

## ASSESSMENT OF THE VULNERABILITY AND EXTERNAL ECONOMIC RESILIENCE OF THE REPUBLIC OF MOLDOVA IN RELATION TO REGIONAL GEOPOLITICAL RISKS AND THE TRANSFORMATIONS OF THE INTERNATIONAL TRADING SYSTEM

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**Abstract:** *The study assesses the vulnerability and external economic resilience of the Republic of Moldova in the context of increasing regional geopolitical risks and ongoing transformations of the international trading system. The analysis covers the period 2014–2024 and is based on official statistical data on exports, imports, and nominal gross domestic product. The research examines the dynamics of external trade flows, structural changes in the geographical orientation of exports, the level of trade openness, and the persistence of trade imbalances. In addition, a log-linear econometric model is estimated using the Ordinary Least Squares (OLS) method, which enables the evaluation of the relationship between exports, the size of the economy, and the share of exports directed toward the European Union market. The results indicate that the progressive reorientation of exports toward the European Union has contributed to strengthening external resilience. However, the persistent trade deficit and the high level of trade openness continue to maintain a significant degree of structural vulnerability. The contribution of the study lies in integrating the descriptive analysis of trade indicators with the econometric evaluation of the determinants of export performance, thereby providing a systemic perspective on the external economic position of the Republic of Moldova.*

**Keywords:** *external vulnerability, economic resilience, trade openness, exports, Republic of Moldova.*

**Classification JEL:** *F14, F62, O11.*

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## 1. Introduction

Over the last two decades, the international trading system has undergone profound transformations driven by globalization, digitalization, financial crises, pandemics, and geopolitical tensions.

Uncertainty associated with trade policies represents an important factor influencing the evolution of international trade and the behaviour of economic agents. Frequent changes in trade regulations, the possible introduction of tariffs or restrictions, and shifts in trade agreements can create an economic environment characterized by a high degree of unpredictability. Under such conditions, firms tend to exercise caution in investment decisions and in expanding export activities, while some trade flows may be postponed or redirected toward markets perceived as more stable. From this perspective, small and open economies are particularly sensitive to increasing trade policy uncertainty, as they depend to a significant extent on the stability of trade rules and on predictable access to external markets (Handley & Limão, 2022).

The UNCTAD Trade and Development Report highlights that the global economy is currently experiencing a period characterized by slowing economic growth, increasing financial uncertainty, and increasingly pronounced divergences among economies. In this context, many developing countries are becoming more vulnerable to fluctuations in the international economic environment, as they depend significantly on external trade flows, global financial conditions, and the stability of supply chains. Consequently, the volatility of international trade, pressures on external debt, and growing global economic fragmentation can amplify macroeconomic risks and limit the capacity of small and open economies to absorb external shocks (UNCTAD, 2023).

The increasing integration of national economies into the international trading system has led to a high degree of economic interdependence among states. Under these conditions, global economic shocks - such as financial crises, disruptions in supply chains, geopolitical conflicts, or volatility in trade flows - are rapidly transmitted across economies. Analyses conducted by international financial institutions highlight that external imbalances and instability in the global economic environment can significantly influence the evolution of international trade and macroeconomic stability, particularly affecting small and open economies that depend to a considerable extent on access to external markets (International Monetary Fund, 2022).

The Republic of Moldova represents a relevant case of an economy characterized by a high level of trade openness, a concentrated export structure, and a structural dependence on imports. The period 2014–2024 is particularly important for assessing external vulnerability, as it includes the reconfiguration of regional trade relations, the pandemic shock of 2020, and the geopolitical instability that intensified starting in 2022.

At the same time, the level of external vulnerability is closely linked to a country's economic competitiveness. The economic competitiveness of the Republic of Moldova is influenced by several structural factors, including the level of development of the entrepreneurial environment, the capacity for innovation, and the degree of integration into the international economy. In this context, the analysis of national competitiveness highlights the existence of several challenges related to relatively low productivity, the structure of exports, and the need to modernize economic infrastructure, factors that directly influence economic performance and the country's positioning within the global economy (Belostecinic, Guţu & Bragoi, 2020).

