













“Assessing the foreign economic security of Ukraine”

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ASSESSING THE FOREIGN ECONOMIC SECURITY OF UKRAINE

Abstract

The study aims to assess the state of Ukraine's foreign economic security and the challenges associated with its ensuring. The integrated assessment methodology of the Ministry of Economy of Ukraine was employed, which is based on a quantitative analysis of indicators that reflect the state of foreign economic security. It involves the characteristics of each indicator in terms of stimulators or destimulators, their normalization, and consideration of weighting coefficients. In order to identify the long-term trends, the official national accounts statistics, data from the World Bank, and the Economic Development Observatory for the period 2004–2023 were employed; the assessment is based on ten indicators. The results demonstrate that the main factors affecting the foreign economic security index are global economic crises, domestic political changes, and a full-scale war with Russia. At the same time, the growth of foreign economic security is recorded in the period of stabilization during the implementation of structural reforms: 2005–2008 – the period after the Orange Revolution, 2014–2016 – the period of growth after the Revolution of Dignity, 2021 – post-pandemic recovery. In 2022–2023, the security index declined to 31.5% and 35.7%, respectively, as a consequence of the outbreak of a full-scale Russian-Ukrainian war. The findings also emphasize the need to develop domestic capacities to ensure the sustainability of foreign economic activity, as well as the importance of maintaining and planning national export infrastructure in the face of global challenges.

Keywords

foreign economic security, crisis, export activity,
international trade, war, instability, debt, integral
assessment, route reorientation, Ukraine

JEL Classification

C82, F52, H12

INTRODUCTION

Ukraine has considerable potential for growth across a range of sectors, including primary industry, agriculture, light manufacturing, and the information technology (IT) sector. The optimization of production processes, introduction of innovations, and continuous improvement of the business climate contribute to economic growth, enhance international competitiveness, and ensure the ability of enterprises to adapt to global challenges and opportunities.

However, the current realm in Ukraine illustrates a distinctive scenario in which foreign economic security is facing significant challenges. It includes a supply crisis, disruption of logistics routes, disorientation of production capabilities, loss of export markets, capital outflows, and a decline in investment activity. This is merely a small part of the issues that have arisen as a consequence of the full-scale military aggression initiated by the Russian Federation against Ukraine in 2022. The Third Rapid Damage and Needs Assessment – RDNA3 report (The World Bank et al., 2024) estimates that as of the end of 2023, the recovery and reconstruction needs amount to almost USD 486 billion. This significant figure encompasses immediate requirements and

medium-term reconstruction objectives over a 10-year period, without considering potential future losses. The aforementioned costs do not include expenses that have already been financed through the Ukrainian state budget or external partners and international assistance. The damage caused by the war resulted in a reduction of real GDP to 75% of the level observed in 2021. As reported by the State Statistics Service of Ukraine (2023), economic growth in 2023 reached 5.3%, indicating a certain stabilization of the economy and a reduction in risks to economic security. Nevertheless, it will require six to seven years of annual growth of 5% for the national economy to restore pre-war GDP levels. In accordance with the IMF (2024) baseline projections, Ukraine's real GDP is anticipated to reach 90.5% of the 2021 level by 2027. This will enable the country to achieve a degree of economic stability.

The extent of Ukraine's challenges underscores the necessity of pursuing sustainable economic growth through the revitalization of domestic demand, the expansion of logistics capacity, and the establishment of continuous production. At the same time, security risks and the consequences of destruction represent significant constraints. However, the growth in investment demand, primarily from international donors, and the expansion of domestic producers' logistics capabilities to enter foreign markets contributed to positive dynamics in early 2024, including the resumption of export-oriented production. These factors directly influence Ukraine's foreign economic security, as the stability and growth of international trade are contingent upon the existence of dependable supply chains, efficient demand, and the assurance of business security.

Thus, the assessment of foreign economic security is crucial in comprehending the present challenges Ukraine is facing in the context of economic instability, unpredictable changes, and the ongoing risks of war. This, in turn, will enhance the capacity to adapt to potential threats.

