



**ECONOMIC ANNALS-XXI**

ISSN 1728-6239 (Online)

ISSN 1728-6220 (Print)

<https://doi.org/10.21003/ea>

<http://www.soskin.info/ea/>

Volume 189 Issue (5-1(1))'2021

Citation information: Okhotnikova, O., & Hlasov, P. (2021). Clustering of the economy in a comprehensive system of the international economic security: organizational economic mechanism. *Economic Annals-XXI*, 189(5-6(1)), 4-14. doi: <https://doi.org/10.21003/ea.V189-01>

UDC 330.332



**Okhotnikova Olena**

PhD (Law), Associate Professor,  
Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University  
32 Ostrozky Str., Vinnytsia, 2100, Ukraine  
[elena-probono@ukr.net](mailto:elena-probono@ukr.net)  
ORCID ID: <https://orcid.org/0000-0003-2927-3363>



**Hlasov Pavlo**

PhD Student (Law),  
Kyiv National Economic University named after Vadym Hetman  
54/1 Peremohy Ave., Kyiv, 03057, Ukraine  
[Pavel\\_Glasov@ukr.net](mailto:Pavel_Glasov@ukr.net)  
ORCID ID: <https://orcid.org/0000-0003-1951-6755>

## Clustering of the economy in a comprehensive system of the international economic security: organizational economic mechanism

**Abstract.** In a globalized world, international economic security has become the key to world order stability. Improving the resilience and competitiveness of the economy is one of the priorities for countries around the world. Furthermore, each country must ensure such a level of its national economic security that will guarantee its safe economic functioning. Clustering the economy can help countries to achieve this. Thanks to the cluster approach, it becomes possible to produce a competitive product and sell it on the world market, which will ensure the effective and rapid development of the international economy. Clustering of the economy can affect on the provision of international economic security and become its main component. Therefore, cluster formations become a productive self-sufficient element in a comprehensive system of international economic security. Empirical and theoretical methods show that there is a relationship between international economic security and clustering of the economy, which is very important in creating the conditions for the security of individual states.

The article proposes to consider the clustering of the economy as the main component of a comprehensive system of international economic security. The integrated system of international economic security is presented in the form of a complex, interconnected, structured algorithm, the components of which are institutions which aimed at guaranteeing security, strategies of national security programs and plans, legal and information support and clustering of the economy.

Besides, clusters can be seen as a link between politics, economics and economic security. Clustering of the economy is directly related to economic security. Clusters cover new industries, innovations, long-term cooperation. They act as catalysts for change in the country's economy. Clusters are related to the political and economic strategies of states. The result of the authors of the strategy of international economic security and the Methodology for assessing the effectiveness of the cluster is a proposal to consider the clustering of the economy an important component of international economic security and an important component of economic policy.

Clusters in the world economic system are able to ensure economic stability in times of crisis, give great economic effect and achieve joint economic success.

**Keywords:** Cluster; Economy; Cluster Formations; International Economic Security; Competitiveness

**JEL Classification:** F02; G34; D20

**Acknowledgements and Funding:** The authors received no direct funding for this research.

**Contribution:** The authors contributed equally to this work.

**Data Availability Statement:** The dataset is available from the authors upon request.

**DOI:** <https://doi.org/10.21003/ea.V189-01>

**Охотнікова О. М.**

кандидат юридичних наук, доцент,

Вінницький державний педагогічний університет імені Михайла Коцюбинського, Вінниця, Україна

**Гласов П. В.**

аспірант,

Київський національний економічний університет імені Вадима Гетьмана, Київ, Україна

**Кластеризация экономики в комплексной системе международной экономической безопасности: организационно-экономический механизм**

**Анотация.** У глобализованном мире международная экономическая безопасность стала залогом стабильности мирового порядка. Повышение устойчивости и конкурентоспособности национальной экономики является одной из приоритетных задач для стран мира. Более того, каждая страна должна обеспечить такой уровень своей национальной экономической безопасности, который будет гарантировать ей безопасное экономическое функционирование. Помочь странам достичь этого может кластеризация экономики. Благодаря кластерному подходу становится возможным производство конкурентоспособного продукта и его реализация на мировом рынке, что обеспечит эффективный и стремительный рост международной экономики. Кластеризация экономики способна повлиять на обеспечение международной экономической безопасности и стать ее главной составляющей. Следовательно, кластерные образования становятся продуктивным самостоятельным элементом в комплексной системе международной экономической безопасности. Эмпирические и теоретические методы показывают, что между международной экономической безопасностью и кластеризацией экономики существует взаимосвязь, которая имеет большое значение в создании условий для обеспечения безопасности отдельных государств.

В статье предложено считать кластеризацию экономики главной составляющей комплексной системы международной экономической безопасности. Комплексная система международной экономической безопасности представлена в виде сложного взаимосвязанного структурированного алгоритма, составляющими которого являются институты, направленные на гарантирование безопасности, стратегии национальных безопасных программ и планов, правовое и информационное обеспечение и кластеризация экономики. Более того, кластеры можно рассматривать как связующее звено между политикой, экономикой и экономической безопасностью. Кластеризация экономики напрямую способствует достижению целей национальной экономической безопасности и является важным компонентом развития международной экономической безопасности и важной составляющей национальной политики мировых государств. Кластеры в мировой экономической системе способны обеспечить экономическую устойчивость в условиях кризисных явлений, дать значительный экономический эффект и достичь общего экономического успеха.

