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Economic Mechanisms of Public Administration for Ensuring National Security

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Abstract
This study examines the role of economic mechanisms of public administration in strengthening national security under contemporary global challenges. It aims to identify key economic mechanisms and develop a typology of public administration models based on economic and security characteristics.

The empirical analysis covers 27 European Union countries and combines content analysis with cluster analysis using the Index of Economic Freedom, KOF Globalisation Index, Legatum Prosperity Index, and Fragile States Index. K-means clustering and hierarchical clustering with Ward's linkage identify five distinct clusters, reflecting differences in economic conditions, institutional capacity, and vulnerability. Based on these clusters, five public administration models are distinguished: sustainable market adaptation, investment sustainability, institutional reorganisation, monetary stabilisation, and regulatory stability. The findings highlight the importance of integrating economic mechanisms with broader security strategies and adapting public administration to evolving geopolitical and technological challenges. The study provides recommendations for strengthening financial, regulatory, investment, monetary, and institutional mechanisms and identifies directions for further empirical research.

Keywords: economic mechanisms, national security, public administration, cluster analysis, economic resilience, European Union.

JEL Classification: F52; H83; G18; H56.

Introduction

National security is a fundamental condition for the existence and development of any state. It ensures the protection of key interests of individuals, society and the state from a wide range of internal and external threats. In today's world, where globalisation, geopolitical conflicts, economic crises, cyber threats and rapid technological progress create new challenges, traditional approaches to ensuring security are becoming less effective. In such conditions, the financial mechanisms employed in the public administration system become the primary tools for managing resources. They enable the state not only to maintain the stability of the national economy but also to respond promptly to security threats.

Economic mechanisms in the context of public administration can be defined as a set of tools, methods and levers. With their help, the state influences economic processes to achieve strategic goals, in particular ensuring national security. These mechanisms encompass various areas, ranging from budgetary financing of the security and defence sector to market regulation, innovation stimulation, and economic policy coordination during times of crisis. The role of these mechanisms is not only to counter threats, but also to create economic conditions for long-term stability and development of the state.

The relevance of the research topic is determined by the need to adapt economic instruments to modern realities. Global challenges, including economic instability, migration crises, and climate change, require flexibility and innovative approaches from public administration systems.

This paper aims to develop a typology of public administration models for strengthening economic security based on a cluster analysis of key economic indicators. To achieve this goal, the following tasks have been identified:

- Identify and systematise the main types of economic mechanisms used in public administration to strengthen national security.
- Analyse the levels of application of these mechanisms in different countries, assess their effectiveness and identify their strengths and weaknesses.
- Propose practical measures to improve economic mechanisms of public administration, taking into account current realities.

Research hypothesis: There are clear cluster models of economic mechanisms of public administration that correlate significantly with the level of national security. In particular, countries with active economic diversification and high institutional efficiency demonstrate greater resilience to global challenges. The novelty of the study lies in a comprehensive analysis of the adaptability of economic mechanisms of public administration to modern hybrid threats (cyberattacks, technological dependence, global supply chains). Unlike previous works, which often focused on individual instruments, this article offers a broader approach. It employs resource-based, institutional, and risk-based approaches, as well as cluster analysis, to identify patterns between economic indicators and security levels. For the first time, a comparative assessment of the effectiveness of mechanisms in European Union (EU) countries has been conducted based on their economic stability and institutional maturity.

1. Literature Review

National security in today's world is closely linked to the economic mechanisms used in public administration. In the context of globalisation, growing geopolitical tensions and contemporary challenges, economic mechanisms are becoming particularly important. In particular, infrastructure investments, export controls and industrial subsidies are essential tools for ensuring national security.

The traditional understanding of national security, which was mainly limited to military aspects, is now expanding to include economic stability, technological development and environmental aspects of sustainability. This suggests that the understanding of national security is influenced by social and political factors, reflecting a growing recognition of the importance of economic elements in state security (Wang et al., 2025). A broader contemporary understanding of national security includes aspects such as critical infrastructure resilience, control over dual-use technologies, energy, food, medical and social security. This expansion suggests that economic factors have a direct impact on a state's ability to ensure the well-being and stability of its population. In particular, it is emphasised that resilient supply chains are crucial to national security as they minimise the ability of adversaries to exploit dependencies and vulnerabilities (Schortgen, 2025).

A comparative analysis of economic security policies reveals that countries such as the United States, Japan, the European Union, the United Kingdom, and South Korea are implementing measures to strengthen their economic security. These measures include trade and investment barriers, industrial policy, and the pursuit of broad capabilities. The European Commission has also developed a new economic governance framework aimed at ensuring green and digital transitions, strengthening economic and social resilience, and enhancing Europe's security capabilities (Edmonstone, 2024).

A report by the US Department of Homeland Security highlights the complexity of threats to national security that could cause significant economic damage. Additionally, research (Witt & Ciravegna, 2025) suggests that concerns about national security can influence the decisions of transnational corporations to exit markets. This highlights the interconnection between economic activity and security. An analysis of the role of public administration in ensuring national security underlined the need for strategic planning and implementation of policies aimed at strengthening national security in the face of growing risks and threats. In complex conditions, the adaptability and readiness of state institutions to rapid changes in the security environment are crucial (Shchokin et al., 2023).