Innovation processes are strongly influenced by the degree of openness of an economy and by the level of its integration into the international economic system. Economies characterized by a high level of international trade create favourable conditions for the development of innovation and for the adoption of modern technologies, as firms are exposed to external competition and to the circulation of ideas, knowledge, and best practices. At the same time, trade flows, foreign investments, and technology imports contribute to facilitating technology transfer and to the modernization of production processes. Moreover, access to broader external markets provides enterprises with additional opportunities for economic growth, production diversification, and the strengthening of long-term competitiveness (Cassiman, Golovko & Martínez-Ros, 2010).

The purpose of this study is to analyse the vulnerability and external resilience of the economy of the Republic of Moldova in the context of recent geopolitical and economic transformations, by examining the evolution of foreign trade indicators and by estimating

the relationships between exports, the size of the economy, and the geographical orientation of trade flows.

In order to achieve this objective, the following research objectives were established: the analysis of the evolution of exports and imports of the Republic of Moldova during the analysed period; the evaluation of the degree of trade openness and of the trade deficit; the examination of the role of the European Union market in the dynamics of exports; and the estimation of an econometric model aimed at identifying the factors that influence the evolution of exports.

The paper is structured as follows: the next section reviews the relevant literature, followed by the methodology, results and discussion, and conclusions.

## 2. Literature Review

The issue of external economic vulnerability has been extensively analysed in the economic literature, particularly in the context of globalization and increasing geopolitical uncertainty. Recent studies emphasize that small and open economies are more exposed to external shocks due to their dependence on international trade flows and external markets (Handley & Limão, 2022).

At the same time, the concept of economic resilience has gained increasing attention, being associated with the ability of economies to absorb shocks and adapt to changing external conditions. According to international analyses, resilience is influenced by factors such as trade diversification, macroeconomic stability, and integration into stable economic areas (International Monetary Fund, 2022).

Other studies highlight that the geographical orientation of exports plays a key role in determining external stability. Economies that are highly concentrated on a limited number of markets tend to exhibit higher vulnerability, while diversification contributes to increased resilience (World Trade Organization, 2023).

While most studies emphasize the role of trade diversification in reducing vulnerability, there is no consensus regarding the extent to which geographical reorientation alone can ensure long-term resilience. Some authors argue that structural factors, such as domestic production capacity, play an equally important role.

In the case of the Republic of Moldova, the literature indicates both progress in the reorientation of exports toward the European Union and the persistence of structural imbalances, particularly in terms of trade deficits and dependence on imports (EU4Moldova, 2025).

Although the existing literature provides valuable insights into external vulnerability and economic resilience, most studies tend to analyse these concepts separately or focus on broader regional contexts. In addition, limited attention has been given to the combined assessment of vulnerability and resilience in small open economies exposed to recent geopolitical disruptions. Moreover, limited studies have simultaneously examined both external vulnerability and resilience in the context of recent geopolitical transformations. This highlights the need for a more integrated analytical approach.

In this context, the present study contributes to the literature by offering an integrated perspective that combines descriptive trade indicators with econometric analysis, focusing specifically on the Republic of Moldova during a period marked by significant structural and

geopolitical changes. The following section presents the methodological framework used to assess external vulnerability and resilience.

### 3. Methodology

The methodological framework is designed to evaluate external vulnerability through a combination of trade indicators and econometric analysis. The analysis aims to evaluate the external economic vulnerability and resilience of the Republic of Moldova through relevant trade and macroeconomic indicators. External vulnerability is examined from three perspectives: trade integration, the geographical structure of exports, and external imbalance.

The trade dimension is assessed through the degree of trade openness, determined as the ratio between the sum of exports and imports and nominal gross domestic product. The structural dimension is analysed through the share of exports directed to the European Union and to the Commonwealth of Independent States (CIS) countries in total exports, indicators that allow the assessment of the geographical orientation and the degree of concentration of external markets. The macroeconomic dimension is reflected through the trade deficit and its ratio to GDP.

The empirical analysis uses annual data for the period 2014-2024, provided by the National Bureau of Statistics. The variables included are total exports (FOB), total imports, exports to the European Union, exports to the CIS countries, and nominal GDP, expressed in current U.S. dollars.