**Ключевые слова:** кластер; кластеризация экономики; кластерные образования; международная экономическая безопасность; конкурентоспособность.

**Охотникова Е. Н.**

кандидат юридических наук, доцент,

Винницкий государственный педагогический университет имени Михаила Коцюбинского, Винница, Украина

**Гласов П. В.**

аспирант,

Киевский национальный экономический университет имени Вадима Гетьмана, Киев, Украина

**Кластеризация экономики в комплексной системе международной экономической безопасности: организационно-экономический механизм**

**Аннотация.** В глобализованном мире международная экономическая безопасность стала залогом стабильности мирового порядка. Повышение устойчивости и конкурентоспособности национальной экономики является одной из приоритетных задач для стран мира. Более того, каждая страна должна обеспечить такой уровень своей национальной экономической безопасности, который будет гарантировать ей безопасное экономическое функционирование. Помочь странам достичь этого может кластеризация экономики. Благодаря кластерному подходу становится возможным производство конкурентоспособного продукта и его реализация на мировом рынке, что обеспечит эффективное и быстрое развитие международной экономики. Кластеризация экономики способна повлиять на обеспечение международной экономической безопасности и стать ее главной составляющей. Следовательно, кластерные образования становятся продуктивным самостоятельным элементом в комплексной системе международной экономической безопасности. Эмпирические и теоретические методы показывают, что между международной экономической безопасностью и кластеризацией экономики существует взаимосвязь, которая имеет большое значение в создании условий для обеспечения безопасности отдельных государств.

В статье предложено считать кластеризацию экономики главной составляющей комплексной системы международной экономической безопасности. Комплексная система международной экономической безопасности представлена в виде сложного взаимосвязанного структурированного алгоритма, составляющими которого являются институты, направленные на гарантирование безопасности, стратегии национальных программ безопасности и планов, правовое и информационное обеспечение и кластеризация экономики. Более того, кластеры можно рассматривать как связующее звено между политикой, экономикой и экономической безопасностью. Кластеризация экономики напрямую способствует достижению целей национальной экономической безопасности и является важным компонентом развития международной экономической безопасности и важной составляющей национальной политики мировых государств. Кластеры в мировой экономической системе способны обеспечить экономическую устойчивость в условиях кризисных явлений, дать значительный экономический эффект и достичь общего экономического успеха.

связана с экономической безопасностью. Кластеры охватывают новые отрасли, инновации, долгосрочное сотрудничество. Они выступают как катализаторы изменений в экономике страны. Кластеры связаны с политическими и экономическими стратегиями государств. Результатом разработанных авторами стратегии международной экономической безопасности и Методики оценки эффективности кластера есть предложение считать кластеризацию экономики важным компонентом развития международной экономической безопасности и важной составляющей экономической политики мировых держав. Кластеры в мировой экономической системе способны обеспечить экономическую устойчивость в условиях кризисных явлений, дать большой экономический эффект и достичь общего экономического успеха.

**Ключевые слова:** кластер; кластеризация экономики; кластерные образования; международная экономическая безопасность; конкурентоспособность.

## 1. Introduction

Increasing the impact of global problems of mankind on the world economy development requires states to recognize that the clustering of the economy in a comprehensive system of international economic security is a significant factor in economic growth. The world economy has never faced such a substantial production and profits layoff over the past 100 years. Many countries worldwide seek long-term economic relations, but the problems of international economic security remain out of consideration. Due to the unusualness and novelty of the various threats posed by the pandemic to the development of the international economy, it is necessary to identify conditions, events, phenomena, and processes that are sources of threats, with further assessment of their impact on international economic security.

Each state must ensure a level of its national economic security that will guarantee its safe economic performance. The importance of ensuring economic security not only in their own country but around the world is becoming crucial today. The basis for providing a sufficient level of security in the world must be a comprehensive system of international economic security. In complex modern conditions, the creation of such a system becomes relevant.

An important issue is an overcoming decline in production of most countries' economies. Clustering the economy will support and encourage cluster initiatives for both the national and world economies. National economic interests include the development of a competitive economy. Clusters can be a powerful incentive for developing their own economy in the country, increasing its competitiveness, and entering the international business environment, thereby reducing the level of threats of economic crises, which will positively affect the state of international economic security.

## 2. Brief Literature Review

The works of foreign authors such as Ronald Harry Coase (2007), Roy Forbes Harrod (2011), Shahar Hameiri (2019), John Maynard Keynes (2015), William Arthur Lewis (1977), Robert Merton Solow (1994), Fabio Scarpello (2018), Joseph Alois Schumpeter (1951) are devoted to the problems of international economic security.

The authors define economic security as an essential component of security in general and underscore that the state of economic security is determined by the level of development of state institutions and their impact on the economy. Much attention in the works is paid to the problems of lack of guaranteed protection of national economic interests.

Domestic scientists V. Aliieva-Baranovska, Z. Varnalii, O. Vlasyuk, V. Geiets, S. Davydenko, I. Dakhno, J. Zhalilo, V. Muntiian, G. Pasternak-Taranushchenko, V. Prykhodko, G. Sytnyk, V. Smolyanyuk, V. Fedorenko, S. Shagoian investigated complex approaches to the interpretation of the term «economic security» as a model, system and complex category. Many works are also devoted to the study of essential components of economic security. One such component may be the clustering of the economy. Thus, Ukrainian researchers O. Hrybinenko, S. Kovalenko, I. Morozova, M. Naumov, S. Okseniuk, I. Onipko, L. Rineyska, M. Khmara, V. Chernykh have studied the role of clusters in ensuring international security and in the development of the world economy.