1. LITERATURE REVIEW

The essence of the foreign economic security of the state is realized through a system of criteria and indicators that describe it. In Ukraine, the Methodology for determining and assessing the level of foreign economic security (hereinafter Methodology) is approved by the Methodical recommendations for calculating the level of economic security of Ukraine (Order of the Ministry of Economy of Ukraine dated October 29, 2013 No. 1277) (Ministry of Economy of Ukraine, 2013). It involves quantitative analysis of indicators reflecting the state of the economy, including foreign economic security as its' priority component. The Methodology also defines the key indicators of foreign economic security, their thresholds, and the algorithm for calculating the integral security index. Methodological recommendations are based on a complete analysis of security indicators with manifestations of potentially permissible threats. They are used for the integral assessment of the economic security of Ukraine as a whole and its components in particular. The selection of indicators for evaluation is rather a difficult task. Therefore, researchers

develop special methods for selecting such indicators. For instance, Kniaz et al. (2021) propose a toolkit based on calculating change in the volume of a three-dimensional figure that describes the criteria of efficiency of foreign trade operations, their parameters, etc.

Despite its widespread use, the above Methodology has a number of shortcomings that limit its effectiveness, in particular, lack of attention to perspective analysis. Methodological recommendations do not consider the possibility of forecasting threats, which limits their application in terms of volatility and turbulence. Moreover, the weighting factors used in the calculations, determined on the basis of expert assessments, lead to an increase in the level of subjectivity of the obtained results. The Methodology also focuses exclusively on quantitative analysis and consideration of a certain number of indicators, ignoring other relevant factors. However, Vasylykivskyi et al. (2019) developed a strategy based on substantiating the direction of development in accordance with the level of influence of external factors using fuzzy modeling and modeling the process of organizational interaction.

Moreover, under current wartime conditions in Ukraine, the Methodology does not fully consider changes in export-import flows, infrastructure losses, and other critical factors, increasing the probability of statistical and analytical errors. The Methodology, which is more focused on the “peaceful” period, may reflect the current state of affairs to a limited extent. The main reasons for this are: 1) incompleteness of statistical information due to loss of control objects and data gaps; 2) growing uncertainty of macroeconomic forecasts; 3) excluding the impact of new risks caused by war, such as sanctions, changes in logistics chains, labor migration, etc.

Thus, the examination of the challenges pertaining to Ukraine’s foreign economic security is of particular significance when considering the prevalence of crisis phenomena associated with geopolitical conflicts and economic instability. Many contemporary scientific publications seek to identify the risks of foreign economic activity, analyze the policy environment in this area, and assess the state of both macro- and microlevels (Ivanova et al., 2024; Nazarova et al., 2021).

However, Kalivoshko et al. (2022) reveal the parameters of foreign economic security that reflect the effectiveness of the mechanism for protecting Ukraine’s economy, considering the impact of external and internal factors. In light of these findings, an indicative system for assessing Ukraine’s foreign economic security was developed, and the statistical reliability of the relationship between indicators of foreign economic activity and economic security was confirmed.

Furthermore, scientific papers focus on export policy (Kulish et al., 2024; Hurochkina et al., 2021; Bosov et al., 2018; Hubareva, 2024), international trade (Patyka, 2021; Martyniuk & Muravska, 2020), and analysis of logistics activities (Melnyk et al., 2024; Kolodizieva et al., 2022; Korpysa et al., 2020).

Bazyliuk et al. (2024) examined the transformation of challenges and threats to Ukraine’s economic security in the context of a protracted war. The sharp decline in the economy can be attributed to two primary factors: the reduction of business activity during the war and the inability to

conduct business in regions that are either within the combat zone or situated in areas with an elevated risk of shelling (border areas). The most significant threats to the state of Ukraine’s foreign economic security are a substantial decline in export potential resulting from the destruction or damage to production facilities and the difficulty of exports due to the destruction or complication of transport logistics. The exacerbation of business operations in Ukraine due to Russian aggression has resulted in a substantial capital outflow from the country, with one of the key challenges being the deficit in foreign trade.

The main macroeconomic indicators that preliminarily determine the state and level of foreign economic security of the national economy are the growth rates of exports, imports, and GDP, as they assess the dynamics of changes and are involved in most of the calculated economic indicators (Chagovets et al., 2023). Under martial law, Ukraine’s economy is contingent upon a number of variables, including exchange rate stability, budget deficit, inflation, external debt, etc. As posited by Zhuravka et al. (2024), macroeconomic determinants undergo substantial shifts due to disruptions in production, diminished exports, augmented defense spending, alterations in capital flows, and the influence of external financial assistance. It is, therefore, crucial to understand the factors that influence these changes to develop effective policies that can maintain economic resilience and mitigate the consequences of the crisis.