Contemporary research emphasises that state economic strategy has become a response to new national security challenges. Weiss (2024) notes that the United States is resuming the active use of economic instruments to maintain technological superiority over China. The rise of economic state strategy is affecting the global trading system, contributing to fragmentation through trade barriers and sanctions. Countries are using economic levers to achieve geopolitical goals.

Economic resilience is a multifaceted concept that encompasses supply chain security, the ability to withstand and recover from shocks, and the adaptability of various economic sectors. Supply chain flexibility is a key aspect of economic resilience, enabling countries to adapt to multiple challenges. NATO recognises the importance of national and collective resilience as a prerequisite for robust deterrence and defence. It is developing a framework to enhance resilience in the fields of defence and security (NATO, 2025).

Studies emphasise the need to integrate the economic consequences of military spending into generally accepted economic models, as it has a significant impact on broader socio-economic indicators. The effectiveness of defence spending as a mechanism for national security is determined not only by the amount of money spent, but also by strategic planning, technological innovation and political support (Dall'Agnol, 2025).

Building economic resilience is a crucial component of national defence from various perspectives, including logistics, economic complexity, and management efficiency. The communication theory of resilience offers approaches to understanding and responding to economic shocks, emphasising social processes and collective meaning-making. For example, the economic resilience index developed for countries in Central and Eastern Europe and the Black Sea region identifies key factors influencing resilience in this geopolitical context (Marek & Strub, 2025).

Countries are increasingly using foreign direct investment screening to block foreign access to sensitive sectors. The OECD and UNCTAD recommend that public institutions restrict investments that pose a threat to national security, provided these measures are consistent with good faith obligations under international law (Lorfing, 2021). Akbari and MacKenzie (2025) propose an optimisation model to support decision-making to assist policymakers in the field of national security. It aims to select projects that best reduce threat risks while adhering to budget constraints. The model considers multiple threats, probabilistic risk assessments, and multidimensional consequences, enabling the effective allocation of resources and increased resilience to disasters.

The topic of economic sanctions as a tool for ensuring national security has become particularly relevant. Smart sanctions are more effective in achieving compliance, as the likelihood of compliance is higher for financial and military sanctions than for trade sanctions. The likelihood of compliance also increases if the goal is to promote democracy, but decreases if the goal is to influence politics, effect regime change, or combat terrorism (Caetano et al., 2023).

The United States has significantly intensified its efforts to utilise economic mechanisms to ensure national security. The 2022 National Security Strategy (NSS) integrates economic security into the national framework, identifying China as the most significant geopolitical challenge to the United States. The strategy emphasises domestic industrial policies and substantial investments to strengthen the economy and technological base (U.S. Department of Defense, 2022).

There are some contradictions in the different approaches taken by scholars. For example, Caetano et al. (2023) argue that sanctions are only effective if there is a clear geopolitical goal, while Weiss (2024) emphasises that their fragmentation harms global trade. One can agree with Weiss, as sanctions often lead to unpredictable consequences, as evidenced by, for example, rising energy prices in the EU, which the instance of clusters of countries with low economic stability can confirm. The study by Doppen et al. (2024) emphasises the critical nature of supply chains, while the analysis by NATO (2025) notes the importance of digital transformation. In our opinion, these approaches are essential, but the lack of integration between technological and economic policies, as is the case in some countries, reduces their effectiveness. Researchers (Moon & Yeon, 2024) argue that the active use of US economic instruments against China is effective. At the same time, Lorfing (2021) warns that excessive state intervention may violate international trade agreements.

At the same time, some gaps require further research. Specifically, there is a lack of comparative analysis of economic mechanisms across different European Union (EU) regions. There is also insufficient connection between economic instruments and specific aspects of security (e.g., cyber defence), as well as a lack of practical recommendations on adapting mechanisms to hybrid threats.

2. Materials and Method

Research Procedure

To achieve the research objective, a comprehensive research approach was applied, combining theoretical analysis, empirical evaluation and synthesis of the data obtained. The research was structured to ensure the consistent implementation of the defined tasks and employed both qualitative and quantitative methods. The study included the following main stages:

- A review of scientific literature was conducted to summarise existing approaches to economic mechanisms in public administration related to national security.
- The empirical part of the study involved a comparative analysis of EU countries with different economic and security indicators.
- Countries were grouped according to economic indicators that affect national security, using cluster analysis.

Sampling

The empirical part of the study involved a comparative analysis of 27 European Union (EU) countries, which varied in terms of their economic and security indicators (Table 1). Focusing on the 27 EU countries provides a reliable testing ground, as these states share similar economic policies and democratic systems. Excluding non-EU countries eliminates omitted variable bias caused by divergent political regimes. This controlled context isolates the variance in national-level economic mechanisms, ensuring that differences in security outcomes directly reflect the efficiency of domestic public administration models rather than disparate geopolitical alignments. The Index of Economic Freedom records a positive correlation between economic freedom and various social and economic goals. Economic freedom is associated with more economically developed societies and security of development (Heritage, 2025). The “economic” sub-index of the Globalisation Index demonstrates the economic aspects of globalisation (KOF Swiss Economic Institute, 2024).