## 3. Purpose

The article aims to research the clustering of the economy as the main component of a comprehensive system of international economic security, namely its organizational and economic mechanism.

#### 4. Results

Theoretical and methodological approaches to solving problems of international economic security were formed both under the influence of world trends and in the light of national economic interests.

International security and the national security of countries are increasingly influenced by the processes that occur worldwide. The major trends in the world economy and politics lead to radical changes in international economic security. Since the beginning of the pandemic, the situation in Ukraine and around the world can have quite complex and even catastrophic results for states' economies. The world economy is at a kind of the point of economic singularity. M. Deering defined singularity as an unprecedented event in people's history, when life, as we know it, will change from «everyday life» to a state of virtually unlimited possibilities (Deering, 2007). Reaching the point of singularity by the economy of states has led not only to the slowdown in economic development due to the constraints caused by the pandemic but also to the emergence of new global problems. It is necessary to understand that the economy is in the process of transformation and therefore requires a qualitative transition to new conditions in connection with the pandemic to avoid worsening of these problems. Consequently, it is necessary to move toward ensuring the common interests of humankind, to unite the efforts of all nation-states. Without synergies, it will be impossible for the economy to achieve efficiency and a significant recovery in economic activity. Therefore, the strategic vision of international economic security in this period should be based on the synergy of proven scientific approaches and innovative developments in strengthening the protection of the economic interests of states. The new IMF forecasts predict the growth of the world economy at 5.5% in 2021. Subsequently, it is expected to slow down slightly in 2022 - to 4.2%. The upward revision of the 2021 forecast shows the positive impact of vaccinations in some countries, additional support from policy measures in late 2020, particularly in the US and Japan, and the expected increase in activity in industries with a high intensity of personal contacts as the health crisis subsides.

This means that even after a significant part of the lockdown restrictions has been lifted, the economic recovery from a pre-crisis drop to pre-crisis levels could take a long time. Although most public attention is paid to the health sector's ability to respond to the crisis, the outbreak has essential implications for the financial health of local governments (McDonald & Larson, 2020). Financial health means the ability of a government to balance its financial obligations with available revenue streams (Leiser & Mills, 2019).

Global economic activity will slowly recover, but now we see a long period of low economic activity (Figure 1).

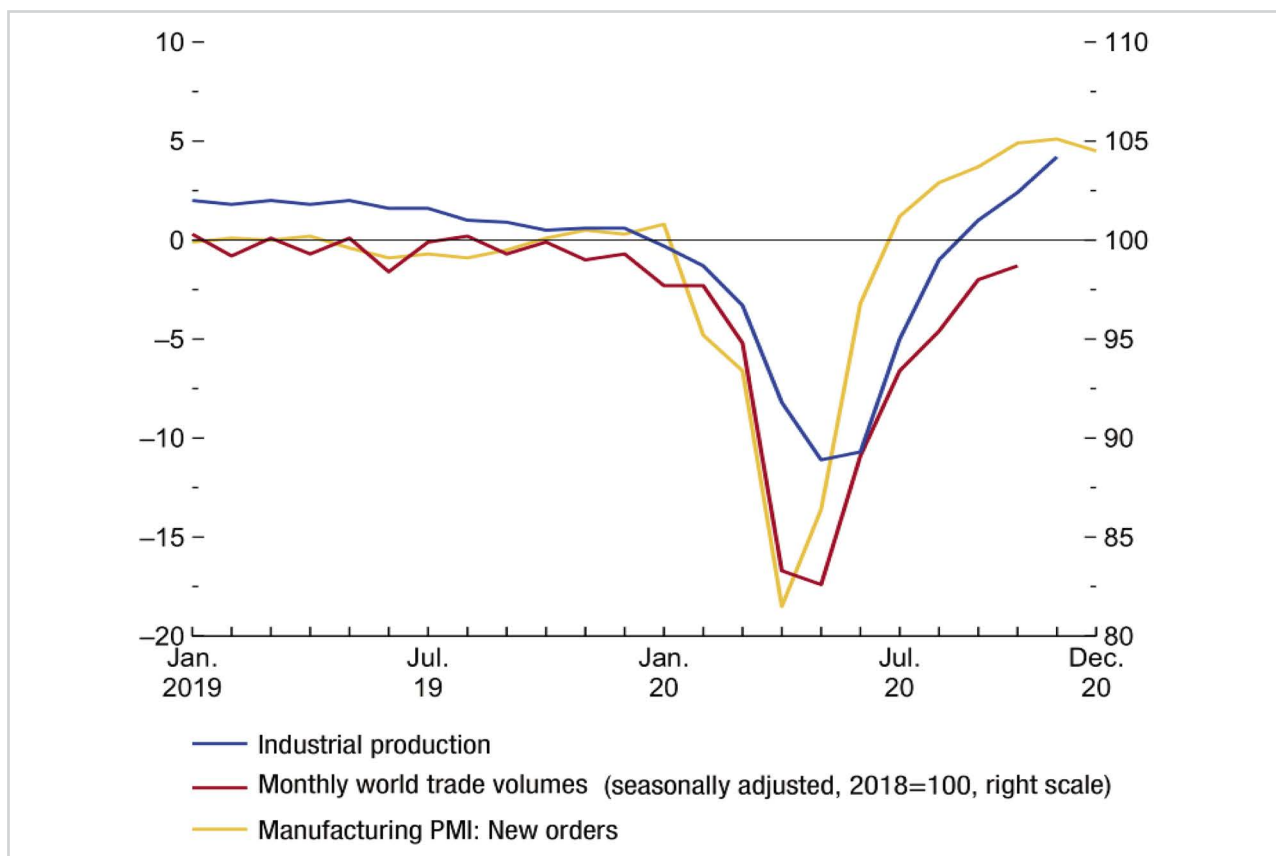
Despite such predictions, Bloomberg News notes that US allies want economic cooperation, not just security. International economic cooperation is important to sustain global economic recovery, increase productivity and living standards, and advance America's security interests in Asia.