To investigate the relationship between exports and macroeconomic factors, a logarithmic regression model was estimated, in which total exports represent the dependent variable, while nominal GDP and the share of exports directed to the European Union are the explanatory variables. The estimation was carried out using the Ordinary Least Squares (OLS) method, in order to identify structural relationships between the size of the economy, trade orientation, and export performance. To ensure a clearer interpretation of the economic relationships between the variables, the model uses the logarithmic transformation of the main macroeconomic variables. This approach allows the estimated coefficients to be interpreted in terms of elasticities and contributes to stabilizing the variance of the data, thereby reducing potential heteroscedasticity issues. The use of the Ordinary Least Squares (OLS) method facilitates the estimation of the relationships between the size of the economy, the geographical orientation of exports, and the performance of total exports.

This approach makes it possible to correlate the descriptive analysis of trade indicators with an econometric evaluation of the determinants of exports.

### 4. Results and Discussion

The period 2014-2024 provides a relevant framework for examining the evolution of the external position of the Republic of Moldova in a regional context characterized by instability and trade reconfigurations. The analysis of foreign trade indicators makes it possible to identify dominant trends, potential structural adjustments, and changes in the orientation of trade flows. The study highlights the main findings regarding the dynamics of exports and imports, as well as their implications for the external balance of the economy.

A more detailed examination of trade dynamics over the analysed period reveals significant fluctuations associated with both internal adjustments and external shocks. The evolution of exports and imports reflects not only changes in external demand but also structural characteristics of the domestic economy. In particular, the persistent gap between exports and imports suggests a structural imbalance that has remained relatively stable over time. These developments underline the importance of analysing trade flows not only in absolute terms, but also in relation to broader macroeconomic conditions.

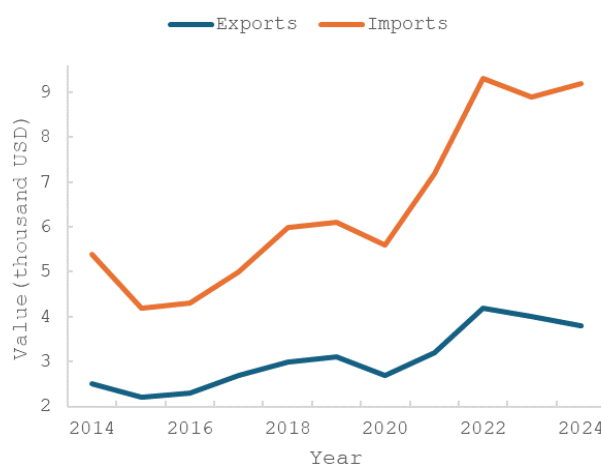
In this context, Table 1 provides a comprehensive overview of the evolution of exports and imports, serving as a basis for assessing the magnitude and persistence of external imbalances.

**Table 1. Evolution of Exports and Imports of the Republic of Moldova (2014-2024, thousand USD)**

Year	Exports	Imports
2014	2.339.529,6	5.316.958,9
2015	1.966.837,2	3.986.820,3
2016	2.044.538,65	4.020.356,96
2017	2.424.972,03	4.831.335,29
2018	2.706.173,30	5.760.057,05
2019	2.779.164,47	5.842.484,34
2020	2.467.106,08	5.415.988,30
2021	3.144.504,54	7.176.761,19
2022	4.332.145,12	9.218.978,77
2023	4.048.604,91	8.675.450,34
2024	3.555.061,73	9.065.184,72

*Source:* Developed by the author based on data from the National Bureau of Statistics (Accessed on March 1, 2026, from [https://statistica.gov.md/ro/statistic\\_indicator\\_details/19#data\\_bank](https://statistica.gov.md/ro/statistic_indicator_details/19#data_bank))

The data presented in Table 1 provide a clear overview of the evolution of exports and imports during the analysed period, highlighting both the overall upward trend and the fluctuations associated with external economic shocks. These developments are further illustrated in Figure 1.



**Figure 1. Evolution of Exports and Imports of the Republic of Moldova (2014–2024)**

*Source:* Developed by the author based on data from the National Bureau of Statistics of the Republic of Moldova. Accessed on March 1, 2026, from <https://statistica.gov.md>

These findings are consistent with previous studies on small open economies, which emphasize that persistent trade imbalances reflect structural dependence on imports and limited domestic production capacity. At the same time, the results reinforce the view that exposure to external demand fluctuations increases macroeconomic vulnerability, particularly in economies with a narrow export base.