The Legatum Prosperity Index assesses the level of prosperity of countries based on a wide range of factors that influence the well-being and development of society (using the "economic quality" sub-indicator) (Prosperity Institute, 2023). The Fragile States Index measures a country's level of instability, which can be one of the factors in understanding overall security in a state (FFP, 2024).

Table 1: Economic and Security Indicators for EU Countries

Country	Index of Economic Freedom	Globalisation Index	Legatum Prosperity Index	Fragile States Index
Austria	69,70	82,96	68,41	23,10
Belgium	69,00	88,05	66,39	30,30
Bulgaria	68,80	71,44	62,46	49,40
Croatia	68,70	76,62	60,36	45,90
Cyprus	73,20	85,29	62,65	54,10
Czech Republic	72,90	81,00	72,12	37,70
Denmark	79,10	84,85	76,81	15,90
Estonia	78,90	85,96	73,32	36,50
Finland	77,00	84,36	70,28	14,30
France	64,40	81,28	65,81	28,30
Germany	71,60	81,85	73,96	24,00
Greece	60,60	78,26	49,58	54,70
Hungary	61,40	82,37	66,05	46,20
Ireland	83,10	87,65	78,81	18,60
Italy	60,90	72,57	57,77	41,10
Latvia	71,40	81,87	65,11	41,40
Lithuania	74,60	80,13	65,40	37,40
Luxembourg	79,50	86,35	76,93	18,70
Malta	66,80	86,08	72,04	31,10
Netherlands	78,20	89,79	74,34	19,50
Poland	67,10	73,11	63,63	41,70
Portugal	70,50	80,84	60,63	25,90
Romania	66,50	72,37	62,04	51,00
Slovakia	68,40	81,16	63,32	35,30
Slovenia	68,30	77,74	64,87	26,10
Spain	66,30	77,45	57,91	44,00
Sweden	77,90	84,05	76,18	20,60

Source: Authors' calculations.

Research Methods

Content analysis was used to identify key concepts and theories. The resource concept states that national security depends on the effective management of economic resources (financial, human, and natural). Economic mechanisms are designed to mobilise and distribute resources in response to threats (Song et al., 2023). The institutional approach emphasises the role of state institutions (budgetary, regulatory, law enforcement) in creating a system of

rules, norms and organisations. They are also responsible for implementing economic mechanisms to support national security (Bown, 2024).

The risk-based approach involves analysing and forecasting economic risks (inflation, debt crisis, sanctions) that could negatively affect the stability and security of the state, and developing mechanisms to minimise them in the context of national security (Roberts, 2023). The concept of economic resilience is defined as the ability of an economic system to withstand shocks, recover from them and adapt to new conditions while maintaining its basic functions and structure (Lin et al., 2024). The content analysis method, based on the identification of key concepts through the systematisation of scientific publications, made it possible to identify the above-mentioned dominant approaches to defining economic mechanisms.

The selected mechanisms directly stem from the applied theoretical frameworks. The resource-based approach operationalises via financial and investment mechanisms to rapidly mobilise capital for critical infrastructure. The institutional approach materialises through regulatory mechanisms (e.g., export controls) to protect markets from adversarial statecraft, while risk-based approaches necessitate monetary mechanisms to absorb macroeconomic shocks. Unlike standard growth-oriented policies, these mechanisms are paramount for national security because they explicitly target structural vulnerabilities and ensure state survival during crises.

Cluster analysis was employed to categorise countries based on economic indicators that influence national security. The k-means method was applied to standardised index data. Additionally, hierarchical clustering was performed using Ward's linkage method to visualise the relationships between countries. The goal was to group 27 EU countries into clusters based on the similarity of their indicators. Before applying clustering algorithms, the dataset was checked for normality and multicollinearity to ensure the reliability and validity of the results. Data normalisation was performed as part of the problem-solving process. Cluster analysis, based on grouping countries by economic indicators (freedom, globalisation, sustainability, and fragility indices), revealed patterns between the level of economic development and the effectiveness of these mechanisms.