Furthermore, the war had a considerable impact on the reorientation of export flows. Palinchak et al. (2023) highlight alterations in international trade, encompassing geographical shifts and product structure modifications. Cross-border linkages between firms are formed through the establishment of distinctive relationships between production and sales units (Herkenhoff et al., 2024). If these links are disrupted or simply physically ruined due to the security situation, there is an increased risk of supply chain instability, which can lead to a reduction in production efficiency, a decline in sales, and even business interruption. Such disruptions also result in increased costs associated with adapting logistics, restructuring business processes, and identifying new partners, which

in turn complicates economic activity and reduces the competitiveness of companies in the global market. Ukraine must identify new areas of foreign economic activity and establish trade flows with reliable partners, including those in the West. Consequently, there is an observable tendency for Ukraine's foreign trade to undergo a geographical redistribution in favor of the EU, as opposed to the CIS countries. In addition, external and internal factors can shape export potential. Mykhailov et al. (2018) identify modern technologies, expansion and improvement of infrastructure, new methods of management, and development of a market economic system at the regional level.

The ongoing Russian-Ukrainian war has significantly redefined trade relationships in the Black Sea region, impacting Ukraine's ability to sustain its export-import activities and influencing global trade dynamics, particularly in relation to the EU and Middle Eastern markets (Nate et al., 2024).

Various models are used to forecast the structure of foreign trade turnover both for a country and a region. Gudz et al. (2020) use gravity models, which allow not only to predict future indicators but also to determine the direction of development of export-import relations and, as a result, competitiveness.

To ensure foreign economic security, one must maintain economic sustainability through the diversification of export markets. The expansion of trade and economic relations assumes particular significance in the wake of signing the Free Trade Agreement with the EU and the conferral of Ukraine's candidate status (Maruniak et al., 2023). Internal trade within the EU is well diversified, with manufactured goods representing a significant portion of the total (Ditsiou et al., 2023). Consequently, the Ukrainian economy's reliance on commodity exports makes it susceptible to global market fluctuations, amplifying its vulnerability to external economic shocks. Consequently, this also constrains the potential for a transition to more sophisticated and high-tech products with high added value (Kafka et al., 2022). In this regard, Tsygankova et al. (2022) propose that one of the avenues for the advancement of Ukraine's foreign economic policy should be the expansion of existing and prospective regional trade agreements to encompass services, e-commerce, and investment. This considers

Ukraine's potential alignment with global trends in the trade system and the possibility of becoming a prominent actor in the markets for services and digital products. However, Ukraine has an imperfect institutional, economic, and legal environment that impedes the implementation of state policy, including foreign economic policy. Hudima et al. (2022) argue that the lack of institutionalization of strategic planning in Ukraine leads to a lack of consistency and coherence in the implementation of economic policy in general and its individual areas, including foreign economic security, by state authorities. In addition, according to Lyulyov et al. (2023), countries with high institutional quality have a higher value of macroeconomic stability.

A prominent position in the global trade network enhances a country's ability to develop strategic planning, which is crucial for ensuring economic resilience and stability in a complex global environment (Starostina et al., 2022).

The issue of combating corruption is particularly crucial for Ukraine, as the European Commission recognizes it as a key obstacle on the country's path to EU membership (Lyeonov et al., 2024).

Thus, while reviewing previous studies, it can be argued that successful adaptation to modern challenges requires a comprehensive approach to strengthening foreign economic security, which includes the diversification of trade, the development of new markets, integration into global value chains, and the creation of a favorable environment for investments.

Therefore, this study aims to assess the state and challenges associated with ensuring Ukraine's foreign economic security.

2. METHODOLOGY

The analytical approach is employed to evaluate the extent of foreign economic security and ascertain the magnitude of potential threats to the economy. This is conducted in accordance with the Methodological recommendations for calculating the level of economic security of Ukraine. The assessment of the state of foreign economic security is based on ten indicators, which are calculated in the following stages.

The first stage is the identification of indicators of foreign economic security. Input data are selected from the World Bank database and official national accounts of Ukraine.

The second stage is determining the characteristics (thresholds) of indicator values. The greatest degree of security is attained when all indicators remain within the prescribed thresholds, and the attainment of optimal values for one indicator does not compromise the optimal values of others. To this end, each indicator is assigned a specific characteristic value, which serves to determine the level of safety. The range of values for each indicator is divided into five intervals: critical, dangerous, unsatisfactory, satisfactory, and optimal. Given the interrelated and sensitive nature of the security indicators, their impact on the overall integral indicator may differ. In order to unify the assessment, the indicators are divided into three categories: stimulators, mixed-type indicators, and destimulators. The relationship between the integral index and stimulator is direct, while the relationship with the destimulator is inverse. Consequently, for destimulators, the upper and lower thresholds are reversed.