The evolution of exports and imports during the period 2014–2024 reflects the influence of both internal and external economic factors that affected trade dynamics differently from year to year. Throughout the analysed interval, exports ranged between approximately 1.97 billion USD (2015) and 4.33 billion USD (2022), while imports fluctuated between 3.99 billion USD (2015) and more than 9.21 billion USD (2022), indicating a pronounced dynamic of trade flows.

The decline recorded between 2014 and 2016 is visible in both exports and imports. Exports decreased from 2.34 billion USD in 2014 to 1.97 billion USD in 2015, while imports fell from 5.31 billion USD to 3.98 billion USD during the same period. This adjustment can be explained by the reconfiguration of trade relations and the reduction in demand on some traditional external markets, as the economy underwent a process of adaptation to the new regional conditions.

The period 2017–2019 marks a gradual recovery of trade flows. Exports increased steadily, reaching approximately 2.78 billion USD in 2019, while imports exceeded 5.84 billion USD in the same year. This development may be associated with expanded access to the European Union market and the consolidation of external trade relations. At the same time, the increase in imports reflects the growth of domestic consumption and the demand for intermediate and energy goods.

In 2020, a decline is observed in both components of foreign trade, with exports falling to 2.47 billion USD and imports to 5.41 billion USD. This development was mainly driven by the effects of the COVID-19 pandemic, which disrupted logistical chains and reduced external demand.

The years 2021 and 2022 highlight a significant increase, particularly in 2022, when exports reached 4.33 billion USD and imports exceeded 9.21 billion USD, representing the highest values recorded during the entire analysed period. This increase was influenced both by the post-pandemic economic recovery and by the rise in international prices for energy and agri-food products, which amplified the overall value of trade transactions.

In 2023 and 2024, a moderation in exports can be observed, declining to 4.05 billion USD in 2023 and 3.55 billion USD in 2024, while imports remained at a high level, exceeding 9 billion USD in 2024. This evolution suggests a slowdown in external demand and a continued dependence on imported goods, particularly energy resources and intermediate products.

Overall, the persistent gap between exports and imports - which in some periods exceeds 4-5 billion USD annually - highlights the structural nature of the trade deficit. The observed variations result from the interaction between external factors (regional crises, volatility in international prices, and changes in trade routes) and internal factors (production capacity, the structure of exports, and the level of domestic demand).

The results suggest that integration into global value chains may increase vulnerability. Furthermore, such integration also involves certain structural risks, as dependence on a limited number of suppliers or trading partners may increase the vulnerability of economies

to external shocks, global crises, or geopolitical tensions. Under these conditions, economic resilience depends not only on the level of trade integration but also on the diversification of economic relations and supply sources (World Trade Organization, 2023).

The asymmetric dynamics between exports and imports confirm the existence of a persistent imbalance, which is relevant for assessing the external vulnerability of the economy of the Republic of Moldova.

Beyond the overall dynamics of exports and imports, a deeper understanding of external vulnerability requires the analysis of the geographical distribution of trade flows. In this context, Table 2 presents the distribution of exports by major groups of countries, highlighting the changes in trade orientation during the analysed period.

**Table 2. Structure of Exports by Groups of Countries (2014–2024, thousand USD)**

Year	Exports to the European Union	Exports to the CIS
2014	1.245.980,0	735.647,7
2015	1.217.587,1	492.294,6
2016	1.331.898,45	414.185,25
2017	1.596.839,60	462.820,45
2018	1.861.863,96	415.922,25
2019	1.830.548,39	434.949,51
2020	1.640.367,53	376.962,60
2021	1.919.531,97	466.207,47
2022	2.537.508,51	1.043.042,14
2023	2.646.659,65	897.005,13
2024	2.392.368,77	241.596,18

*Source:* Developed by the author based on data from the National Bureau of Statistics (Accessed on March 1, 2026, from [https://statistica.gov.md/ro/statistic\\_indicator\\_details/19#data\\_bank](https://statistica.gov.md/ro/statistic_indicator_details/19#data_bank))

The share of exports to the European Union increased steadily, while exports to the CIS countries declined significantly. This reorientation indicates a strategic adaptation to the new geopolitical and economic realities. This pattern is in line with existing empirical research suggesting that the diversification and reorientation of exports toward more stable and economically integrated markets contribute to enhancing external resilience. At the same time, the findings confirm that reduced dependence on volatile markets can mitigate the transmission of external shocks.

