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The EU Global Competitive Force Index

Abstract

Introduction. With this paper we want to show that the study of international competitiveness only at a country level does not correspond to the contemporary development of the global economy. The author presents the methodology for competitiveness grouping of international integration groupings' member states in order to assess the global competitive force of trade and economic groupings in the world economy. Based on the data of the Global Competitiveness Report 2019 regarding the competitiveness of the EU Member States, the Global Competitive Force Index of the EU as an interstate integration grouping has been calculated. The Index will help evaluate economic integration or disintegration processes in the global economy. The research demonstrates the necessity of the annual global competitive force ranking of international integration groupings.

This study will enhance knowledge in the field of economics by grouping the EU Member States' global competitiveness indices according to 12 criteria and identifying the new quantitative and qualitative integrated Global Competitive Force Index of an international integration grouping. To reach this objective, we will define the Integrated Global Competitive Force Index as the average of the individual points of the EU Member States in 2019.

The novelty of our study lies in the comparative analysis of the three largest interstate integration groupings from the perspective of their competitive force. The introduction of the new integrated Global Competitive Force Index of interstate integration groupings will help competition policy makers decide which processes of economic integration or disintegration should be preferred in order to increase their competitive force in the global economy.

The purpose. Research and calculation of the European Union's Integrated Global Competitive Force Index to analyze the attractiveness of the European Union in terms of global competitive force. Based on the calculation of the EU Integrated Global Competitive Force Index 2019, the attractiveness of the EU competitive environment has been determined according to 12 criteria.

Results. The ranking of the three largest regional integration groupings of the world economy has been formed. Specification of the assessment and results of the integrated index of interstate integration groupings' global development can be used for the competition policy development of the individual member state of an integration grouping as well as the communitarian competition policy. The EU Integrated Global Competitive Force Index will help understand what the integration grouping's competitive force means and whether the process of interstate integration of countries contributes to enhancing the competitive force of an individual country and the integration grouping as a whole. To calculate the EU Integrated Competitive Force Index, we will analyze the Member States on 12 competitive strength criteria, and Global Competitiveness Report 2019 will serve as the basis for our study. According to our calculations, the EU Integrated Global Competitive Force Index is 72 points out of 100.

Conclusion. The results of a comprehensive integrated assessment of the competitive force of 28 EU Member States demonstrate a high overall competitive force index of the grouping, indicating the EU's impact on global competitive processes. The EU Global Competitive Force Index can be used both as an indicator of the separate international integration grouping's development and as a global criterion for the effectiveness of interstate integration groupings in the transformation of international competitive relations.

Discussion. The highlighting of the EU global competitive force is a requirement for the contemporary development of the global competitive environment, since interstate integration groupings are the main actors of the world economy, which significantly affect the distribution and growth of competitive force.

Keywords: Global Competitiveness Index; Member States of the European Union; Competitive Force of Interstate Integration Grouping; EU Competition Policy; EU Competitive Status in Global Economy

JEL Classification: F00; F01; F02; F12; F15

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Індекс глобальної конкурентної сили ЄС

Анотація. У статті запропоновано методіку групування конкурентоспроможностей країн-членів міжнародних інтеграційних об'єднань для визначення глобальної конкурентної сили торговельно-економічних союзів у світовому господарстві. На основі даних The Global Competitiveness Report 2019 про конкурентоспроможність країн-членів Європейського Союзу розраховано індекс глобальної конкурентної сили міждержавного інтеграційного об'єднання – ЄС, який допомагатиме визначити розвиток процесів економічної інтеграції чи дезінтеграції в глобальному господарстві.

Обґрунтовано необхідність складання щорічного рейтингу глобальної конкурентної сили між міжнародними інтеграційними об'єднаннями. Сформовано рейтинг найбільших міждержавних інтеграційних союзів за їх індексом глобальної конкурентної сили, який буде слугувати як орієнтир для визначення трансформації процесів міжнародної економічної інтеграції та дезінтеграції, позаяк в останні роки особлива увага в економічній науці приділена не лише процесам економічної інтеграції, але й дезінтеграції, які вплинули на зміну глобальної конкурентної сили ЄС та USMCA. Перерозподіл глобальної конкурентної сили у світовому господарстві продемонстровано в нашому дослідженні.