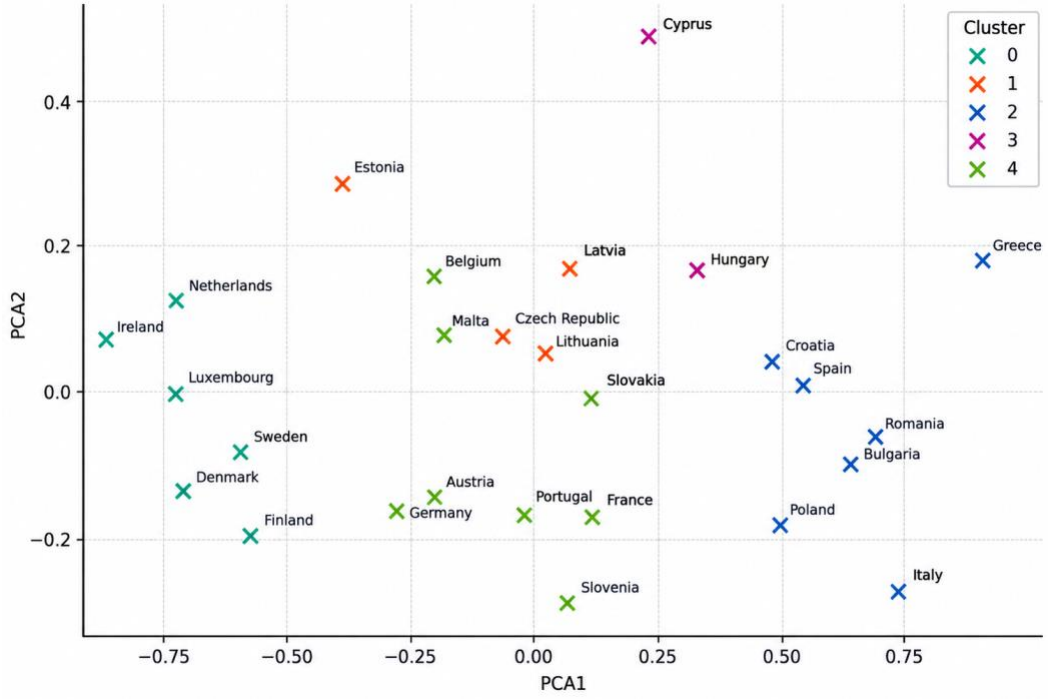
Statistical analysis and clustering were performed using Python, which enabled both the graphical representation of the results (2D graphs) and the construction of dendrograms. The following libraries were used: Pandas – for structuring and preliminary data processing; NumPy – for mathematical operations and array manipulation; SciPy – for statistical tests; scikit-learn – for clustering, data scaling, and cluster number estimation; SciPy.cluster.hierarchy – for clustering and dendrogram construction; Matplotlib and Seaborn – for visualising results.

3. Research Results

Based on the concepts outlined in the methodology, the following key economic mechanisms of public administration aimed at implementing national security functions can be identified: financial (Zuleeg & Lausberg, 2025), regulatory (Zhao et al., 2024), investment (Manna & Owen, 2024), monetary (Chikwira & Jahed, 2024), and institutional (Bran, 2022). It is worth noting that financial and regulatory mechanisms are the most universal, but their effectiveness depends on the level of institutional maturity. At the same time, investment mechanisms need to be adapted to the national context.

Before the clustering process, statistical tests defined by the methodology were performed, which confirmed the absence of problematic multicollinearity between the selected indicators and the adequacy of their distribution. These validation procedures increased the reliability of the subsequent results obtained using k-means and hierarchical clustering. Let us consider the results of using various economic mechanisms based on indicators that demonstrate a country's economic security, including the Index of Economic Freedom, the KOF Globalisation Index, the Legatum Prosperity Index, and the Fragile States Index. To determine the optimal number of clusters in the k-means algorithm, a graph of the dependence of intra-cluster dispersion on the number of clusters k was constructed. Countries are divided into clusters based on the similarity of their values. The clustering results are presented in a 2D graph (Figure 1).

Figure 1: Results of Cluster Analysis

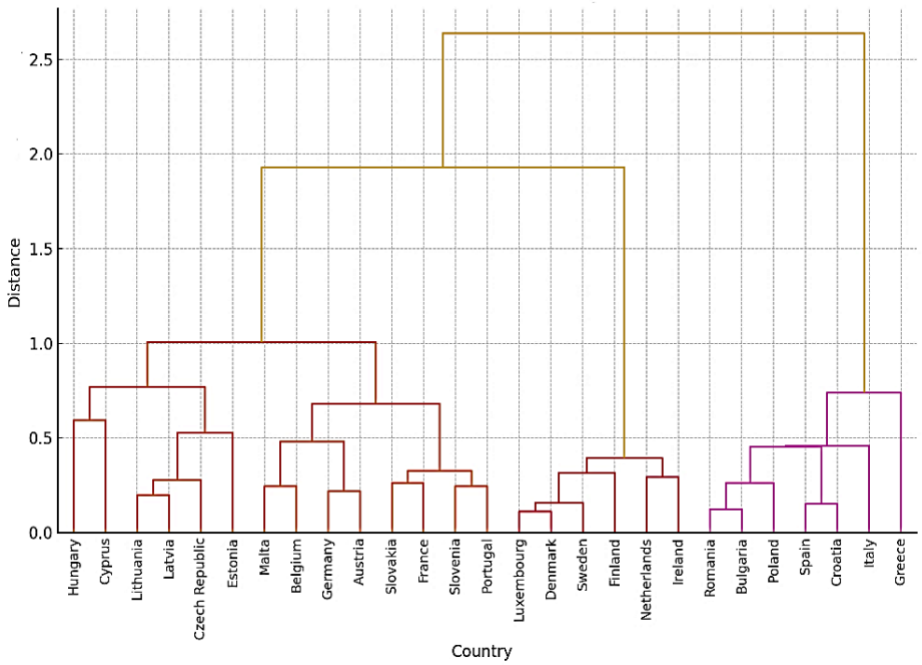


Source: Authors' calculations.

Main component 1 and Main component 2 in Figure 1 are linear combinations of the original variables that capture the most significant variance in the data. They are used to reduce the data dimension to 2D for visualisation. As shown in Figure 1, the clear division into groups highlights the significant differences between EU countries. The tree diagram (dendrogram) of EU country clustering shows how countries are grouped into clusters based on their economic and security indicators (Figure 2).