The third stage is the normalization of indicators. This is the process of transforming indicators into a single, measurable scale, which is typically within the range of 0 to 1 or expressed as a percentage between 0% and 100%. This allows for the standardization of indicators that have different units of measurement and enables the calculation of an integral indicator. Normalization facilitates comprehension of the extent to which each indicator aligns with established limits and its impact on the overall state of the system under examination. When normalizing indicators, the range of acceptable values is considered, enabling an objective assessment of the security state.

The fourth stage is the determination of weighting coefficients for security indicators. It defines the degree of contribution of each indicator to the integrated security index. This index is established through the expert evaluation of the relevant data. The weighting coefficients are equal to the elasticity coefficients, which determine the percentage deviation of the integral index when a single component or indicator changes by 1%. Consequently,

the weighting coefficients determine the priorities for influencing the security sector. The weighting coefficients for foreign economic security are presented in Appendix A, Table A1, column 12.

The fifth stage is calculating the score of the integral index of foreign economic security following the formula:

$$I = \sum d_m I_m, \quad (1)$$

where d_m is a weighting factor that determines the degree of contribution of each indicator to the integral security index; I_m is a composite indicator of foreign economic security, where $m = 1, 2, 3, \dots, n$.

Therefore, the level of foreign economic security, as one of the principal components of Ukraine's economic security, is calculated per the aforementioned consistent Methodology. The assessment identifies the economy's resilience to internal and external threats, establishing the prerequisites for optimal efficiency and integrity.

3. RESULTS AND DISCUSSION

The data utilized for calculating foreign economic security indicators (Table 1) were obtained from various sources, including the World Bank, the State Statistics Service of Ukraine, the Ministry of Finance of Ukraine, and the Ministry of Energy of Ukraine.

Consequently, the concept of foreign economic security is not confined to the analysis of export-import flows and associated effects. Rather, it encompasses a more comprehensive characterization of the various dimensions of international trade. One such indicator is economic openness, which reflects the degree of integration of the national economy into the global economic system. It is defined as the ratio of the total volume of exports and imports of goods and services to the country's gross domestic product (GDP), expressed as a percentage. A high level of economic openness is indicative of a country's active involvement in international trade, integration into global production networks, and investment flows.

The Ukrainian economy demonstrated notable fluctuations in openness throughout the period

Table 1. Input indicators for assessing Ukraine's foreign economic security, 2004–2023

Source: Compiled using the data of World Bank Group (n.d.a, n.d.b, n.d.c, n.d.d), Observatory of Economic Complexity (n.d.), State Statistics Service of Ukraine (2023, 2024a, 2024b, n.d.), Ministry of Finance of Ukraine (2024), Ministry of Energy of Ukraine (n.d.), Orel (2022).

Year	Indicator of foreign economic security									
	Openness of the economy, %	Export-import coverage ratio, times	Share of the leading partner country in total exports, %	Share of the leading partner country in total imports, %	Share of the leading product (product group) in total exports, %	Share of the leading product (product group), excluding energy imports, in total imports, %	Share of imports in domestic consumption, %	Terms of trade index (price), %	Transit capacity utilization of the oil transportation system, %	Transit capacity utilization of the gas transportation system, %
2004	109.99	1.14	14.92	34.26	33.08	31.46	22.35	91.70	83.85	76.81
2005	94.65	1.02	17.60	30.68	32.98	27.63	20.47	97.80	82.52	76.41
2006	89.18	0.94	17.89	26.81	33.96	26.26	20.94	93.10	79.57	71.99
2007	88.05	0.88	20.63	24.21	33.85	24.85	21.75	91.60	68.56	64.54
2008	94.17	0.85	19.34	20.27	33.91	26.56	23.65	100.10	65.19	67.00
2009	87.48	0.96	16.28	24.44	24.56	28.99	20.68	73.80	44.58	53.67
2010	95.73	0.94	20.48	31.90	26.42	30.37	23.46	106.70	54.51	55.24
2011	104.81	0.89	23.69	31.05	26.42	32.01	26.19	104.10	48.85	58.38
2012	102.62	0.86	20.38	27.18	21.83	27.31	26.81	89.00	25.86	47.23
2013	94.00	0.84	18.44	23.87	21.50	22.97	25.68	99.80	25.30	46.89
2014	100.69	0.93	15.10	18.26	23.47	23.14	23.87	96.40	26.82	34.85
2015	107.81	0.95	10.08	14.91	19.78	23.26	24.37	91.60	26.91	37.59
2016	105.52	0.88	7.81	9.81	18.12	16.18	25.10	99.80	24.51	46.05
2017	104.03	0.86	7.30	11.50	18.77	19.95	24.78	101.70	24.69	52.38
2018	99.20	0.84	6.17	11.45	19.65	20.09	24.77	99.50	23.62	48.63
2019	90.51	0.84	5.66	12.14	20.35	17.56	22.60	99.90	23.27	50.20
2020	79.16	0.96	11.68	13.17	19.54	18.29	18.18	105.00	28.06	31.26
2021	82.70	0.97	9.85	13.09	19.67	17.84	18.87	119.00	27.88	23.31
2022	87.40	0.68	11.59	10.30	23.46	15.59	26.46	78.90	28.60	18.60
2023	78.10	0.58	9.31	11.80	22.93	12.72	42.28	79.90	27.89	6.50