The transformation of Hong Kong into an international financial center is an example of the spontaneous order that emerged under limited government. It is doubtful that Hong Kong's national security can contribute to national security or economic and social stability, especially considering the growing tensions in Sino-US relations after the outbreak of the COVID-19 pandemic. It is also questionable whether the law is in the interests of both China and Hong Kong. Without Hong Kong's special status as an international financial center and without a window to absorb foreign investment and new technology, it is unlikely that China will be able to continue sustainable growth. Empirical evidence from numerous intergovernmental studies has clearly shown that factors such as the rule of law, civil liberties, capitalism, investment, and openness to trade are good for economic growth. In contrast, factors such as wars and market distortions are bad (Chu, 2021).

This suggests that changes in economic relations affect the state of international economic security, and trade support comes first, making economic security protection slower. This is a substantial challenge to international economic security. Each country must understand that national economic interests depend on the conditions in which they find themselves. Thus, international economic security can become a priority and a tool for building a competitive economy.

All the time, changes in society and the world force states to create effective mechanisms to protect their economies. New challenges and threats require the leadership of states, scientists, and the public to look for ways to solve the problems that arise in the sectors of national





Note: PMI = purchasing managers' index.

Figure 1:  
**Indicators of world economic activity**  
Source: IMF

economies. Changing the paradigm of international economic security requires rethinking priorities, principles, and concepts to form its new foundations.

The doctrine of international economic security started to form based on modern economic theory, which contains a wide range of current economic doctrines from the standpoint of the problems studied by various schools and areas of economics and from the standpoint of analytical tools.

There are various views on the doctrinal nature of economic security in the politics of the world's leading countries in the modern economical literature. Many top Ukrainian and foreign economists have devoted their work to the economic security study. Scientific and theoretical research is the basis for economic security definitions. However, scientists do not have a common opinion on this issue. Therefore, there are two directions of definitions of economic security. The first is based on threats that exist permanently and always have a negative impact on the functioning of the economic entity; the second - as a particular state of the economic system, does not include possible threats.

Theoretical generalizations of scientific views have made it possible to determine economic security as a state of the economy in which a sufficiently high and stable economic growth is ensured; effective satisfaction of economic needs; state control over the movement and use of national resources; protection of economic interests of the country at the national and international levels. Thus, economic security is seen as a national security component, its foundation, and its material basis. Under economic security is understood as a set of internal and external conditions under which the country's ability to maintain the economy's competitiveness, promote effective dynamic growth of the national economy, and meet the needs of society, state, and its citizens.

The official status of the «economic security» term was defined in the decisions of the UN General Assembly at its 40<sup>th</sup> session in 1985 when the resolution «International Economic Security» was adopted. It identified «the need to promote international economic security for the

socio-economic development and progress of each country, especially developing countries, through international economic cooperation and the use of the potential of multilateral and regional organizations.» However, despite thorough scientific research, there is no consensus in economics on the concept of international economic security.

Thus, some authors believe that international economic security is a set of international conditions for the existence of agreements and institutional structures, in which each member state of the world community is free to choose and implement its strategy of social and economic development, without external and political pressure, counting for non-interference, understanding and mutually acceptable and mutually beneficial cooperation from other states (Bashtova, 2015). The synergetic nature of security is that global security integrates into a single system all social spheres - political, economic, social, and spiritual, with all subsystems of human activity, creating a systemic effect of sustainable development, which did not exist before (Maslova, 2014). We believe that to create a systemic effect of sustainable social development of international economic security, and it is necessary to establish cooperation of all institutions of political, economic, social, and humanitarian spheres of human life, society, state, and in some cases, international institutions as a whole system.

Security should be considered a specific property of dynamic systems as a comprehensive criterion for assessing its quality and integrity, which characterizes the dynamics of system development and its technical implementation (Korzh, 2019).

The «**international economic security**» concept is closely related to the «global security» category which is seen as «conditions for the coexistence of institutional structures in which each member of the world community has the opportunity to freely choose and implement its development strategy in accordance with globalization.» (Tkachuk, 2020).

After analyzing the views of leading scientists, we can conclude that a unanimous concept of international economic security in economics is absent. Thus, **international economic security** is defined as a set of international conditions, a system, and specific property, state, and process.

Therefore, we propose to define **international economic security** as a condition for compliance with world order rules by national and international institutions of the world's leading countries involved in conducting independent domestic and coordinated foreign policy to respect all world powers' rights.

Also, different authors define the components of international economic security differently.

Components of economic security are a macroeconomic, foreign economic, investment, financial, scientific and technological, energy, industrial, demographic, social, food security (Lyashenko, 2015).

The most significant impact on economic security is exerted by its components such as energy, financial, scientific, and technological (Sak, 2013).

