

**Europe in the World Economic System**

Olena BULATOVA,
Eisen ROLAND,
Oleksandr KARPENKO,
Serhii SARBASH

**DEVELOPMENT OF THE EUROPEAN
SECURITY COMPLEX IN THE CONTEXT
OF CURRENT POSITIONS
OF THE EU COUNTRIES
IN INTERNATIONAL RANKINGS**

Abstract

Continuous monitoring and diagnostics of key security indicators and all its components are of particular importance to ensure a high level of security development of countries/integration associations. Modern international rankings form the analytical basis for assessing the components of the security sector, allow for comparative analysis and identify the respective leadership positions of countries. The results of the monitoring contribute to an objective assessment and man-

© Olena Bulatova, Eisen Roland, Oleksandr Karpenko, Serhii Sarbash, 2024.

Bulatova Olena, Doctor of Economics, Professor, First Vice-Rector. Mariupol State University, Kyiv, Ukraine. ORCID: 0000-0001-7938-7874 Email: olena_bulatova@yahoo.com

Eisen Roland, Doctor of Economics, Professor, J.-W. Goethe University, Frankfurt am Main, Germany. Email: rolandeisen@gmail.com

Karpenko Oleksandr, PhD in International Economic Relations, Mariupol State University, Kyiv, Ukraine. ORCID: 0000-0001-6390-2309 Email: KarpenkoOleksandrmdu@ukr.net

Sarbash Serhii, postgraduate, Mariupol State University, Kyiv, Ukraine. ORCID: 0009-0009-4880-8846 Email: sarbashes@ukr.net

agement of economic security risks at the relevant levels: regional (regional security complex), national (security of individual countries), micro-level, etc.

Diagnosing the asymmetry of the EU countries' development will help to identify joint coordinated actions in specific areas and security components to improve the common European position in the global environment. Economic growth and sustainable development of the EU, strengthening the competitiveness of both European countries and the EU will contribute to the security development of all member states of the integration association.

Key Words:

regional security complex, EU, security, rankings, indices, indicators.

JEL: F52, D81.

2 tables, 40 references.

Problem Statement and Literature Review

A special place in the study of modern problems of the world economy development belongs to the formation of Regional Security Complexes. They have emerged as a response to the profound transformations occurring in the international security environment, which are deeply interconnected (Buzan & Wæver, 2003). In this regard, addressing security challenges requires appropriate interdisciplinary research. As a consequence of the war on the European continent, new challenges have arisen for the modern European security system and the world order, affecting the search for new security instruments and mechanisms, and marking a change in the EU's security paradigm in the face of the failure of multilateral institutions (Lazarou & Zamfir, 2022). Adoption of appropriate decisions related to the security sector requires a thorough analysis and proper assessment of the integration association's leadership position in the global competitive environment, as well as determination of the potential for sustainable

economic and security development of European countries. Previous studies have revealed megatrends in international economic development and identified current challenges to economic security with a focus on the potential for resilience and risk counteraction management policies (Bulatova, Panchenko & Ivashchenko, 2023), the impact of globalisation on the modern security environment by identifying sources of transformation (Sarbash, 2022), the institutional profile of modern regional security complexes is clarified (Karpenko, 2023b), the tools for assessing the level of security development of countries are substantiated (Karpenko, 2023a), and a methodological approach to quantifying and monitoring the level of development of the European regional security complex is proposed (Bulatova, Osaulenko & Zakharova, 2021). Further research is essential in the methodological apparatus for determining and assessing the security conditions of the national economies of the EU countries, as well as the development of modern tools for comparative analysis of the country's leadership positions in the world economy, based on modern international rankings.

The intensification of regionalisation processes in the second half of the twentieth century influenced the formation and emergence of «regional orders» which defined the relevant security mechanisms and instruments of implementation, security regimes, and conditions for the enhancement of the regional security environment in general. Despite the fact that these «regional orders» have their own identity and differ in levels of development (Buzan & Little, 2000) and primarily meet regional needs (Lake & Morgan (eds.), 1997), they combine global and international processes (Katzenstein, 2005), and their totality determines the multi-regional nature of the modern system of international relations (Hurrell, 2007). On the one hand, modern regions in the international economy influence policy-making at the national level, and on the other hand, regional initiatives in combination with national processes influence the determination of international policy (Katzenstein, 1996).

In accordance with the concept of regional security complexes (Buzan & Wæver, 1998), the main regions of the world economy are divided into groups of countries whose security systems are interdependent and interconnected, i.e. the security of each country depends on the influence of other countries. These geographical regions differ not only in terms of resources, but also in terms of political, legal and social environments. Regional security clusters (Tavares, 2008) vary depending on the level of development of regional integration processes, instruments and mechanisms of regional cooperation, and the set of security agents.

Methodology

The paper proposes the following algorithm for content analysis of countries' assessment in accordance with the main international rankings: assessment of countries' positions based on the analysis of the scores of the relevant index and rank (ordinal number in the ranked list of countries), as well as using methods of estimating dynamic series; generalised assessment of international rankings indices and statistical indicators of variation and differentiation of countries; calculation of structural characteristics of distribution (positioning of countries) in international rankings.

The purpose of the article is to determine the EU's current leadership positions in the world economic system in the context of the development of the European security complex based on the indicators of the EU countries' positions in international rankings.