The five-cluster distribution model reflects economic differences within the EU. Cluster 0 consists of leaders. Clusters 1, 2, and 4 represent the average level with growth potential, and Cluster 3 brings together countries facing challenges in terms of economic performance. Cluster 0 countries have a stable economic base with potential for both growth and adaptation to external challenges. This situation may reflect the presence of developed infrastructure, well-established institutions and the ability to integrate into the global economy while maintaining certain internal reserves. Cluster 1 countries actively attract investment and develop infrastructure, which indicates effective use of investment mechanisms. Cluster 2 countries need to strengthen their institutions and legal systems to improve economic stability.

Figure 2: Dendrogram of EU country clustering



Source: Authors' calculations.

This model confirms that countries with higher economic index values have a lower fragility index, i.e. higher security and stability. Cluster 3 countries face monetary challenges, including inflation and debt burdens, which impact their economic stability. Cluster 4 countries have effective regulatory systems that ensure a balance between market forces and government intervention.

Based on the results obtained and the characteristic features of each cluster, it is possible to form a typology of public administration models that can be linked to a certain level of economic security (Table 2). The distribution of countries indicated in the model implies corresponding differences in the level of economic development. It suggests the identification of significant differences in the use of economic mechanisms of public administration.

Table 2: Public Administration Models by Economic Security Level

Cluster	Public Administration Model	Key Economic Features	Mean Index Values	Countries
0	Model of sustainable market adaptation	High levels of economic freedom, globalisation and prosperity; low vulnerability index	Index of Economic Freedom: 79.1; KOF Index: 85.6; Legatum Prosperity Index: 76.6; Fragile States Index: 17.3	Denmark, Finland, Ireland, Luxembourg, the Netherlands, and Sweden
1	Investment sustainability model	High level of economic freedom and globalisation; moderate vulnerability index. Need to improve investment attractiveness.	Index of Economic Freedom: 74.0; KOF Index: 82.7; Legatum Prosperity Index: 67.3; Fragile States Index: 38.5	Czech Republic, Estonia, Latvia, Lithuania

Cluster	Public Administration Model	Key Economic Features	Mean Index Values	Countries
2	Model of institutional reorganisation	Low economic freedom and prosperity indicators, with a higher vulnerability index. There is a need to strengthen institutions and public administration.	Index of Economic Freedom: 65.1; KOF Index: 73.4; Legatum Prosperity Index: 60.0; Fragile States Index: 44.3	Bulgaria, Greece, Croatia, Italy, Poland, Romania, Spain
3	Stabilisation monetary model	Lowest economic freedom and globalisation scores; high vulnerability index. Inflation and debt burden need to be stabilised.	Index of Economic Freedom: 61.0; KOF Index: 80.3; Legatum Prosperity Index: 57.8; Fragile States Index: 50.4	Cyprus, Hungary
4	Regulatory stability model	Average economic freedom and globalisation indicators; moderate vulnerability index. Regulatory environment reform is needed.	Index of Economic Freedom: 69.3; KOF Index: 82.3; Legatum Prosperity Index: 66.6; Fragile States Index: 30.4	Austria, Belgium, France, Germany, Malta, Portugal, Slovakia, Slovenia

Source: Authors' calculations.

The model of sustainable market adaptation is based on well-developed institutional foundations and flexible market mechanisms that allow for rapid adaptation to changes in the external environment without significant crises. The investment stability model focuses on maintaining constant investment flows and technological development even in the face of global change. The institutional reorganisation model reflects systemic transformations in administrative and economic structures aimed at achieving stability. The stabilisation monetary model focuses on financial instruments of state economic management in conditions of increased state vulnerability. The regulatory stability model evaluates a country's ability to establish robust regulatory mechanisms that mitigate its vulnerability to global risks.

Differences in the results of using economic mechanisms enable the adjustment of measures aimed at enhancing the national economy's resilience in the context of contemporary global challenges. Key concepts (resource, institutional, and systemic) and approaches (risk-oriented and resilience) form the basis for understanding economic mechanisms in the context of national security. The identified mechanisms (financial, regulatory, investment, monetary and institutional) are interrelated tools that require balanced development.

4. Discussion

A study of the economic mechanisms of public administration for ensuring national security revealed their key role in countering modern challenges, such as geopolitical conflicts, economic crises, and cyber threats. The conclusions regarding the growing role of economic mechanisms in ensuring national security are supported by numerous modern scientific works. For example, a study by the Centre for Strategic and International Studies (CSIS, 2024)

emphasises that economic policy, particularly in the field of technological innovation, is necessary to counter threats from certain authoritarian states. This is consistent with the emphasis of our findings on the integration of economic and security policies in the context of geopolitical challenges.

Similarly, Patalinghug (2025) conceptualises corruption, governance quality, and military expenditure as interrelated determinants of state security capacity, demonstrating that national security is contingent not only upon defence resources but also upon economic and institutional resilience. Dancaková (2025), in turn, argues that cybersecurity and the protection of intellectual capital are emerging as important economic mechanisms for safeguarding strategic assets. Taken together, these findings support our results regarding the growing role of economic, technological, and regulatory instruments in the national security system and underscore the need for an active industrial policy aimed at strengthening strategic sectors and national resilience. Furthermore, the article (Adhikari, 2024) demonstrates an empirical link between economic factors and security risks, reinforcing the systemic approach proposed in our article. Finally, the report (SWP, 2024) analyses the impact of US economic instruments on allies, reflecting conclusions about the international dimension of economic mechanisms, particularly in the context of the European Chips Act.