between 2004 and 2023. These fluctuations reflect the country's diverse stages of economic development and the influence of the external economic environment. In particular, there was a periodic increase in openness during the years of economic recovery and revival of international trade (2010–2011, 2014–2015), as well as a decline in the periods after the global crises (2009, 2020).

One of the most significant developments is the stabilization of the indicator at approximately 100% following 2015. This suggests that the economy is striving to maintain its international trade relations, even in the context of external shocks. However, since 2019, the degree of economic openness has begun to decline once more, reaching 78.1% by 2023. This represents the lowest indicator observed throughout the entirety of the analyzed period. This decline can be attributed to a combination of factors, including the impact of the global pandemic, deteriorating conditions in

international trade, and the prevalence of geopolitical instability.

Such dynamics of openness indicate that the Ukrainian economy is susceptible to external factors. The Ukrainian economy is significantly dependent on external economic conditions and is susceptible to internal crises that may impact its integration into the global economy. This indicates that the economy is attempting to adapt to changes and is experiencing challenges in maintaining stability in foreign economic activity. In recent years, there has been a downward trend in openness, which may indicate a desire to reduce the risks associated with external dependence. However, this may also signify a loss of potential opportunities for economic development due to restrictions on international trade.

The trade index reveals the country's trade position within the context of international relations.

It measures the relationship between the prices of exported and imported goods, thereby reflecting the purchasing power of a unit of exports relative to a unit of imports. An increase in trade index indicates that a greater quantity of imported goods can be obtained for a given quantity of exported goods. This is beneficial for the country in question, as it enhances the purchasing power of export earnings. Conversely, a reduction in the index signifies a deterioration in the terms of trade, whereby a country receives diminished income from its exports. Over the period from 2004 to 2008, the trade index exhibited a range of values between 91.7% and 100.1%. A relatively stable level of the index with minor fluctuations suggests an equilibrium between the prices of exported and imported goods. During this period, global commodity prices exhibited an upward trajectory, which had a favorable impact on Ukraine's export earnings. This was due to the fact that the composition of exports was predominantly comprised of raw materials, including metals and agricultural products. The decline in the post-crisis period indicates a decline in export revenues, which had a deleterious effect on the country's balance of payments. Since 2014, the trade environment has deteriorated markedly due to changes in the political situation, the loss of traditional markets, in particular the Russian Federation, and falling prices for key export commodities.

The high volatility of the trade index indicates a significant vulnerability of the Ukrainian economy to global market fluctuations. This is due to the dominance of low-value-added commodities in exports, which worsens revenues in times of crisis and negatively affects macroeconomic stability. It is, therefore, essential to diversify the export structure, focusing on the development of high-tech and higher value-added industries. This will increase the economy's resilience to external shocks and ensure more favorable terms of trade.

An essential indicator is the proportion of imports in domestic consumption, which enables the evaluation of the extent to which domestic production fulfills the needs of the domestic market and the degree of substitution of domestic products by imported goods. A reduction in the proportion of imports in domestic consumption during periods of economic crisis, such as the global financial cri-

sis of 2008, the political events of 2014–2015, and the pandemic associated with COVID-19, suggests that the economy is responding to external challenges. Concurrently, the elevated reliance on imports during periods of relative stability underscores the inadequacies of domestic production and a deficient industrial foundation that is unable to satisfy the full extent of domestic demand.