Research Results

The relationship between the development of European integration processes and the relevant EU security mechanisms is mutual and two-sided, as, on the one hand, the national interests of the member states are increasingly dependent on each other, especially from the global leaders (Leonard, Pisani-Ferry, Ribakova, Shapiro & Wolff, 2019), and on the other hand, deepening integration cooperation will help to strengthen and implement security guarantees for both the EU and partner countries – future members of the integration association. Accordingly, sustainable development and economic growth of the EU, strengthening the competitiveness of both European countries and the EU will contribute to the security development of all member states of the integration association

The development of the process of military-political cooperation in the EU after the Second World War was characterised by several stages (Duginets & Bucharieva, 2022), which determine the directions of the EU's international security strategy (Table 1).

Europe, as a civilian power centre, plays a leading role in the modern international system, using primarily non-military instruments to achieve its goals (expanding diplomatic cooperation, influence of supranational institutions, etc.), which contribute to increasing resilience in an unstable environment, especially in the areas of the rule of law, civilian governance and protection, justice, the fight against terrorism and organised crime, etc.

Table 1

Directions for shaping the EU's international security strategy

Time Period	Shaping the EU's international security strategy;
1946–1949	identification of the main general areas of cooperation and forms of cooperation;
1950–1954	reduction and abandonment of national projects;
1955–1968	a period of conceptual uncertainty;
1969–1986	resumption of the European security dialogue;
1987–1997	identification of security norms and instruments of defence cooperation;
1998 – the middle of 2000th	implementation and enhancement of the institutional mechanism of the European Security and Defence Policy;
From the middle of 2000th	adaptation of the European Security and Defence Policy to the realities of the multipolar international system;
from 2022	strengthening the strategic autonomy of the integration association, agreeing on a common strategic vision of the EU's role in security and defence.

Source: Duginets & Busarieva (2022); European Union (2023); NATO (2022).

The increasing influence of the European Union in shaping international norms (Europe as a normative centre of power) is determined by the corresponding transformations that are ensured indirectly and uncoercively (the Brussels effect) not only within the EU (extraterritoriality). Thus, the EU has a unique unilateral regulatory influence to unilaterally reshaping of the global markets through the establishment of its norms and standards (Bradford, 2019). The dissemination of European norms (democracy, rule of law, social justice, solidarity, sustainable development) through regional and multilateral initiatives also affects the content of international norms. Hence, norms and procedures are becoming an appropriate source of influence and a negotiation tool for resolving conflicts in an interdependent world, and the European integration model itself has become a model for the development of other integration initiatives in the global economy.

Security policy is a relatively new area of EU activity that has proven its effectiveness and is characterised by the following (Duginets & Busarieva, 2022). Security issues are highly relevant to European politics and are an «internal priority» of the European Union. In recent years, the military component has become an essential part of the European Security and Defence Policy, and the development of the military contingent has enabled the EU to provide peacekeeping missions both on the European continent and beyond, which has strengthened the role of the EU as an international actor. However, the military settlement is still

ambiguously perceived by some EU member states, which does not contribute to its effective functioning. Active cooperation between the EU and NATO against the backdrop of Russia's military aggression against Ukraine increases the EU's influence on security issues. In the context of the war, in 2022, important strategic documents for the development of the EU and NATO were endorsed – the EU Strategic Compass (A Strategic Compass for Security and Defence. For a European Union that protects its citizens, values and interests and contributes to international peace and security) (European Union, 2023) and the NATO Strategic Concept (NATO, 2022), which emphasise the importance of the EU's strategic partnership with the Alliance in terms of Euro-Atlantic security, world order and international security in general. The development of this partnership requires coordination and joint solution of the problems that hinder the development of the security environment, among which special attention should be paid (NATO, 2023): intensification of global competition, rapid spread of revolutionary technologies, critical consequences of climate change, protection of critical infrastructure, use of space, information manipulation, etc. Concentrating joint efforts on addressing them will foster mutual support, protect critical infrastructure, increase assistance to partner countries, prevent crises and counter hybrid threats.

The current challenge for the European community is to maintain the EU's leadership position in the global economic system in the context of the development of the European security complex. The system of international rating assessments may serve as an important tool for diagnosing the level of security and identifying security vulnerabilities. Assessment of ranking databases accumulated by international organisations, foundations, research and consulting companies and independent agencies, content analysis of indicators characterising the conflict dynamics, as well as the method of expert assessments allow for comparative analysis of countries in different areas and indicators, and thus for identifying leaders and outsiders.

Since the analysis of the level of economic security should form the basis for effective assessment and management of economic security risks both at the regional level (European Regional Security Complex), national level (national security of individual EU countries), and at the business level (microeconomic, represented by the interests of business entities and the population), it is advisable to analyse international rankings based on their preliminary classification by security areas (components) that correlate with the categories of global rankings.

The analytical basis for assessing the economic component of the security sphere can be analysed using the international rankings, such as Doing Business Index (DB) (The World Bank, n.d.), Economic Freedom Index (EF) (The Heritage Foundation, n.d.), Sustainable Development Goals Index (SDGI) (SDG Transformation Center, n.d.), Global Sustainable Competitiveness Index (GSCI) (The Global Sustainable Competitiveness Index Report, 2022), KOF Index of Globalisation (Eth Zürich Kof, n.d.).