Researchers emphasise the importance of investing in green technologies for economic sustainability (Stiglitz et al., 2023), which supports the article's recommendations on investment mechanisms. Several researchers (Slawotsky, 2024; Markakis, 2024) emphasise the key role of regulatory mechanisms (e.g., export restrictions) for security. Some studies focus on the need to implement industrial strategies (Mahoney et al., 2024), which is relevant for countries classified in Cluster 2 in our analysis.

Despite confirmation of specific results, some studies question the adequacy of economic mechanisms as the sole instrument for ensuring national security. Data from CEPR (2024) emphasise that economic measures aimed at security can have unpredictable consequences for global supply chains and trade. These consequences were not fully considered in the article's analysis. This suggests that external factors, such as geopolitical instability or technological advancements, may limit excessive reliance on economic instruments.

A comparison of the results with contemporary research shows that economic mechanisms are a necessary but insufficient element in ensuring national security. Their effectiveness depends on integration with other strategies and adaptation to specific contexts. Key trends indicate a shift from a traditional approach to national security to a more comprehensive one that considers economic stability and technological development. The key is a growing focus on economic mechanisms that target specific vulnerabilities and threats, rather than large-scale intervention. There is an increasing awareness of the need to strike a balance between state regulation and economic freedom to ensure adequate national security.

Thus, countries with high economic freedom (Cluster 0) have the lowest level of fragility. Conversely, countries with low economic indicators (Cluster 3) are the most fragile. This confirms the research hypothesis (economic mechanisms of public administration correlate significantly with the level of national security). While confirming a correlation between robust economic mechanisms and low fragility, potential reverse causality exists as a bidirectional feedback loop.

Efficient mechanisms generate resources to harden security; conversely, pre-existing institutional stability is a prerequisite for economic freedom and deregulation. Thus, economic mechanisms both engineer security and rely on the predictability it provides. Future research should employ instrumental variable (IV) regressions or dynamic panel models to strictly isolate this causal direction.The results can be used in practice by governments and international organisations to improve economic policy in the context of national security. For example, investment attraction and deep economic reforms should be implemented in Cluster 3 countries to reduce their vulnerability. These directions provide a modern understanding of the relationship between economic mechanisms in public administration and national security, which serves as the basis for developing effective policies in this area. An additional area for improvement could be the expansion of the set of indicators. For example, indices of cyber resilience, innovation potential or healthcare system reliability could complement the existing system and provide a more multidimensional view of national security.

The analysis has certain limitations that must be considered when evaluating its application. First, the sample is geographically limited, based exclusively on EU countries, which may not reflect the diversity of economic and security models in a global context. Second, the use of secondary data, such as official reports and documents from international organisations, may be subject to biases caused by political or ideological factors and the methodologies used.

Based on the identified challenges and cluster-specific findings, Table 3 summarizes the main recommendations for improving the economic mechanisms of public administration across financial, regulatory, investment, monetary, and institutional dimensions.

Table 3: Strengthening Economic Mechanisms of Public Administration for National Security

Economic mechanisms	Areas for improvement
Financial mechanism	▪ Introduction of tax incentives for companies investing in cybersecurity and the development of dual-use technologies. ▪ Creation of reserve funds for rapid response to the economic consequences of unforeseen threats.
Regulatory mechanism	▪ Strengthening control over the export of strategic goods and technologies to prevent their use for military purposes by the enemy. ▪ Antitrust regulation is crucial for ensuring competition in markets that are vital to national security.
Investment mechanism	▪ Attracting investment in the development of critical infrastructure (transport, energy, communications). ▪ Stimulating innovation in the defence industry by providing grants, loans and other forms of support for research and development.
Monetary mechanism	▪ Managing the exchange rate to ensure economic stability in the face of external influences. ▪ Reducing dependence on foreign currencies in international settlements to lessen vulnerability to sanctions.
Institutional mechanism	▪ Strengthening coordination between government agencies responsible for economic and security policy, and increasing transparency and accountability in the activities of government agencies.

Source: Authors' calculations.

To operationalise Table 3, we propose a phased financial roadmap for vulnerable Cluster 3 countries:

- Phase 1. Containment Months (deploy monetary tools to stabilise exchange rates and audit public procurement, minimising external debt exposure).
- Phase 2. Reallocation Months (issue sovereign guarantees for SMEs in dual-use sectors to stimulate secure domestic supply chains).
- Phase 3. Anchoring (establish a National Economic Security Fund, financed by tariffs on high-risk investments, to absorb geopolitical shocks).

Escaping the vulnerability trap demands this sequential approach, prioritising immediate financial stabilisation over structural market liberalisation. About general directions for strengthening economic mechanisms, the following can be highlighted:

- Developing common standards for economic security measures within international organisations (such as NATO and the EU) will increase their effectiveness and help avoid trade conflicts.
- Economic mechanisms should be complemented by military and diplomatic strategies, taking into account intangible factors.
- Ensuring transparency in the implementation of economic measures will reduce the risk of bias and increase confidence in them.

Thus, although economic mechanisms play a crucial role in ensuring national security, their success depends on a balanced approach, consideration of contemporary challenges, and continuous improvement informed by data analysis.