The sharp increase in the share of imports observed in 2023 is the consequence of the detrimental impact of the war on the domestic economy. It demonstrates the necessity of pursuing a policy of import diversification and developing a strong industrial base in order to guarantee economic self-sufficiency. The advancement of import substitution, the reinforcement of domestic producers, a moderate fiscal policy, the promotion of unregulated business, and the assurance of stable conditions for domestic investors are essential tasks for enhancing economic stability and reducing vulnerability to external economic factors. Such factors also include fluctuations in global prices and exchange rate volatility, as well as political instability in partner countries.

It is also noteworthy to mention the utilization of transit capacities of the oil and gas transportation system as an additional indicator. These indicators reflect the extent to which existing infrastructure capacities for energy transportation throughout the country are being utilized, which is a crucial aspect of economic activity and Ukraine's role in global markets. This efficiency has a direct bearing on the amount of state budget revenues and the country's energy independence. A decline in utilization was observed over the period from 2004 to 2023. In particular, the utilization of the oil transportation system exhibited a marked decline, from a level exceeding 80% at the outset of the period under review to approximately 28% at its conclusion. A comparable trend is evident in the case of the gas transportation system, which also exhibited a considerable decline in utilization, from approximately 77% to a critically low level of 6.5%.

The decline in transit capacity utilization can be attributed to several factors, including the evolving geopolitical landscape, which has reduced reliance on transit through Ukraine. Furthermore,

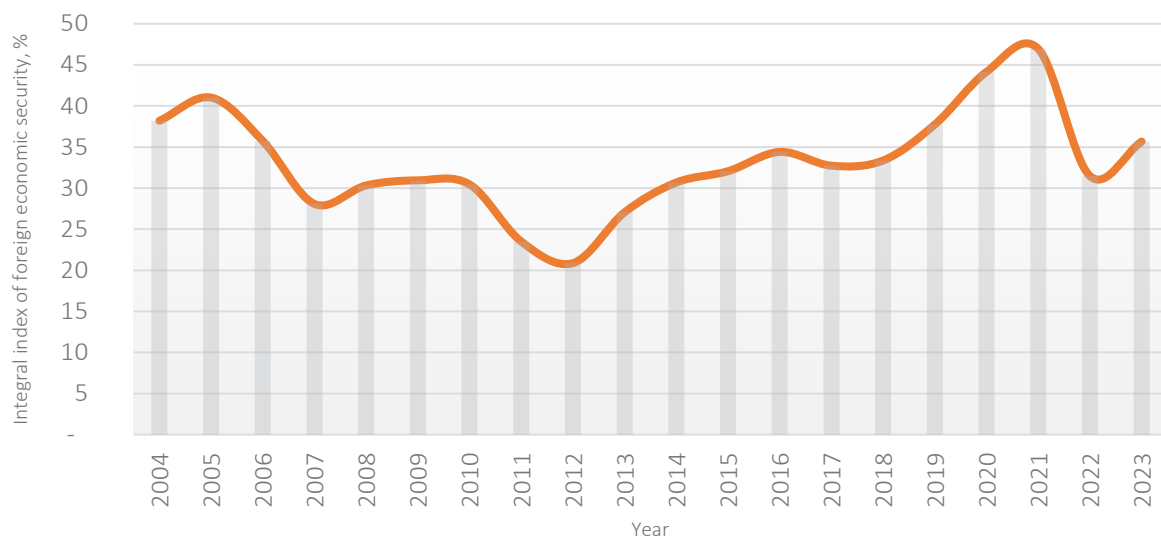


Figure 1. Ukraine's foreign economic security index over the period 2004–2023

the enhanced capacity of alternative routes for the transportation of Russian gas, such as Nord Stream and other gas pipelines that circumvent Ukraine, has also exerted a detrimental influence on the utilization of the Ukrainian GTS. The reduction in transit volumes results in a decline in budget revenues, which in turn constrains the financial resources available for the development of energy infrastructure and the maintenance of energy security. Furthermore, the reduction in transit volumes has an adverse effect on the technological condition of gas and oil transportation systems. The low utilization rate makes maintaining optimal pressure in the networks challenging, resulting in higher operating costs.

The results of the assessment of Ukraine's foreign economic security over the period from 2004 to 2023 indicate a number of significant trends that reflect the challenging political and economic circumstances that have shaped the development of the national economy (Figure 1).