EU countries are in the top 50% of the Doing Business ranking, although they are not usually at the top. The top ten countries include only two EU countries – Denmark and Sweden, the second ten – four countries Lithuania, Estonia, Latvia and Finland, and the third – Austria, Germany and Ireland. However, compared to 2017, the EU countries' positions in the ease of Doing Business ranking have deteriorated. Meanwhile, the value of the ease of Doing Business index is quite high, with an average of 76.21 across the EU, 15 countries (55.6%) have an index above the European average, the level of differentiation is 1.29, and the gap is only 29% between the country with the best business environment, Denmark (85.3 maximum score), and the worst, Malta (66.1 minimum score). The latest Doing Business Report (World Bank, 2020) indicates that the countries with the best regulatory performance include: Slovenia (by the cost of starting a business), Luxembourg (by the construction quality control index), Germany (by the number of procedures (permits) for access to electricity networks), Portugal (in terms of the number of procedures for registering property rights), Denmark (in terms of the overall tax burden), Croatia, the Netherlands, Austria and Estonia (in terms of time spent on applying for and receiving VAT refunds), Estonia, Lithuania, Portugal, Sweden (in terms of time spent on applying for corporate income tax adjustments), Poland, Spain, Austria, Belgium, Denmark (for time spent on export transactions), Hungary, Luxembourg, France, the Netherlands, Portugal (for monetary costs of export transactions), Latvia, Estonia, France, Germany (for time spent on import transactions), Latvia, Belgium, Denmark, Estonia (for monetary costs of import transactions).

Economic freedom is a key prerequisite for the development of sustainable national economies, where an efficient business environment is in place, entrepreneurship is developing, and the general welfare is ensured. Economic freedom is closely linked to healthier societies, a cleaner environment, greater per capita prosperity, human development, democracy, poverty eradication and security at all levels. Portugal (in terms of the number of procedures for registering property rights), Denmark (in terms of the overall tax burden), Croatia, the Netherlands, Austria and Estonia (in terms of time spent on applying for and receiving VAT refunds), Estonia, Lithuania, Portugal, Sweden (in terms of time spent on applying for corporate income tax adjustments), Poland, Spain, Austria, Belgium, Denmark (for time spent on export transactions), Hungary, Luxembourg, France, the Netherlands, Portugal (for monetary costs of export transactions), Latvia, Estonia, France, Germany (for time spent on import transactions), Latvia, Belgium, Denmark, Estonia (for monetary costs of import transactions).

Economic freedom is a key prerequisite for the development of sustainable national economies, where an efficient business environment is in place, entrepreneurship is developing, and the general welfare is ensured. It is closely linked to healthier societies, a cleaner environment, greater per capita prosperity, human development, democracy, poverty eradication and security at all levels. Based on the analysis of the positioning of EU countries in the Economic Freedom ranking,

which comprehensively compares countries by the degree of freedom in society, it was found that all EU countries (except Greece) are in the top 50% of the ranking, and 6 countries (Ireland, Estonia, Luxembourg, the Netherlands, Denmark and Sweden) are in the top ten. On a positive note, compared to 2017, the positions of EU countries in the economic freedom ranking have improved (with the exception of Lithuania and Romania). Over the analysed period, the EFI values increased most rapidly for Slovenia, Portugal, Croatia, Cyprus, and Ireland; the most significant decrease was observed for Romania, Lithuania, and Hungary. The average EFI across EU countries is 70.54, 13 countries (48.1%) have an index above the European average, the level of differentiation is 1.44, and the gap between the country with the highest level of freedom (Ireland – 82 points) and the lowest level (Greece – 56.9 points) is 44%.

In the Sustainable Development Goals Index (SDGI), which measures the progress of countries in achieving the 17 UN Sustainable Development Goals and compares countries by percentage of success (a score of 100 signals the achievement of all UN goals), EU countries are in the top 25% of the ranking and form the top ten of the ranking. The level of differentiation is 1.2, with a small gap of 20% between the country with the best results (Finland – 86.76) and the lowest result (Cyprus – 72.49). For 10 EU countries, their positions in the ranking improved over the period 2017-2022, with the following countries showing the best results: Poland (from 27th to 9th position), Latvia (from 32nd to 14th position), Croatia (from 24th to 12th position), Portugal (from 28th to 18th position), and Greece (from 38th to 28th position). Among the countries whose positions have deteriorated, Malta (from 22nd to 44th), Cyprus (from 50th to 59th), Belgium (from 12th to 19th), and the Netherlands (from 13th to 20th) have lost the most ground.

Sustainable competitiveness means that the current level of wealth is not threatened by a reduction or diminution due to overexploitation of resources (natural and human), attraction of innovative investments necessary to compete in globalised markets (including education), and does not cause discrimination, marginalisation or exploitation of different segments of society (The Global Sustainable Competitiveness Index Report, 2022). The vast majority of EU countries are in the top 25% of the global sustainable competitiveness ranking and are leaders in the GSC, including 5 countries (Sweden, Finland, Denmark, France, and Slovenia) in the top ten. However, while the EU countries have achieved an average of 80.16% success in the SDGI, the average GSC level is one third lower at only 53.21%, which means that 46.79% is not enough to ensure sustainable competitiveness. The level of differentiation among EU countries according to the GSCI is 1.32, meaning that there is a 32% gap between the country with the highest level of sustainable competitiveness, Sweden (60.7), and the lowest, Cyprus (46.1). In 2017, 11 EU countries moved up in the ranking, with Malta, France, Lithuania, the Netherlands, and Spain showing the most intensive improvement. At the same time, Estonia, Croatia, Luxembourg, Romania, Hungary, and Bulgaria lost the most ground.