All scholars define **economic security** as one of the most critical components of national security, which ensures its protection and implementation (Levkovets, 2020).

Ecological and economic security is an integral part of international economic security and should be defined as a state of protection of social, economic, and environmental interests of territories, countries, society, and individuals from threats arising from destructive natural forces, technical systems, and industries, with characteristic to provide it with forms and methods of forecasting dangerous situations, allowing to get out of them with the most negligible consequences for the environment, economy, and human health (Gribinenko, 2019).

Although the authors distinguish various components, it should be noted that all these components are interconnected and have a remarkable role in creating the conditions for the security of individual states.

In our opinion, the components of international economic security are legal, human rights, organizational, foreign economic activity, innovation and investment, clustering of the economy. An important place among these components is occupied by the latter, which contributes to the effective operation of the organizational and economic mechanism for ensuring international economic security.

At the international level, the interests of states in different areas are intersect, and on this basis, conflict situations arise. Overcoming them make necessary the creation of a comprehensive system of international economic security. When studying international economic security as a system, it should be considered that there is no single definition of a «system of international economic security» in economics. An essential component of the system of international

economic security should be the institutions that are authorized to perform the relevant functions of guaranteeing and ensuring international economic security.

Therefore, there is a need to create such a system, especially in a contemporary world. Therefore, we propose our definition of a comprehensive system of international economic security as a complex, interconnected, structured algorithm, which includes institutions to ensure security, strategies of national security programs and plans, legal and information support, and clustering of the economy.

In current conditions of finding a way out of the economic crisis and forming a new model of economic development of the country, the development of modern cluster theory is of high importance. Concepts of clustering of the national economy depend on many factors of economic, political, social, legislative direction. Cluster policy can change the content of industrial policy of the state and ensure economic growth in the world.

State cluster policy is an industrial policy based on a cluster approach. Through the process of clustering it is possible to increase the development of the economy in the short, medium, and long term; to promote the development of economic ties between states, producers, suppliers, consumers. Cluster policy acts as a system of state guarantees to support cluster initiatives.

Foreign experience shows that the cluster approach is recognized as an effective policy to increase the competitiveness of regional and national economies. The implementation of the cluster approach can be described as clustering and is a set of organizational and economic measures, state and public institutions for the association of enterprises in clusters, and the establishment of informal relations and networking between them (Shpak, 2020).

Presidents from countries that have survived the inflation crisis are more likely to prioritize financial stability within their attribution. These severe crises often overshadow policymaking, as budgetary constraints persist even after the business cycle shifts toward slower growth and higher unemployment (Kaplan, 2018).

Noteworthy is the European project Fascinate (Sustainable Fashion Alliance for International Markets), which will put forward a joint internationalization strategy between the fashion, footwear, and digital technologies to enter international markets, focusing on sustainability and circulation. The Fascinate project aims to support the internationalization of EU textile and fashion clusters of small and medium-sized businesses working to develop sustainability in these areas. In addition to the textile and fashion industries, this partnership will also seek cross-sectoral cooperation with the technology and footwear sectors.

Many world countries have chosen the path of intensive, innovative development and a cluster model of economic organization. In the context of globalization, clusters have become a consolidating force that helps companies achieve maximum production efficiency and receive significant competitive advantages, leading to increased competitiveness. According to experts, clustering has already covered more than 50% of the world's economies, which has provided them with significant GDP growth.

For the successful development of national and transnational economic processes in the EU, a European platform for cluster cooperation has been created (European Cluster Collaboration Platform).

The European cluster approach to growth is based on three main principles: interregional cooperation; internationalization of clusters; the advantage of clusters. This approach is implemented through specific EU initiatives under EU financial programs, mainly COSME and Horizon 2020. Due to the importance of clusters for economic policy, they are also included in other European programs (Mikhailyuk & Necheva, 2020).

The implementation of cluster initiatives in Europe is one of the major areas for achieving economic goals. Clusters in modern economic systems are diversified structures in terms of location, goals, objectives, and priorities. These are structures that increase the effectiveness of both their participants and the economic systems in which they operate. The interaction of entities within clusters makes it easier to resist the risks posed by the current development of the world economy in general, regional and national economic systems. In the long term, we consider it appropriate to study the aspects of the implementation of cluster policy by the European Union, the experience of which can be applied by cluster structures of Ukraine (Calan, 2020).

The cluster approach helps to increase the level of transparency and controllability of regional economic processes. In case of successful performance and development, clusters become centers of investment, better human resources, and related services (Samylenko, 2019).

Global practice provides various tools and forms of implementation of the cluster approach. The development of European clusters takes place in the context of the European strategy of smart specialization, so the involvement of the European model of clustering for innovation and production development of Ukrainian industry is another logical step in the direction of European integration (Shevtsova, & Shvets, 2017).

EU cluster initiatives aim to take advantage of national strengths, use a strong leader, and aim at a pan-European impact.

World experience shows that the macroeconomic policy of developed countries is primarily focused on the strategy of forming clusters and other territorial industrial associations and structures and thus ensures essential economic growth of integrated economic entities in this way. World experience in the formation and development of network and cluster associations (Pushkar, & Fedorova, 2011).

The cluster is economically significant. Manufacturing firms are not only for development in themselves important, but also raise issues of organizational conflicts that do not arise when decision-makers are separate small firms (Atkin, Chaudhry, Chaudhry, Amit, Handelwal, & Verhoogen, 2017).