The economic integration of the Republic of Moldova into the European economic space has been strengthened in recent years through a series of initiatives and agreements aimed at supporting economic development and convergence with European Union standards. Among these is the implementation of the European Union Growth Plan for the Republic of Moldova, which combines structural reforms, investments, and financial support to stimulate economic development, modernize infrastructure, and strengthen economic connections with the European market (EU4Moldova, 2025).

Deeper integration into the EU market has contributed to the stability of trade flows and to reducing dependence on markets characterized by high volatility.

In order to assess the level of integration of the Republic of Moldova's economy into international trade and to quantify its exposure to external fluctuations, the degree of trade openness was calculated for the period 2014-2024. This indicator reflects the ratio between the total volume of trade flows and nominal gross domestic product.

Economies characterized by a high degree of trade openness are more exposed to external economic fluctuations, as export dynamics depend not only on domestic production capacity but also on the evolution of demand in partner economies. Under such conditions, economic shocks affecting trade partners may generate indirect effects on export performance and on domestic macroeconomic stability (Eurostat, 2026).

**Table 3. Degree of Trade Openness of the Republic of Moldova (2014–2024)**

Year	Exports + Imports (thousand USD)	GDP (thousand USD)	Trade Openness (%)
2014	7.656.488,5	9.399.967	81,45
2015	5.953.657,5	7.798.648	76,34
2016	6.064.895,6	7.980.938	75,99
2017	7.256.307,3	9.518.976	76,23
2018	8.466.230,3	11.251.641	75,24
2019	8.621.648,8	11.735.722	73,47
2020	7.883.094,4	11.531.922	68,36
2021	10.321.265,7	13.690.980	75,39
2022	13.551.123,9	14.520.739	93,32
2023	12.724.055,3	16.714.886	76,12
2024	12.620.246,5	18.206.842	69,32

*Source:* Developed by the author based on data from the National Bureau of Statistics (Accessed on March 1, 2026, from [https://statistica.gov.md/ro/statistic\\_indicator\\_details/19#data\\_bank](https://statistica.gov.md/ro/statistic_indicator_details/19#data_bank))

The degree of trade openness was determined according to the following relationship:

$$\text{Trade Openness} = (\text{Exports} + \text{Imports}) / \text{GDP} \times 100\% \quad (1)$$

To ensure comparability, all variables were expressed in thousand U.S. dollars, using GDP values at current prices. The values presented in Table 3 indicate that the economy of the Republic of Moldova operated throughout the analysed period under conditions of high trade openness, with the average value of the indicator being around 77%. Such a level confirms the deep integration of the economy into the international trading system and its structural dependence on external flows of goods.

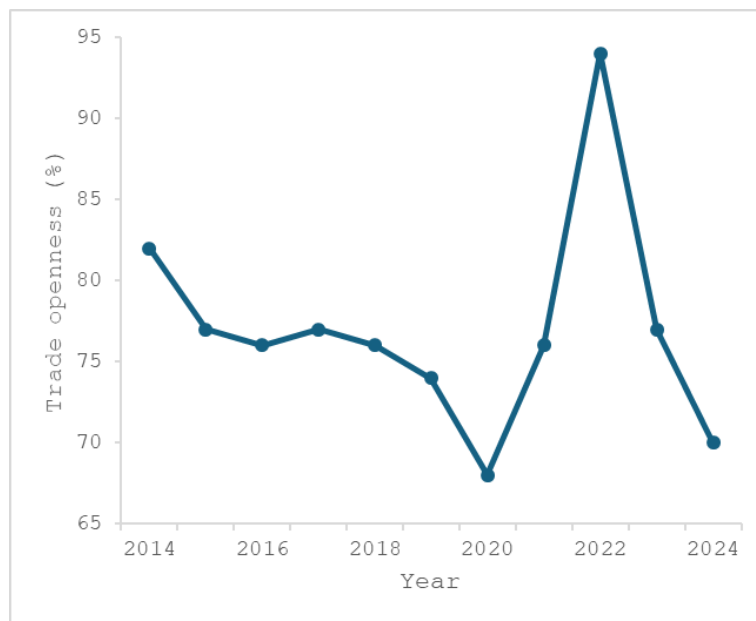
During the period 2014-2019, the degree of trade openness fluctuated moderately between 73% and 81%, reflecting a phase of consolidation of external trade relations, particularly following the deepening of economic ties with the European Union. During this period, the dynamics of exports and imports were broadly correlated with the evolution of GDP, without extreme imbalances in the trade-to-GDP ratio.