The leading positions of countries in the system of global economic, social, political and legal relations are directly related to the level of globalisation, which is most comprehensively measured by the Globalisation Index of the Swiss Institute for Business Research (GI KOF). All EU countries are among the 40 most globalised economies in the world (out of 196 countries), and 8 EU countries (the Netherlands, Belgium, Sweden, Germany, Austria, Denmark, Finland and France) are among the top 10 most globalised countries. The average EU level of globalisation (KOF index) is high and equals 84. The gap between the most globalised country in the EU, the Netherlands (90.5), and the least globalised, Latvia (76.8), is 1.18. Among all economic indices, this is the lowest level of differentiation.

In the social component of security, we analysed such international rankings as the Human Development Index (HDI) (UN Development Programme, n.d.), The Global Prosperity Index (GPI) (Legatum Institute, n.d.), Social Progress Index (SPI) (The Social Progress Imperative, n.d.), World Happiness Index (WHI) (World Happiness Report, n.d.), which reflect the social aspects of sustainable societies. According to the latest ranking, all EU countries, except Bulgaria (high level), are classified as countries with very high human development (HDI>0.8) and are among the top 40% of countries in the overall ranking. Most EU countries are among the top 40 countries with the highest HDI. The average HDI value for the EU is 0.90, while 13 countries (50%) have an HDI level above the average. The gap between the country with the highest HDI value, Denmark (0.948), and the lowest, Bulgaria (0.795), is only 1.19 (19%). For 14 EU countries, their positions in the ranking improved between 2017 and 2021, most intensively in Denmark, Malta, and Croatia, while for the remaining countries, the changes were within 1-3 points. Among the countries whose positions have deteriorated, Bulgaria, Slovakia, and Austria have lost the most positions.

In today's environment, countries are developing on the basis of building an inclusive society that protects the fundamental freedoms and security of every person and creates conditions for genuine development. The latter is measured globally by the Global Prosperity Index. Denmark and Sweden top the ranking of the most successful countries in the world, while EU countries are in the top 30% of the most successful countries and, according to the prosperity scale of the index, are in the first two groups in terms of welfare. The EU average is 75.19, and 11 EU countries have an above-average index. The gap between the EU country with the highest GPI value, Denmark (84.55), and the lowest, Bulgaria (65.55), is only 1.29 (29%). The largest growth in GPI values can be seen in Latvia, Cyprus and Greece, while the growth for the top countries ranges from 1-1.5%.

An essential index that also measures the achievements of countries in the social sphere and welfare is the Social Progress Index, which assesses the level of progress in terms of the quality of education, healthcare, technology, personal security and human rights. All EU countries are included in the first (11 countries) and second (16 countries) tier of six countries in terms of social progress and are therefore in the top 33% of countries with the highest achievements in terms of

social progress. The average SPI value for the EU is 84.72, and 15 EU countries have a social progress index above the EU average. There are 5 EU countries in the top ten, 6 in the second, and 8 in the third. The gap between the EU country with the highest SPI value, Denmark (90.54), and the lowest, Bulgaria (76.81), is only 1.18 (18%). During the analysed period of 2017-2023, 11 EU countries improved their positions in the ranking, but the value of the Social Progress Index in 2023 decreased in all countries compared to 2017, with Slovenia, Latvia, Greece and Poland showing the largest decrease (above 6%).

The World Happiness Index identifies the happiest countries, which are also the most desirable to live in. All EU countries, except Portugal, Greece and Bulgaria, have WHI scores in the range of 6-8, meaning they are happy countries and are among the 36% of the world's happiest countries. Portugal, Greece and Bulgaria ($4.5 < WHI < 6$) are moderately happy. The top ten happiest countries in the world include 5 EU countries, including Finland, Denmark, the Netherlands, Sweden, and Luxembourg. The average WHI for EU countries is 6.63. However, the gap between the EU country with the highest WHI value, Finland (7.8), and the lowest, Bulgaria (5.5), is 1.43 (43%), which is the largest value compared to other social well-being indices.

The political and legal environment is of great importance for ensuring the security of the national economy. There are several international political and legal ratings, including The Corruption Perceptions Index (CPI) (Transparency International, n.d.), The Democracy Index (DI), The Global Peace Index (GPI) (Institute for Economics & Peace, 2023), The Fragile States Index (FSI) (The Fund for Peace, 2023), which reflect the specifics of the political and legal environment and the security of the individual and the state. For most countries in the world, corruption is still one of the factors that hinder the development of democratic societies and make it impossible to achieve a high level of prosperity and sustainability. Corruption is a fundamental threat to peace and security.