Conclusions

The study found that economic mechanisms of public administration play a key role in ensuring national security in the context of contemporary global challenges, such as geopolitical conflicts and economic crises. Economic mechanisms facilitate the mobilisation of resources, market regulation and stability, which are critical for countering threats. At the same time, it is necessary to use integrated strategies that involve the application of other areas of public policy.

The implementation of modern, practical approaches to financial, regulatory and investment policy reduces the risks associated with hybrid threats and external negative influences. A comparative study of EU countries has shown that the effectiveness of economic mechanisms depends on the level of economic freedom, globalisation and prosperity, which shapes the typology of public administration models. It is also determined by their integration with other strategies and adaptation to national characteristics. The results obtained indicate that economic mechanisms are a necessary but not the only tool for ensuring national security. Their effectiveness depends on a comprehensive approach and the ability to adapt in response to rapidly changing global conditions. This requires the development of common economic security standards within institutional associations; the integration of economic mechanisms with military and diplomatic strategies; and flexibility in the implementation of economic measures.

The results can be used to develop national economic security strategies. They are also helpful in optimising the allocation of resources between financial, regulatory and investment mechanisms, as well as for improving the resilience of critical infrastructure in the face of hybrid threats. The study provides practical tools for political and economic implementation, particularly in areas such as deregulation and digitalisation of governance. Thus, economic

mechanisms are a necessary but not sufficient tool, and their effectiveness depends on a balanced, adaptive and integrated approach. Future research should focus on empirically testing the effectiveness of the proposed economic security mechanisms.

CRediT Authorship Contribution Statement

Krasnostanova, N.: Conceptualization, Methodology, Investigation, Writing – original draft, Writing – review & editing. Izha, M.: Conceptualization, Methodology, Supervision, Writing – review & editing. Mazur, H.: Investigation, Resources, Validation, Writing – review & editing. Kyrylenko, V.: Data curation, Formal analysis, Software, Visualization, Writing – review & editing. Chemerys, M.: Investigation, Data curation, Validation, Writing – review & editing.

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Conflict of Interest Statement

The authors declare that they do not have conflict of interest.

Data Availability Statement

The data used in this study are derived from publicly available secondary sources, including the Index of Economic Freedom, KOF Globalisation Index, Legatum Prosperity Index, and Fragile States Index. The corresponding source links are provided in the References section. The processed dataset used for the cluster analysis is available from the corresponding author upon reasonable request.

Ethical Approval Statement

Not applicable. This study relies exclusively on publicly available secondary, country-level data and does not involve human participants, personal data, animal subjects, or experimental interventions. Therefore, ethical approval was not required.

References

Adhikari, L. D. (2024). Exploring the relationship between national security risks and economic factors: A Nepalese perspective. *Journal of Political Science, 24*(1), 39-56. https://doi.org/10.3126/jps.v24i1.62853

Akbari, P., & MacKenzie, C. A. (2025). Optimising resource allocation to mitigate the risk of disruptive events in homeland security and emergency management. *Computers and Society, arXiv:2504.02652.* https://doi.org/10.48550/arXiv.2504.02652

Bown, C. P. (2024). Trade policy, industrial policy, and the economic security of the European Union. *Peterson Institute for International Economics Working Paper*, 24-2. https://www.piie.com/sites/default/files/2024-01/wp24-2_0.pdf

Bran, A. C. (2022). The economic dimension is the foundation of a state's security. *Scientia Moralitas-International Journal of Multidisciplinary Research*, *7*(2), 31-39. https://doi.org/10.5281/zenodo.7474478

Caetano, J., Galego, A., & Caleiro, A. (2023). On the determinants of sanctions effectiveness: An empirical analysis by using duration models. *Economies, 11*(5), 136. https://doi.org/10.3390/economies11050136

CEPR. (2024). *Key issues in economic analysis in an increasingly turbulent security environment*. https://cepr.org/voxeu/columns/key-issues-economic-analysis-increasingly-turbulent-security-environment

Chikwira, C., & Jahed, M. I. (2024). Analysis of exchange rate stability on the economic growth process of a developing country: The case of South Africa from 2000 to 2023. *Economies*, *12*(11), 296. https://doi.org/10.3390/economies12110296

CSIS. (2024). Beyond economics: How US policies can undermine national security goals. https://www.csis.org/analysis/beyond-economics-how-us-policies-can-undermine-national-security-goals

Dall'Agnol, G. F. (2025). *Defence economics and innovation*. Cambridge University Press. https://doi.org/10.1017/9781009409766

Dancaková, D. (2025). The global economics of knowledge protection: A bibliometric analysis of cybersecurity and intellectual capital research. *Journal of Applied Economic Sciences, 20*(4(90)), 695–715. https://doi.org/10.57017/jaes.v20.4(90).04

Edmonstone, G. (2024). *Economic security policies compared: The United States, its allies and partners*. https://www.ussc.edu.au/economic-security-policies-compared-the-united-states-its-allies-and-partners

FFP. (2024). *Fragile states index. Annual report 2024*. https://fragilestatesindex.org/2025/02/18/https-fragilestatesindex-org-wp-content-uploads-2025-02-fsi-2024-report-a-world-adrift-2-pdf/

Heritage. (2025). *Index of economic freedom*. https://www.heritage.org/index/

KOF Swiss Economic Institute. (2024). *KOF globalisation index*. https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html