The significant decline recorded in 2020 (68.36%) can be explained by the impact of the COVID-19 pandemic on global trade flows. Logistical restrictions, disruptions in supply chains, and the reduction of external demand led to a decrease in the volume of trade relative to the size of the economy. This development demonstrated the direct sensitivity of the Moldovan economy to systemic external shocks.

The year 2022 represents a turning point. The degree of trade openness reached 93.32%, the highest level during the entire analysed period. This increase reflects not only an expansion of exports but also a strong intensification of imports in a regional context marked by geopolitical instability and the reconfiguration of trade routes. The high volume of trade relative to GDP indicates a significant external exposure, as the economy became strongly connected to the dynamics of international trade flows. Under conditions of regional instability, such a level may amplify both temporary trade opportunities and risks associated with external volatility.

These results confirm the conclusions of international studies, which argue that economies characterized by high levels of trade openness benefit from increased integration into global markets, but at the same time face higher exposure to external economic fluctuations. In this context, the literature underlines that openness represents both a source of growth and a channel through which external shocks are transmitted.

In 2023 and 2024, a downward adjustment of the indicator can be observed, reaching 69.32% in 2024. This evolution suggests a relative normalization of the relationship between trade and GDP, supported by the partial stabilization of trade flows and the growth of nominal GDP. The decline of the indicator does not imply a withdrawal from international trade, but rather a rebalancing between the size of the economy and the volume of trade exchanges. The evolution of the degree of trade openness over the analysed period is presented in Figure 2.



**Figure 2. Trade Openness of the Republic of Moldova (2014-2024)**

*Source:* Developed by the author based on data from the National Bureau of Statistics of the Republic of Moldova. Accessed on March 1, 2026, from <https://statistica.gov.md>

The degree of trade openness presented in Figure 2 highlights the high level of integration of the economy of the Republic of Moldova into international trade. Throughout the analysed period, the indicator recorded significant fluctuations, yet its values remained consistently at a high level. This evolution reflects the dependence of the national economy on external trade flows and its sensitivity to changes in the international economic environment. The sharp increase observed in 2022 indicates an intensification of trade exchanges within a regional context marked by geopolitical instability and economic volatility, while the subsequent decline suggests a gradual adjustment in the relationship between trade and the size of the economy.

Overall, the high level and volatility of the indicator confirm the dual nature of trade openness. On the one hand, external integration facilitates access to markets, the diversification of exports, and the attraction of resources. On the other hand, this integration enables the rapid transmission of external shocks into the domestic economy, amplifying vulnerability during periods of global or regional crisis. Although this indicator is not directly included in the estimated econometric model, it provides a relevant context for

interpreting the evolution of exports and for understanding the degree of integration of the national economy into the international trading system.

At the same time, the analysis of the degree of trade openness provides a useful framework for assessing the external vulnerability of the economy. A high level of this indicator suggests that the evolution of economic activity is significantly influenced by the dynamics of external markets and by the performance of trading partners. Under such conditions, fluctuations in the international economic environment may have direct effects on macroeconomic stability and on export performance.

For a more in-depth assessment of external vulnerability, it is necessary to analyse the trade imbalance in relation to the size of the economy. In this regard, the trade deficit and its share in GDP were calculated for the period 2014-2024.