The EU countries are the top performers in the ranking, having made significant progress in tackling corruption, strong institutions and a well-functioning democratic system. Most countries (20 countries in the top 50) are in the yellow zone, which has the lowest level of corruption perception, while the rest are in the orange zone, which has an average level. 7 EU countries are among the top ten least corrupt countries, with Denmark and Finland topping the ranking. Only three EU countries have CPI scores below 50 – Romania, Bulgaria and Hungary. The average figure for EU countries is 63.6%, with a gap of 2.14 between the EU country with the highest CPI value, Denmark (90), and the lowest, Hungary (42), which is more than 2 times. 14 EU countries demonstrated positive changes in the ranking over the period 2017-2022, with Italy, Ireland, Greece, Estonia, and Spain showing the greatest improvement in their positions (7 to 13 points of growth). Italy, Greece, Slovakia, Spain, and Lithuania had the largest increase in the CPI, which indicates further reforms in the formation of a democratic society, over the analysed period (in the range of 5-12%).

The Democracy Index assesses countries by the level of development of democratic principles, respect for civil rights and freedoms, and the existence of independent and effective state institutions. Table 12 shows the results of the EU countries' positioning in the Democracy Index. According to the DI, 10 EU countries, namely Sweden, Finland, Denmark, Ireland, the Netherlands, Luxembourg, Germany, Austria, Spain and France, belong to the group of countries with full democracy ($8 < DI < 10$), while the rest of the countries belong to the group of countries with imperfect democracy ($6 < DI < 8$). In general, EU countries are in the top 40% of the ranking, but do not top it. The average DI value for the EU is 7.89, with a gap of 1.46 (46%) between the EU country with the highest DI value, Sweden (9.39), and the lowest, Romania (6.45). As for the nature of the changes, 11 EU countries showed positive changes in the ranking between 2017 and 2022, with the largest improvements in Greece, the Czech Republic, France, and Poland (6 to 12 points), which also had the largest increases in DI (in the range of 5.4-9%).

The Global Peace Index assesses countries by the level of security of living in them, unlike all the previous ones, it is a disincentive, the growth of its values increases the level of danger, i.e. countries with the highest index value are the most dangerous in the world in terms of tension and conflicts. According to the GPI (2023) classification groups, 8 EU countries have a very high level of peace and security, while the rest of the countries, with the exception of France, which is in the moderate peace and security group, are in the high peace and security group. The leaders of the peace ranking are Denmark, Ireland, Austria, Portugal and Slovenia. The average GPI value for the EU is 1.55 (high), with a gap of 1.44 (46%) between the EU country with the highest GPI value, Denmark (1.31), and the lowest, France (1.94). For the majority of EU countries, the value of the index decreased over the period 2017-2022, which is due to the military actions in Ukraine and, as a result, the growing tension in the European region as a whole. Croatia, Estonia, Greece, the Netherlands, Ireland, Poland, and Italy showed the largest declines in the GPI (in the range of 5-11.5%), but their rankings improved.

The Fragile States Index, which measures the level of stability in countries, is similar. The better the ranking, the higher the level of institutional and social instability, and the more often such countries and societies suffer from conflicts. In other words, the most unstable countries (fragile ones) are at the top of the ranking, while countries with a high level of stability are at the bottom of the ranking. As the analysis shows, EU countries are among the third most stable countries, occupying positions at the bottom of the fragility ranking. The average FSI value for the EU is 35.36, and the gap between the most stable EU country with the lowest FSI value, Finland (16), and the least stable, Cyprus (57), is 3.56, which is the highest differentiation score among the analysed indices. In terms of assessing changes, 22 EU countries saw their FSI levels decline between 2022 and 2023, with the rate of decline being quite significant and ranging from 5-23%.

Spain, Poland, Romania, and Belgium have improved their positions in the ranking and the corresponding increase in the index.

To evaluate the level of innovation potential and technological leadership, we analysed such global rankings as the Global Innovation Index (GII), The Global Knowledge Index (GKI) (UNDP & MBRF, 2023), and the Global Cybersecurity Index (GCSI) (International Telecommunication Union, 2021). All EU countries are among the 50 most innovative economies in the world (out of 132 countries), and 5 EU countries (Sweden, the Netherlands, Germany, Finland, and Denmark) are among the top ten innovative countries. The average GII value for EU countries is low – 45.59 (out of 100), which means that the potential for increasing the level of innovation is significant. The gap between the most innovative EU country with the highest GII value, Sweden (61.56), and the least innovative Romania (34.11) is 1.8 (80%). Analysing the changes in positions and the index for the period 2017-2022, it should be noted that only 11 EU countries moved up in the ranking, but these shifts are insignificant, with some countries, such as Ireland and Slovenia, losing positions by 12-13 points. In general, for all EU countries, with the exception of France, the GII values have decreased, with an average decline rate of 8.6%, indicating an increase in the risks of losing innovation advantages.

One more ranking that reflects the level of countries' ability to generate and use innovations is The Global Knowledge Index. As in the previous ranking, all EU countries are among the top 50 countries in the ranking, and 6 countries (Sweden, Finland, the Netherlands, Luxembourg, Denmark and Austria) are among the top 10 and are therefore the countries with the most developed knowledge economies. The average GKI across EU countries is 59.56 (out of 100), which is higher than the average GII, while the gap between the EU country with the highest GKI (Sweden – 66.96) and the lowest (Greece – 48.83) is smaller and amounts to 1.37 (37%). Among the EU countries that significantly improved their positions in the ranking in 2017-2022 and increased their GKI values are Estonia, Slovenia, Cyprus, Latvia, and Romania.