The higher the percentage of the integral security indicator, the greater the protection afforded to the economy from external risks and threats. The maximum level of protection is 100%, while 0% indicates the economy's complete vulnerability to external influences, which can result in significant negative consequences for its stability and development.

At the outset of the study period, Ukraine's foreign economic security was 38.2%. The Orange Revolution, which occurred at the end of 2004, resulted in changes to government policy despite the political instability it created. This led to an improvement in the indicator to 41.0% in 2005. The period from 2006 to 2011 is distinguished by a notable decline in the level of security, from 35.7% to 20.9%. The deterioration in security levels was exacerbated by political instability and poor governance during the global financial crisis and its aftermath. This was compounded by the prevalence of corruption and the weakness of institutional capacity, which collectively contributed to a further decline in security. It is noteworthy that during this period, public debt obligations increased (under the premiership of Yuliia Tymoshenko), which constrained the financial capacity to support the economy and, consequently, had a detrimental impact on the country's debt security.

The lowest level was recorded in 2012 (20.9%), which can be attributed to economic stagnation, a deceleration in export growth, and an insufficient level of investment attractiveness. The increase to 27.1% in 2013 indicates the commencement of economic reforms, which were instigated by public demand following Euromaidan. The subsequent growth in security to 30.7% in 2014 and 32.1% in 2015 can be attributed to the active implementation of economic reforms, particularly the corporate governance reform of state and mu-

nicipal property and the commencement of small-scale privatization. The signing of the Association Agreement with the EU constituted a pivotal moment for the Ukrainian economy, as it facilitated the country's integration into the global trade system and granted it access to international markets under established norms and regulations. Ukraine was able to increase exports to European countries, thereby contributing to an increase in the security indicators, which reached 37.7% in 2019.

In 2021, the foreign economic security indicator reached its highest value, at 46.9%. This was made feasible by the stability of agricultural exports, which constituted the primary source of revenue for Ukraine in the context of constrained demand for other categories of goods.

In 2022, the level of security declined to 31.5% as a consequence of the outbreak of a full-scale Russian war. In 2023, the situation experienced a partial stabilization, with the indicator rising to 35.7%. This reflects the economy's adaptation to new conditions, the introduction of alternative logistics routes, and support from the international community.

In general, the foreign trade sector in Ukraine is not adequately protected from internal and external threats. During periods of crisis, the aforementioned indicators exhibit a pronounced decline, thereby underscoring the sector's considerable vulnerability to both global economic shifts and internal economic destabilization. The present level of security demonstrates a degree of improvement; however, the economy remains only slightly more than one-third protected from threats. The mean level of Ukraine's foreign economic security over a 20-year period is 33.3%, which indicates the stability of the Ukrainian economy. This level of security presents significant challenges for business development and export activities, as a stable environment is a crucial prerequisite for business growth and export opportunities.

The full-scale invasion of Ukraine had a profound impact on the distribution of Ukrainian goods, economic activity, and the overall capacity to engage in foreign trade operations. Adapting to the export infrastructure and shifting toward new markets facilitated the recovery approaches. A survey conducted by the National Bank of

Ukraine (2024) indicates that Ukrainian businesses are optimistic about business growth over the next 12 months. However, in addition to the aforementioned security risks, there are several persistent problems. These include logistical challenges resulting from the blockade of the western borders, energy supply disruptions caused by shelling, a decline in consumer demand, a shortage of workers due to mobilization and emigration, an increased debt burden on the country, and a lack of funding for both military and civilian needs.

Moreover, the restoration of Ukraine's financial system may encounter obstacles due to further destruction. The pace and efficacy of the recovery hinge on the trajectory of hostilities and the degree of international assistance, which serves as a crucial source of financing the budget deficit and bolstering economic activity, particularly the recuperation of export-oriented sectors. The availability of financial resources is a crucial factor in supporting the economy. However, the receipt of foreign aid often results in an increase in public debt, as grant support accounts for only 30% of aid, while the remainder is long-term loans that must be repaid. If the funds are not utilized optimally, the country may encounter difficulties in meeting its financial commitments, which will result in further challenges to macroeconomic stability and the limitation of opportunities for the advancement of foreign economic activity. It is, therefore, crucial to ensure the effective management of available funds in order to minimize the risks associated with foreign economic security and the stability of the economy as a whole.

Ukraine's export activity demonstrates the challenges posed by external aggression and the capacity to adapt to new conditions through diversification of markets, logistics reorganization, and strengthening economic ties with developed countries. The findings of this study underscore the necessity of fostering domestic capabilities to guarantee the longevity of foreign economic operations and the significance of bolstering the national export infrastructure in the context of global challenges.