**Table 4. Trade Deficit and Its Share in GDP (2014–2024)**

Year	Trade Deficit (thousand USD)	GDP (thousand USD)	Deficit / GDP (%)
2014	2.977.429,3	9.399.967	31,67
2015	2.019.983,1	7.798.648	25,90
2016	1.975.818,3	7.980.938	24,75
2017	2.406.363,3	9.518.976	25,28
2018	3.053.883,8	11.251.641	27,14
2019	3.063.319,9	11.735.722	26,10
2020	2.948.882,2	11.531.922	25,57
2021	4.032.256,6	13.690.980	29,45
2022	4.886.833,6	14.520.739	33,65
2023	4.626.845,4	16.714.886	27,68
2024	5.510.122,9	18.206.842	30,27

*Source:* Developed by the author based on data from the National Bureau of Statistics (Accessed on March 1, 2026, from [https://statistica.gov.md/ro/statistic\\_indicator\\_details/19#data\\_bank](https://statistica.gov.md/ro/statistic_indicator_details/19#data_bank))

The trade deficit was calculated as the difference between imports and exports, while its share in GDP was determined according to the following relationship:

$$\text{Trade Deficit} = \text{Imports} - \text{Exports} \quad (2)$$

$$\text{Deficit / GDP} = (\text{Trade Deficit} / \text{GDP}) \times 100 \quad (3)$$

The data presented in Table 4 highlight the structural nature of the trade imbalance of the Republic of Moldova. Throughout the entire analysed period, the trade deficit remained at relatively high levels, varying between approximately 25% and over 33% of GDP.

The years 2014, 2022, and 2024 stand out due to particularly high levels of the deficit relative to GDP, exceeding the 30% threshold. Such a level reflects significant pressure on the macroeconomic balance and indicates an increased dependence on external financing.

In 2022, when the deficit reached 33.65% of GDP, the economy simultaneously faced rising imports and heightened regional volatility. This combination suggests an amplification of external vulnerability within an uncertain geopolitical context.

The persistence of the deficit at high levels confirms that, although exports have increased and the orientation toward the European Union has strengthened, the domestic economic structure does not yet generate sufficient resources to balance trade flows.

Persistent trade imbalances are considered an indicator of external vulnerability, as dependence on imports and the need to finance the deficit may increase the sensitivity of the

economy to external shocks and to changes in international trade conditions (Eaton & Kortum, 2002).

Relating the trade deficit to GDP complements the analysis of the degree of trade openness and provides a clearer picture of external vulnerability. While trade openness reflects the level of integration, the trade deficit expresses the sustainability of this integration. In the case of the Republic of Moldova, external integration is high, yet the persistent trade imbalance indicates the existence of structural vulnerabilities that may amplify the effects of regional geopolitical shocks.

In order to assess the factors influencing export performance, a simplified econometric model was estimated, in which total exports are explained by the size of the economy and the geographical orientation of exports.

**The model has the following form:**

$$\ln(\text{EXP}_t) = \alpha + \beta_1 \ln(\text{GDP}_t) + \beta_2 \text{SH\_UE}_t + \varepsilon_t(4)$$

where:

- $\text{EXP}_t$  – represents the value of total exports in year  $t$  (thousand USD);
- $\alpha$  – represents the intercept of the model;
- $\beta_1$  and  $\beta_2$  – represent the regression coefficients;
- $\text{GDP}_t$  – represents the nominal gross domestic product in year  $t$  (thousand USD);
- $\text{SH\_UE}_t$  – represents the share of exports directed to the European Union in total exports;
- $\varepsilon_t$  – represents the error term, capturing the influence of other factors not explicitly included in the model.

The model is based on two fundamental economic hypotheses. First, the size of the economy influences export capacity, as a larger economy (measured by GDP) has more developed productive capacities, better infrastructure, and a broader industrial base, which supports the growth of exports. Second, the geographical orientation of exports may influence their stability, and deeper integration into the European Union market can contribute to stabilizing trade flows due to access to a large and relatively predictable market.

**Table 5. OLS Estimation Results for the Export Determinants Model (2014–2024)**

Variable	Coefficient	t-statistic	Probability
Constant	-1,84	-2,21	0,058
$\ln(\text{GDP})$	0,91	8,12	0,000
SH UE	0,29	2,44	0,041

*Source:* Developed by the author based on data from the National Bureau of Statistics (Accessed on March 1, 2026, from <https://statistica.gov.md/ro/>)

The model yields  $R^2 = 0.88$  and Adjusted  $R^2 = 0.85$ , indicating that approximately 88% of the variation in exports is explained by the included variables.