The concept of the solution we focus on is stability, based on the absence of blocking coalitions consisting of one firm and several employees. However, the allocation is likely to allow for a situation where several firms may shuffle their current combined set of employees and possibly hire additional employees to get a better result for all participants. Thus, a more clear definition of stability in the spirit of the core of the cooperative game may be needed (Kleinber, Lavi, & Smorodinsky, 2017).

Therefore, the cluster approach is an effective means of increasing competitiveness, contributes to the growth of living standards, business activation, increasing innovation and technological potential, improves the investment climate (Mikolyuk, 2017).

The size and number of consumer clusters are mainly influenced by geographical area, variety of registrations, population density, distance from the city center and electronic WOM corresponding to each cluster (Lu, Reeve, & Huang, 2018).

It is known that a cluster is an association of territorially similar enterprises in terms of the range of manufactured products, which reduces the impact on their activities of adverse external factors and strengthens internal reserves. As a result, each company wins while maintaining an independent strategic policy. Therefore, the cluster has a positive impact not only on individual enterprises but also on the economic situation totally in the region. In general, these progressive changes are due to factors such as the formation of a specific market, innovation and infrastructure environment for cluster members; creation of clusters on the branch principle; efficient use of resources, infrastructure facilities, and effective cooperation between industrial enterprises. That is, a cluster is an association of companies that work in one area of activity and have the opportunity to obtain information about how their products are sold in the market, what is the profitability of competitors, how best to select suppliers and staffing. Also important are reducing costs and increasing income (profit) from the sale of goods and services. Addressing these issues will give cluster players an edge over competitors and provide the necessary profit growth, develop a way to optimize costs and choose the most effective management solution. Thus, there are several advantages in clusters that prove that independence is less effective for enterprises.

Today, cluster economic development strategies are widely used around the world. Forming cluster policy, public authorities in developed countries advocate a broad classification of clusters to include as many firms as possible (Ryneiska, 2016).

Based on available statistics, countries that are relatively more willing to create an active business environment include Canada, Finland, China, and the United States.

Countries that are better placed to survive a pandemic with lower economic costs include countries that have found different mechanisms that will help the country better cope with the effects of the pandemic and the negative impact on their economy. For example, the countries that use a flexible work schedule (the Netherlands, New Zealand, Switzerland, Estonia, and the United States) and those where the most common online jobs are Finland, Sweden, Estonia, Iceland, and the Netherlands.

Also, Denmark, Finland, Norway, Austria, Luxembourg, Switzerland can count on support during the crisis from the state.



Countries with a robust financial system, such as Taiwan, Finland, the United States, the United Arab Emirates, and Singapore, have the resources to lend.

Canada, Finland, China, and the United States are relatively more ready to start an active business. Long-term investment in the economy will strengthen the stability of the economy and improve support for financial markets.

Increasing the role of clusters is a good stimulus for economic development. Finding investments in clusters will help increase their productivity, competitiveness, efficiency, and profitability. It is advisable to create export-oriented clusters.

The high competitiveness of clusters allows influencing the economy of this or that country positively. The more developed the cluster, the higher its productivity.

The participation of clusters in foreign economic activity is significant, so, in our opinion, it is advisable to create export-oriented clusters.

Thus, if we study the participation of clusters in export operations, it should be noted that the productivity of highly effective clusters is more than two times relative to enterprises that are not members of clusters, as shown in Figure 2.

We see that exporting companies are interested in solid cluster structures to develop new business ties.

A country with more developed clusters has a better profit level.

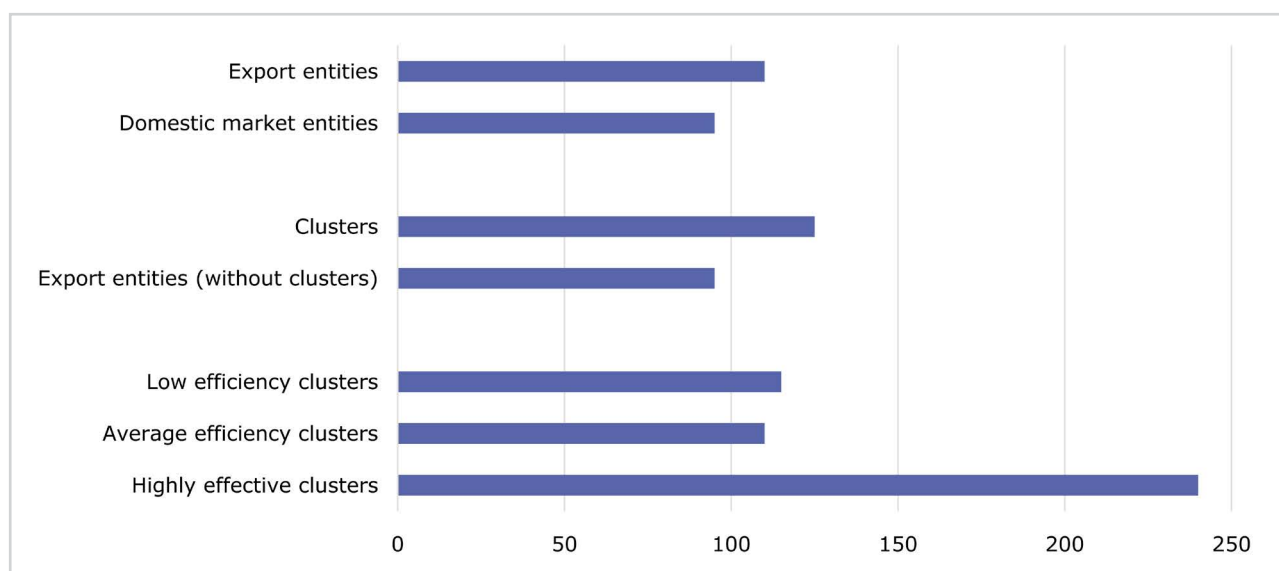
The destabilizing factors caused by the pandemic have affected the economic security of states. The development and implementation of a strategy for the renewal of international economic security will consider all the realities of today and achieve effective management of economic security in the world.