Lin, X., Long, H., & Chen, Y. (2024). Looking back deeper, recovering up better: Resilience-oriented contrarian thinking about COVID-19 economic impact. *Sustainability*, *16*(15), 6687. https://doi.org/10.3390/su16156687

Lorfing, P. A. (2021), Screening of foreign direct investment and the states' security interests in light of the OECD, UNCTAD and other international guidelines. In Titi, C. (ed.), *Public Actors in International Investment Law* (pp. 179-199). Springer. https://doi.org/10.1007/978-3-030-58916-5_10

Mahoney, C. W., Tkach, B. K., & Rethmeyer, C. J. (2024). Leveraging national security: Private equity and bankruptcy in the United States defense industry. *Business and Politics*, *26*(3), 362-381. https://doi.org/10.1017/bap.2023.33

Manna, P., & Williams, O. (2024). Critical Infrastructure that Inspires Confidence and Delivers Results: Proceedings from a Symposium Hosted by the William & Mary Public Policy Program. William & Mary Public Policy Program. https://www.wm.edu/as/publicpolicy/news/wmpubpol2024criticalinfrastructuresymp.pdf

Marek, J., & Strub, D. (2025). *US - Japan technology and economic security: Achieving resilience in an era of disruption.* https://www.nbr.org/wp-content/uploads/pdfs/publications/sr116_us-japan_technology_feb2025.pdf

Markakis, M. (2024). The new EU economic governance framework: Principle, policy, and enforcement. *European Law Review*, *49*(5), 478-505. https://pure.eur.nl/files/172117610/Markakis_2024_49_ELRev_Issue_5_Offprint.pdf

Moon, C.-in, & Yeon, W. (2025). Clashes of techno-statecraft: US-China technology rivalry and South Korea's strategy? *Business and Politics,* 27(4), 548–568. https://doi.org/10.1017/bap.2024.26

NATO. (2025). *Resilience reference curriculum*. https://www.nato.int/nato_static_fl2014/assets/pdf/2025/2/pdf/DEEP-resilience-reference-curriculum.pdf

Patalinghug, J. C. (2025). The impact of corruption on military spending in the Asia-Pacific region. *Journal of Applied Economic Sciences, Volume XX,* Summer, 2(88), 232–243. https://doi.org/10.57017/jaes.v20.2(88).05

Prosperity Institute. (2023). *Legatum Prosperity Index*. https://index.prosperity.com/rankings

Roberts, A. (2023). Risk, reward, and resilience framework: Integrative policy making in a complex world. *Journal of International Economic Law*, *26*(2), 233-265. https://doi.org/10.1093/jiel/jgad009

Schortgen, F. (2025). Global Supply Chains and Geopolitical Dynamics, Geopolitical Challenges to the Global Influence of Western Society: A New World Order?, Frederic Lemieux, Marios P. Efthymiopoulos, Josef Demergis. https://doi.org/10.1108/978-1-83708-218-6

Shchokin, R., Soloviov, O., & Tantsiura, I. (2023). The role of public administration in ensuring state security: Strategies and mechanisms of implementation. *Journal of Law and Sustainable Development*, *11*(8), e1521. https://doi.org/10.55908/sdgs.v11i8.1521

Slawotsky, J. (2024). Conceptualizing national security in an era of great power rivalry: Implications for international economic law. *East Asia*, *42*, 279-307. https://doi.org/10.1007/s12140-024-09434-y

Song, M., Xie, Q., Shahbaz, M., & Yao, X. (2023). Economic growth and security from the perspective of natural resource assets. *Resources Policy*, *80*, 103153. https://doi.org/10.1016/j.resourpol.2022.103153

Stiglitz, J., Barrett, S., & Kaufman, N. (2023). *How economics can tackle the 'Wicked Problem'of climate change.* https://igp.sipa.columbia.edu/sites/igp/files/2023-12/How-Economics-Can-Tackle-the-Wickedproblem-of-Climate-Change.pdf

SWP. (2024). *Economy and national security*. https://www.swp-berlin.org/10.18449/2024RP11/

U.S. Department of Defense. (2022). *National defense strategy*. https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF

Wang, K., Chen, B., & Song, Y. (2025). Visual analysis of national security economics based on bibliometrics. *Journal of Political Science and Public Opinion*, *3*(1), 118. https://doi.org/10.33790/jpspo1100118

Weiss, L. (2024). Reviving economic statecraft for national security. *American Affairs*, *8*(2), 3-21. https://www.researchgate.net/publication/380732353_Reviving_Economic_Statecraft_for_National_Security

Witt, M. A., & Ciravegna, L. (2025). Serving national security? MNE responses in economic war. *Journal of World Business*, *60*(3), 101628. https://doi.org/10.1016/j.jwb.2025.101628

Zhao, M., Xiao, X., Yang, J., & Chen, H. (2024). Do regional tax incentive policies improve productivity? *PLoS One*, *19*(8), e0307561. https://doi.org/10.1371/journal.pone.0307561

Zuleeg, F., & Lausberg, P. (2025). Thinking outside the Multiannual Financial Framework: Financing Europe's security priorities. European Policy Centre. https://www.epc.eu/content/Financing_Europe_s_security_priorities_14_02.pdf