The model is estimated based on an annual series covering the period 2014–2024, an interval that includes distinct economic stages and relevant episodes of structural adjustment. Although the analysis uses a limited number of observations, the selected period allows the essential relationships between exports, the size of the economy, and the geographical orientation of trade flows to be captured. Within this framework, the results provide a

coherent perspective on the structural trends that have characterized the economy of the Republic of Moldova in the context of recent trade transformations.

The coefficient  $\beta_1$  associated with the variable  $\ln(\text{GDP})$  is 0.91 and is statistically significant at the 1% level. This means that a 1% increase in GDP is associated, on average, with an increase of approximately 0.9% in exports. This result confirms that export dynamics are closely correlated with the evolution of domestic productive capacity.

The results should be interpreted with caution, as the model does not include all structural factors that may influence export performance, such as institutional quality, human capital, or macroeconomic stability. In econometric analyses of economic growth, the omission of such relevant variables may lead to biased estimated coefficients and to the overestimation or underestimation of relationships between macroeconomic indicators. The inclusion of additional explanatory variables contributes to reducing this type of bias and to obtaining more robust estimates of economic relationships (Barro, 2003).

The coefficient  $\beta_2$ , associated with the share of exports directed to the European Union, is positive (0.29) and statistically significant at the 5% level. This result indicates that an increase in the orientation toward the European Union market contributes to the growth of total exports. From a structural perspective, European integration appears as a factor strengthening external performance.

The results of the econometric model highlight the existence of a positive relationship between the size of the economy and export performance. At the same time, the positive coefficient associated with the share of exports directed to the European Union indicates that orientation toward this market contributes to stabilizing trade flows and strengthening the external performance of the economy of the Republic of Moldova.

The estimated relationships are broadly consistent with previous empirical research, which highlights that export performance in small open economies is closely linked to both economic size and access to stable external markets. In particular, the positive role of the European Union market supports the view that deeper economic integration contributes to improving export capacity and enhancing external resilience.

From a policy perspective, these findings suggest that strengthening the export capacity of the Republic of Moldova requires a coordinated approach targeting both the supply side and the institutional framework. Specifically, policies aimed at increasing the value added of domestic production, reducing administrative barriers to trade, and supporting the integration of local firms into European value chains could contribute to improving export performance. At the same time, given the persistent trade deficit, measures to stimulate import substitution in strategic sectors - particularly energy and intermediate goods - remain relevant for reducing external vulnerability over the medium term.

Based on the empirical results, the analysis suggests that strengthening economic resilience requires a combination of trade diversification, increased value-added exports, and improved integration into stable external markets.

In this context, the European Union represents a key anchor for external stability, while reducing dependence on volatile markets remains a strategic priority.

## 5. Conclusions

The analysis covering the period 2014–2024 highlights several key structural features of the Republic of Moldova's economy in the context of the evolving international trading environment. The consistently high level of trade openness reflects a strong integration into external markets, while the persistence of the trade deficit points to a structural mismatch between domestic production and import needs. At the same time, the gradual reorientation of exports toward the European Union stands out as one of the most important economic shifts of the past decade.

From a strategic standpoint, closer trade relations with the European Union contribute to greater external stability by ensuring access to a large and relatively predictable market. However, this positive trend is accompanied by continued reliance on imports, particularly in sensitive areas such as energy and intermediate goods, which sustains a notable level of external vulnerability.

The findings indicate that improving economic resilience requires a balanced set of measures focused on diversifying the production base, increasing the value added of exports, and supporting sectors with the potential to integrate into regional value chains. At the same time, investments in infrastructure, digital technologies, and renewable energy, together with the development of human capital and innovation capacity, are essential for strengthening the economy's ability to adjust to external shocks over the long term.

Overall, the results suggest that while international trade integration creates opportunities for economic development, it also exposes the economy to external risks. In this context, enhancing competitiveness and addressing structural imbalances remain critical for achieving sustainable economic growth.

The study has certain limitations, primarily related to the relatively small dataset and the simplified structure of the econometric model. Future research could expand the analysis by including additional variables and extending the time horizon, in order to obtain a more comprehensive understanding of external vulnerability and economic resilience.

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