Moreover, our recommended strategy for updating international economic security should include an analysis of the state of modern international economic security and various influences on it, both economic and political, where the priority is to identify real threats.

During strategy development, relevant international practices need to be considered. Many countries around the world have chosen a cluster model of economic organization. Economic security must be based on the effective business opportunities of clusters.

A separate block in this strategy should indicate the services of the sourcing platform. Also, an online directory is essential for finding business partners and establishing direct contacts. At the same time, the sourcing tool needs to be expanded and clusters can be based on it. All this will lead to long-term partnerships of clusters with other business partners. Clusters will be interested in recognizing their reliability. In this case, the competitiveness of clusters will increase. The reliability of clusters as business partners is an important condition for cooperation with them.

Therefore, in our view, it is necessary to develop a Methodology for evaluating the effectiveness of the cluster, which will determine the level of efficiency of its activities.



**Figure 2:**  
**Comparative performance of clusters and other entities**

Source: Authors' own development

We offer the calculation of cluster efficiency according to the following formula:

$$E_k = (R_k - V_k) \times \frac{1}{(1+I)^t}, \quad (1)$$

where:

$E_k$  is economic efficiency of the cluster;

$t$  is reporting period;

$R_k$  is the financial result of the cluster;

$V_k$  is costs of the cluster;

$I$  is investment.

Therefore, the economic efficiency of the cluster for the reporting period can be calculated as the difference between results and costs.

Evaluating the cluster effectiveness involves the use of many indicators. However, if the cluster is highly productive, developed, strong, it can cooperate with other firms and conquer new market segments.

Clustering of the economy is an essential component of the development of international economic security and an important component of the world states economic policy. Clusters in the world economic system can ensure economic stability in times of crisis, give significant economic effect, and achieve joint economic success. Therefore, the clustering of the economy is a new step in ensuring international economic security. Thanks to the cluster approach, it becomes possible to produce a competitive product and sell it on the global market, which will ensure the effective and rapid international economy development. The clustering of the economy will be able to influence the provision of international economic security, its further development and become its main component.

## 5. Conclusions

The article considers the relationship between international economic security and the clustering of the economy. It is proposed to include cluster policy among the components of international economic security. The clustering of the economy has become an integral part of the economic policy of states. Measures to create clusters, as well as support existing ones, can facilitate the transition to a new level of cluster integration into other economic programs. Clusters can be considered as a link between politics, economics, and economic security. Clustering of the economy is directly related to economic security. Clusters cover new industries, innovations, long-term cooperation. They act as catalysts for change in the country's economy. Clusters are related to the political and economic strategies of states.

The own term «international economic security» is offered. Thus, we propose to define the international economic security of countries as a condition for compliance with world rules by world countries, as a comprehensive system of all state and international institutions involved in conducting independent domestic and coordinated foreign policy with respect for the rights of all world states. Also, it is proposed to add the following to the components of international economic security: legal, human rights, organizational, innovation and investment, cluster economy. An important place among these components is occupied by the clustering of the economy, which contributes to the effective operation of the organizational and economic mechanism of international economic security. The authors propose to consider the modern model of international economic security as a complex system, the priorities of which will be to ensure socio-economic security in the world and a coordinated policy between states. We have conceptually solved the problem of forming a comprehensive system of international economic security. The main patterns of developing international economic security and conditions of effective action of the organizational and economic mechanism of maintaining international economic security are analyzed. Based on this analysis, the development of a strategy for international economic security is determined. It can be concluded that this strategy is largely determined by the country's position in the geoeconomics and geopolitical range. In addition, we have proven that the performance of clusters is better than that of other business entities. Also, to evaluate the effectiveness of the cluster, the authors proposed a Methodology for assessing the effectiveness of the cluster.