The key technological risks of today are linked to the growing number of cyberattacks and weak information security systems, and therefore, one of the keys to the safe development of countries is reliable cybersecurity systems, which are compared within the Global Cybersecurity Index. Four EU countries, including Estonia, Spain, Lithuania, and France, have the highest level of cybersecurity, and 23 EU countries are among the world's 50 countries with the best cybersecurity systems. For 18 EU countries, there were positive changes in the ranking in 2017-2020, with some countries, including Lithuania, Portugal, Greece, and Slovakia, improving their positions by 35-50 points. Ireland, Romania, the Czech Republic, and Bulgaria demonstrated a significant deterioration in their positions in the ranking (loss of 20-33 points). The average value of the cybersecurity index by country, the gap between the EU country with the highest level of cybersecurity (Estonia – 99.48) and the lowest (Bulgaria – 67.38) is 1.48 (48%).

Another vector for the development of sustainable economies is the focus on the development of a green economy, and therefore, the study analysed the positions of EU countries in some environmental rankings, namely Environmental performance index EPI (Wolf et al., 2022), Green Growth Index GGI (Global Green Growth Institute, 2023). All EU countries are among the top 50 countries in the ranking, and 7 countries, including Denmark, Finland, Malta, Sweden, Luxembourg, Slovenia, and Austria, are among the top 10, which means they are the countries with the most effective environmental policies. The average EPI value for EU countries is 61.57 (out of 100), with a gap of 1.55 (55%) between the EU country with the highest EPI value, Denmark (77.9), and the lowest, Portugal (50.4). Despite the fact that the value of the Environmental Performance Index in 2022 decreased for all countries compared to 2018, meaning that the effectiveness of environmental reforms has worsened, the rankings for 15 EU countries improved, with Croatia, Estonia, Latvia, Slovenia, the Czech Republic, Romania, Slovakia, and Hungary achieving the most significant improvement in the ranking. Bulgaria, France, Spain, Ireland, and Portugal have seen a significant deterioration in their positions in the ranking. The EU countries lead the ranking of green economies, with the top 30 countries comprising 80% of the ranking. In terms of the intensity of changes in the green growth index, most countries showed a slight increase in the index in the range of up to 2% in 2017-2021, meaning that there were no significant shifts towards intensifying and accelerating the green growth.

An analysis of the structural characteristics of the distribution of EU countries in global rankings revealed the following (Table 2). On average, 69.8% of EU countries are in the first quintile of the distribution (top 20% of the ranking). EU countries have the highest level of leadership potential in the Sustainable Development Goals Index (81.5% of EU countries are in the top 10%), Sustainable Competitiveness Index (81.5%), Globalisation Index (100%), Human Development Index (77.8%), Social Progress Index (81.5%), Environmental Performance Index (88.9%), and Green Growth Index (85.2%). On average, 83.1% of the EU countries are in the first quartile of the distribution (the top 25% of the ranking), and more than 90% of the EU countries are leaders in such rankings as the Sustainable Development Goals Index (92.6%), the Sustainable Competitiveness Index (96.3%), the Globalisation Index (100%), the Social Progress Index (96.3%), and the Environmental Performance Index (92.6%).

Table 2

Analysis of the structural characteristics of the distribution of EU countries in global rankings

Indices		Average rank	Quantile distribution					
			1st decile (10% of leaders)		1st quintile (leaders 20%)		1st quartile (leaders 25%)	
			Number of EU countries	% of EU countries	Number of EU countries	% of EU countries	Number of EU countries	% of EU countries
Economic	DB	40	5	18,5	12	44,4	18	66,7
	ER	32	10	37,0	16	59,3	21	77,8
	SDGI	19	13	48,1	22	81,5	25	92,6
	GSCI	22	12	44,4	22	81,5	26	96,3
	KOF	18	15	55,6	27	100,0	27	100,0
Social	HDI	28	8	29,6	21	77,8	25	92,6
	GPI	24	8	29,6	19	70,4	24	88,9
	SPI	23	9	33,3	22	81,5	26	96,3
	WHI	28	6	22,2	14	51,9	18	66,7
Political and legal	CPI	33	9	33,3	14	51,9	19	70,4
	DI	30	7	25,9	16	59,3	21	77,8
	GPI	25	10	37,0	20	74,1	22	81,5
	FSI	153	11	40,7	20	74,1	23	85,2
Technological	GII	27	6	22,2	12	44,4	18	66,7
	GKI	23	8	29,6	15	55,6	21	77,8
	GCSI	30	9	33,3	20	74,1	21	77,8
Environmental (Ecological)	EPI	19	14	51,9	24	88,9	25	92,6
	GGI	20	12	44,4	23	85,2	24	88,9
On the average				35,4		69,8		83,1

Source: author's calculations

Practical Implementation

The achievement of a high level of security development of countries/integration associations requires constant monitoring and diagnostics of the main indicators such as the level of security and all its components (economic, social, geopolitical, technological, environmental, etc.). The application of the proposed content analysis algorithm by the relevant state institutions and analytical agencies will facilitate the objective assessment and management of economic security risks both at the regional (regional security complex), national (national security of individual countries) and micro levels.