The results of the study emphasize the need to develop domestic capacities to ensure the sustainability of foreign economic activity, as well as the importance of maintaining and planning national

export infrastructure in the face of global challenges. They are in line with the findings of Hudima et al. (2022), who found that the lack of institutionalization of strategic planning in Ukraine leads to a disruption of the systemic nature of economic policy and its policy directions. Since the methodological guidelines for calculating the level of economic security of Ukraine are advisory and not mandatory, it is necessary to establish legal mechanisms for adopting strategic documents to assess the state's foreign economic security.

Study results align with Fleychuk and Babets (2020), who proved that changes in the key factors of Ukraine's foreign economic security indicate the presence of threatening trends due to the country's growing export and technological dependence as a result of an inefficient economic structure and low competitiveness in foreign and domestic markets.

To assess the level of foreign economic security of national economies, Chagovets et al. (2023) use the main macroeconomic indicators, such as ex-

port, import, and GDP growth rates, as they assess the dynamics of changes and are involved in most of the calculated economic indicators. Whereas in the current study, a more extended approach is proposed to calculate the integral security indicator, which takes into account the specifics of the Ukrainian economy, as well as the peculiarities of its export-import structure and infrastructure capacity, which allows for a more comprehensive assessment of the level of foreign economic security.

Analyzing foreign experience in assessing foreign economic security, Koshikov (2020) draws attention to the methodologies (indices) of the World Bank and the European Bank for Reconstruction and Development. They are characterized by the study of not only economic indicators but also related areas, such as the level of corruption, crime, efficiency of government agencies, quality of the regulatory framework, and government intervention in the economy. Therefore, the national Methodology for assessing the level of economic security of Ukraine should be modified.

CONCLUSION

The purpose of this study is to assess the state of Ukraine's foreign economic security and the challenges associated with its ensuring. It was found that as of 2023, foreign economic security is at 35.7%. The average index for the studied period of the last 20 years is 33%, which means that Ukraine's economy is only one-third protected from foreign economic risks and threats. The main factors affecting the foreign economic security index are global economic crises, domestic political changes, and a full-scale war with Russia. At the same time, the growth of the level of foreign economic security is recorded in the period of stabilization during the implementation of structural reforms: 2005 – the period after the Orange Revolution, 2014–2016 – the period of growth after the Revolution of Dignity, 2021 – post-pandemic recovery. In 2022, the level of security declined to 31.5% due to the outbreak of a full-scale Russian war. In 2023, the situation experienced a partial stabilization, with the indicator rising to 35.7%. The main challenge for Ukraine is to achieve more sustainable foreign economic security by implementing effective reforms, strengthening the investment climate, and further integrating into global markets.

The obtained results should ensure the diagnostics of the economic security in Ukraine as a whole, monitoring of export-import activities, and the elaboration of appropriate solutions. Prospects for further research include integrating the research findings into the economic development strategy, which will allow the proactive formation of a policy for long-term economic growth.

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APPENDIX A

Table A1. Characteristic values of indicators and weighting coefficients for assessing external economic security (considering the stimulating and de-stimulating effects on the integrated security indicator)

Source: Ministry of Economy of Ukraine (2022).

Indicators	Characteristic values of the indicator										Weighting factor value
	x_C	x_C	x_C	x_C	x_C	x_D	x_D	x_D	x_D	x_D	
	crit.	danger.	dissatisf.	satisf.	opt.	opt.	satisf.	dissatisf.	danger.	crit.	
Openness of the economy						75	85	90	95	100	0.0835
Export-import coverage ratio	0.85	0.9	0.95	0.975	1	1.2	1.25	1.3	1.5	1.7	0.1061
Share of the leading partner country in total exports of goods						5	8	15	20	25	0.0885
Share of the leading partner country in total imports						5	8	15	20	25	0.0935
Share of the leading product (product group) in total exports						5	6	7	8	10	0.0909
Share of the leading product (product group) in total imports						5	8	12	15	20	0.0877
Share of imports in domestic consumption	5	7	10	12.5	15	17	19	22	25	30	0.0992
Trading conditions index (price)	85	90	95	105	110						0.0996
Transit capacity utilization of the oil transportation system	0	60	70	80	90						0.0774
Transit capacity utilization of the gas transportation system	0	60	70	80	90						0.0754