## References

1. Atkin, D., Chaudhry, A., Chaudhry, S., Amit, K., Handelwal, A., & Verhoogen, E. (2017). Organizational Barriers to Technology Adoption: Evidence from Pakistani Soccer Ball Manufacturers. *Quarterly Journal of Economics*, 132(3), 1101-1164. <https://doi.org/10.1093/qje/qjx010>
2. Bashtova, M. (Ed.). (2015). International economic security through relations and factors of nature management. In *Economic and social development of Ukraine in the XXI century: national vision and challenges to globalization, proceedings of the conference of young scientists*. Ternopil: TNEU (in Ukr.).
3. Calan, M. (2020). Implementation of cluster initiatives in Europe. *Biznes-navihator (Business Navigator)*, 57(1), 22-27 (in Ukr.).
4. Chu, K. H. (2021). Financial Development in Hong Kong and China: A Hayekian Perspective. *Cato Journal*, 41(1), 25-45. <https://www.cato.org/sites/cato.org/files/2021-01/cj-v41n1-2.pdf>
5. Deering, M. (2007). *Dawn of the Singularity*. <https://web.archive.org/web/20110908052319/http://transhumanism.org/languages/russian/dawnofsingularity/Deering.htm> (in Russ.)
6. Gribinenko, O. (2019). Environmental Component of International Economic Security. *Visnyk Mariupolskoho derzhavnoho universytetu (Bulletin of Mariupol State University)*, 18, 51-61 (in Ukr.).
7. Kaplan, S. B. (2018). Fighting Past Economic Wars: Crisis and Austerity in Latin America. *Latin American Research Review*, 53(1), 19-37. <http://doi.org/10.25222/larr.292>
8. Korzh, I. (2019). Safety: methodological approaches to the concept. *Natsionalnyi yurydychnyi zhurnal: teoriia i praktyka (National Legal Journal: Theory and Practice)*, 38(4), 68-72 (in Ukr.).
9. Hu Fu, Kleinberg, R., Lavi, R., & Smorodinsky, R. (2017). Job security, stability and production efficiency. *Theoretical Economics*, 12(1), 1-24. <https://doi.org/10.3982/TE2016>
10. Leiser, S., & Mills, S. (2019). Local government fiscal health: Comparing self-assessments to conventional measures. *Public Budgeting & Finance*, 39, 75-96. <https://doi.org/10.1111/pbaf.12226>
11. Levkovets, N. (2020). Definitions of «security» and «economic security». *Visnyk Natsionalnoho transportnoho universytetu (Bulletin of the National Transport University)*, 47, 139-147 (in Ukr.).
12. Lyashenko, O. (2015). Conceptualization of economic security management of the enterprise. Kyiv: NISS (in Ukr.).
13. Lu, R., Reeve, T., & Huang, J., Jian, Z., Chen, M. (2018). Cluster Theory Literature Review: Is Cluster Relationship Important? *Journal of Economic Research*, 32(4), 1201-1220. <https://doi.org/10.1111/joes.12255>
14. Maslova, L. (2014). *Mechanisms of state regulation in the system of ensuring the spiritual security of society*. (Dissertation for the degree of Candidate of Science in Public Administration) National Academy of Public Administration under the President of Ukraine, Kyiv (in Ukr.).
15. McDonald, B. D., & Larson, S. E. (2020). Current Issues in Practice. Implications of the Coronavirus on sales tax revenue and local government fiscal health. *Journal of Public and Nonprofit Affairs*, 6(3), 377-400. <https://doi.org/10.20899/jpna.6.3.377-400>
16. Mikhailyuk, O., & Necheva, N. (2020). Study of the features of the process of clusterization of the tourist sphere of Europe. *Visnyk sotsialno-ekonomichnykh doslidzhen (Bulletin of Socio-Economic Research)*, 72(1), 35-48. <http://dspace.oneu.edu.ua/jspui/bitstream/123456789/11494/1/%d0%94%d0%be%d1%81%d0%bb%d1%96%d0%b4%d0%b6%d0%b5%d0%bd%d0%bd%d1%8f%20%d0%bf%d1%80%d0%be%d1%86%d0%b5%d1%81%d1%96%d0%b2%20%d0%ba%d0%bb%d0%b0%d1%81%d1%82%d0%b5%d1%80%d0%b8%d0%b7%d0%b0%d1%86%d1%96%d1%97.pdf> (in Ukr.)
17. Mikolyuk, O. (2017). Formation of cluster structures in the conditions of formation of energy independence. *Ekonomichnyi analiz (Economic analysis)*, 27(3), 56-61 (in Ukr.).
18. Olave, M., Nogales, R., Córdova, P., & Rejas, B. (2020). Bolivia: Una nueva mirada al rol de los recursos naturales en el crecimiento económico. *Latin American Research Review*, 55(1), 81-98. <https://doi.org/10.25222/larr.176>
19. Pushkar, T. A., & Fedorova, V. G. (2011). International experience the formation and development of network and associations klasternih. *Economic Annals-XXI*, 11-12, 68-71. <http://soskin.info/ea/2011/11-12/201127.html> (in Ukr.)
20. Ryneiska, L. (2016). Clusters in the modern global economy. *Efektivna ekonomika (Effective Economy)*, 5, 1-3 (in Ukr.).
21. Sak, T. (2013). Economic security of Ukraine: concept, structure, main tendencies. *Innovatsiina ekonomika (Innovative Economics)*, 6, 336-340 (in Ukr.).
22. Samylenko, G. (2019). Cluster structures of regions of Ukraine: theoretical aspects, problems and prospects of practical implementation. *Problemy i perspektyvy ekonomiky ta upravlinnia (Problems and Prospects of Economics and Management)*, 1, 155-165 (in Ukr.).
23. Shevtsova, G., & Shvets, N. (2017). Clustering of the chemical industry: European experience and lessons for Ukraine. *Visnyk ekonomichnoi nauky Ukrainy (Bulletin of Economic Science of Ukraine)*, 33(2), 103-109 (in Ukr.).
24. Shpak, Y. (2020). Cluster approach in the management of territorial development of Ukraine. *Publichne upravlinnia ta mytne administruvannia (Public Administration and Customs Administration)*, 2, 187-191 (in Ukr.).
25. Tkachuk, N. (2020). *Economic security of enterprises in the conditions of transformational transformations*. (Dissertation for the degree of Candidate of Economic Sciences). Odesa National Academy of Food Technologies, Odesa (in Ukr.).

Received 4.04.2021

Received in revised form 19.04.2021

Accepted 30.04.2021

Available online 10.06.2021