Conclusions

Based on the assessment of the conditions for guaranteeing the security of the national economies of the EU countries, as well as based on the indicators of the EU countries' positions in international rankings, we identified significant achievements of the countries in terms of ensuring the conditions and ease of doing business; belonging to countries with predominantly free or moderately free economic systems; countries that have achieved more than 80% of the progress in achieving the goals of sustainable development; countries with the most stable competitive economies, but have not yet reached the highest possible level of sustainability in ensuring competitive advantages; countries that are the most globalised economies in the world; have a very high or high level of human development; are in the first two groups (out of six possible) of countries in terms of prosperity and well-being; are in the group of happy or moderately happy nations; have the lowest or average level of perceived corruption and are the countries that have achieved the greatest success in overcoming corruption and have strong institutions and an effectively functioning democratic system (complete or imperfect); are countries with a very high level of peace and security, have stable socio-political systems; are among the 50 most innovative economies in the world, characterised by a high level of knowledge economy development; have developed cybersecurity systems; are characterised by the most effective results of environmental policy implementation and lead the ranking of green economies in the world, having high green growth rates.

The analysis of the structural characteristics of the EU countries' positioning in international rankings has revealed an average of 35.4% of the EU countries in the top 10% of the most effective (by various criteria) countries in the world, while the EU countries have the highest level of leadership potential in such rankings (and relevant indices) as the Sustainable Development Goals In-

dex, the Sustainable Competitiveness Index, the Globalisation Index, the Fragile States Index, the Environmental Performance Index, the Green Growth Index, i.e. the highest leadership positions in economic and environmental performance. On average, 69.8% of EU countries are in the first quintile of the distribution (20% of the ranking leaders), and 83.1% of EU countries are in the first quartile of the distribution (25% of the ranking leaders), while more than 90% of EU countries occupy leading positions in such rankings as the Sustainable Development Goals Index, the Sustainable Competitiveness Index, the Globalisation Index, the Social Progress Index, and the Environmental Performance Index.

The assessment of the EU countries' variation in global indices highlights the necessity to concentrate the cohesive efforts in such areas as ensuring the growth of global sustainable competitiveness, intensification of innovation development and development of the knowledge economy. The heterogeneity and asymmetry of the EU countries' development is revealed by the fragile states indices; moderate variation is observed in political indices, in particular the Corruption Perceptions Index, the Democracy Index, the Peace Index, and the Global Innovation Index and the Environmental Performance Index; the greatest differentiation is found in the Corruption Perceptions Index and the Fragile States Index, which requires joint coordinated efforts by countries in these areas to improve the European position in the global environment.

International rankings facilitate a comparative analysis of countries in various areas and indicators and identify their respective leadership positions. The results of the content analysis contribute to the formation of an objective assessment and management of economic security risks at various levels; creation of strong security ecosystems which will determine the directions of further research – modern tools for comparative analysis of the security positions of countries, creation of security indices using multidimensional assessment methods, various methods of developing complex (integral) indicators.

References

- Bradford, A. (2019). *The Brussels Effect: How the European Union Rules the World*. Oxford University Press, 67-69. <https://doi.org/10.1093/oso/9780190088583.001.0001>
- Bulatova, O., Osaulenko, O., & Zakharova, O. (2021). Monitoring and Evaluation of the Level of Development of the European Regional Security Complex. *Baltic Journal of Economic Studies*, 7(1), 27–38. <https://doi.org/10.30525/2256-0742/2021-7-1-27-38>
- Bulatova, O., Panchenko, V., & Ivashchenko, O. (2023). Megatrends of International Economic Development and Challenges to Economic Security: The

- Potential of Management of Resilience and Risk Prevention Policy [In Ukrainian]. *Modeling the development of the economic systems*, 2, 215–222. <https://mdes.khmnu.edu.ua/index.php/mdes/article/view/210>
- Buzan, B. & Wæver, O. (2003). *Regions and powers: the structure of international security*. Cambridge University Press.
- Buzan, B., & Little, R. (2000). *International Systems in World History: Remarking the Study of International Relations*. Oxford: Oxford University Press.
- Buzan, B., & Wæver, O. (1998). *Security: A New Framework for Analysis*. Boulder: Lynne Rienner Publishers.
- Duginets, G., & Busarieva, T. (2022). Features of Security and Defense Policy Formation in EU [In Ukrainian]. *Scientific perspectives*, 6(24), 185–202. [https://doi.org/10.52058/2708-7530-2022-6\(24\)-185-202](https://doi.org/10.52058/2708-7530-2022-6(24)-185-202)
- Economist Intelligence Unit, (2023). *Democracy index*. <https://ourworldindata.org/grapher/democracy-index-eiu>.
- Eth Zürich Kof, (n.d.). *KOF Globalisation Index*. <https://kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html>.
- European Union Strategic Communications, (2023). *A Strategic Compass for the EU*. https://www.eeas.europa.eu/eeas/strategic-compass-eu-0_en.
- Global Green Growth Institute, (2023). *Green Growth Index*. <https://gggi-simtool-demo.herokuapp.com/>.
- Hurrell, A. (2007). *On Global Order. Power, Values, and the Constitution of International Society*. Oxford: Oxford University Press.
- Institute for Economics & Peace, (2023, June). *Global Peace Index 2023: Measuring Peace in a Complex World*. Sydney. <https://www.visionofhumanity.org/wp-content/uploads/2023/06/GPI-2023-Web.pdf>.
- International Telecommunication Union, (2021). *Global Cybersecurity Index 2020*. Geneva, Switzerland. <https://www.itu.int/epublications/publication/D-STR-GCI.01-2021-STM-E/>.
- Karpenko, O. (2023a). Economic Security of The Country and International Rankings: Analysis and Assessment Tools [In Ukrainian]. *Scientific Bulletin of Poltava University of Economic and Trade. Series: Economic Sciences*, 3(109), 5–12. <https://doi.org/10.37734/2409-6873-2023-3-1>
- Karpenko, O. (2023b). Regional Security Complexes in the Present Conditions. *Economics: time realities. Scientific Journal*, 3(67), 74–85. <https://doi.org/10.5281/zenodo.8317384>
- Katzenstein, P. J. (2005). *A world of regions: Asia and Europe in the American imperium*. Ithaca, London: Cornell University Press.

-
- Katzenstein, P. J. (1996). Regionalism in Comparative Perspective. *Cooperation and Conflict*, 31(2), 123–159. <https://doi.org/10.1177/0010836796031002001>
- Lake, D., & Morgan, P. (eds.) (1997). *Regional orders: Building security in a new world*. University Park: Pennsylvania State University Press.
- Lazarou, E., & Zamfir, I. (2022). *Peace and Security in 2022: Overview of EU action and outlook for the future*. European Parliamentary Research Service. <https://epthinktank.eu/2022/07/19/peace-and-security-in-2022-overview-of-eu-action-and-outlook-for-the-future/>.
- Legatum Institute, (n.d.). *The Legatum Prosperity Index*. <https://www.prosperity.com/>.
- Leonard, M., Pisani-Ferry, J., Ribakova, E., Shapiro, J., & Wolff, G. (2019). Redefining Europe's economic sovereignty. *Policy Contribution*, 9. https://bruegel.org/wp-content/uploads/2019/06/PC-09_2019_final-1.pdf.
- NATO, (2023). *Joint Declaration on EU-NATO Cooperation*. https://www.nato.int/cps/en/natohq/official_texts_210549.htm.
- NATO, (2022). *Strategic concept*. https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/290622-strategic-concept.pdf.
- Sarbash, S. (2022). Global transformation and modern trends of security environment development [In Ukrainian]. *Bulletin of Mariupol State University. Series: Economics*, 23, 78–99. <https://doi.org/10.34079/2226-2822-2022-12-23-78-99>
- SDG Transformation Center, (n.d.). *Sustainable Development Report*. <https://www.sdgindex.org/>.
- Tavares, R. (2008). Understanding regional peace and security: A framework for analysis. *Contemporary Politics*, 14(2), 107–127 <https://doi.org/10.1080/13569770802176853>
- The Fund for Peace, (2023, June 14). *Fragile States Index 2023 – Annual Report*. <https://fragilestatesindex.org/2023/06/14/fragile-states-index-2023-annual-report/>.
- The Global Sustainable Competitiveness Index Report*, 11th edition, (2022). Seoul: SolAbility Sustainable Intelligence Zurich. <https://www.politico.com/f/?id=00000184-d344-da2c-a3af-fb66c4150000>.
- The Heritage Foundation, (n.d.). *Index of Economic Freedom*. <https://www.heritage.org/index/>.
- The Social Progress Imperative, (n.d.). *Social Progress Index Time Series*. <https://www.socialprogress.org/social-progress-index-time-series/>.
- The World Bank, (n.d.). *Doing Business Data*. <https://archive.doingbusiness.org/en/data>.

- Transparency International, (n.d.). *The Corruption Perceptions Index*. <https://www.transparency.org/en/cpi/2022>.
- UN Development Programmer, (n.d.). *Human Development Index*. <https://hdr.undp.org/data-center/human-development-index#/indicies/HDI>.
- UNDP, & MBRF (2023). *The Global Knowledge Index, 2022*. United Nations Development Programme and Mohammed bin Rashid Al Maktoum Knowledge Foundation. <https://knowledge4all.com/gki>.
- Wolf, M. J., Emerson, J. W., Esty, D. C., de Sherbinin, A., Wendling, Z. A., et al. (2022). *2022 Environmental Performance Index*. New Haven, CT: Yale Center for Environmental Law & Policy. <https://epi.yale.edu>.
- World Bank, (2020). *Doing Business 2020*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/server/api/core/bitstreams/75ea67f9-4bcb-5766-ada6-6963a992d64c/content>.
- World Economic Forum, (2023). *The Global Risks Report 2023*. 18th Edition. https://www3.weforum.org/docs/WEF_Global_Risks_Report_2023.pdf?_gl=1*1w4tiut*_up*MQ..&gclid=EAlaIQobChMI8dPuxNmTgAMVGsd3Ch3VNw4WEAAYAiAAEgIjPD_BwE_
- World Happiness Report, (n.d.). *World Happiness Report*. <https://worldhappiness.report/>.
- World Intellectual Property Organization, (2022). *Global Innovation Index 2022: What is the future of innovation-driven growth?* https://www.wipo.int/global_innovation_index/en/2022/index.html.