Ключові слова: індекс глобальної конкурентоспроможності країни; країни-члени Європейського Союзу; конкурентна сила міждержавного інтеграційного об'єднання; конкурентна політика Європейського Союзу; конкурентний статус ЄС у глобальному господарстві.

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Индекс глобальной конкурентной силы ЕС

Аннотация. В статье предложено методіку группирования конкурентоспособности стран-участниц международных интеграционных объединений для определения глобальной конкурентной силы торгово-экономических союзов в мировом хозяйстве. На основе данных The Global Competitiveness Report 2019 о конкурентоспособности стран-членов Европейского Союза рассчитан индекс глобальной конкурентной силы межгосударственного интеграционного объединения – ЕС, который поможет определять развитие процессов экономической интеграции или дезинтеграции в глобальном хозяйстве. В работе обоснована необходимость составления ежегодного рейтинга глобальной конкурентной силы между международными интеграционными объединениями. Сформирован рейтинг крупнейших межгосударственных интеграционных союзов по их индексу глобальной конкурентной силы, который будет служить в качестве ориентира для определения трансформации процессов международной экономической интеграции и дезинтеграции, так как в последние годы особое внимание в экономической науке уделено не только процессам интеграции, но дезинтеграции, которые повлияли на изменение глобальной конкурентной силы ЕС и USMCA. Перераспределение глобальной конкурентной силы в мировом хозяйстве продемонстрировано в нашем исследовании.

Ключевые слова: индекс глобальной конкурентоспособности страны; страны-члены Европейского Союза; конкурентная сила межгосударственного интеграционного объединения; конкурентная политика Европейского Союза; конкурентный статус ЕС в глобальном хозяйстве.

1. Introduction

Examining the competitiveness of participants in global competition, we noticed that there is no universally accepted definition of the competitiveness of interstate integration groupings. It was also found out that the Global Competitive Force Index of these groupings which would characterize and evaluate the state and dynamics of economic integration and disintegration processes has not been calculated. While the commodity, enterprise, industry, country competitiveness are being explored by many scholars, no study, to our knowledge, has considered the global competitive force of regional integration groupings. In our view, it is necessary to investigate the

competitive force of international integration groupings, as they are important members of the global economy and significantly affect the international competitive environment and the results obtained will have theoretical and practical value.

With this article we want to show that the study of international competitiveness only at a country level does not correspond to the contemporary development of the global economy. This study will enhance knowledge in this field of economics by grouping the EU Member States' global competitiveness indices according to 12 criteria and identifying the new quantitative and qualitative integrated Global Competitive Force Index of an international integration grouping. To reach this objective, we will define the Integrated Global Competitive Force Index as the average of the individual points of the EU Member States in 2019.

2. Brief Literature Review

The study of global competitors necessitates a critical understanding of the scientific developments regarding the nature of the integrative and dynamic category of the country's competitiveness. In the international academic literature, there is no single definition of the competitiveness of the national economy. Scientific debates about the term are ongoing. Many scientists have been engaged in the analysis of the theoretical foundations of the country's competitiveness: Michael Porter (1990) who notes that there is not an accepted definition of competitiveness as applied to nations. While the notion of a competitive company or industry is clear, the notion of a competitive nation is not: Karl Aiginger (2006) argued that competitiveness is the country's ability to increase welfare; Karl Aiginger and Johanna Vogel (2015) show national competitiveness in the light of the performance of the country's companies; Bruce R. Scott and George C. Lodge (1985) note that the country's competitiveness is the ability of the national economy to produce and distribute goods in the international arena; Yovka Bankova (2013) claims that the international competitiveness of a country is the ability to produce goods and services that are competitive on the world market; Paul Krugman (1994, 1996) argues why national competitiveness is a misnomer and suggests that nations are not as competitive as companies; Erik Reinert (1994) in his work argues that the term «competitiveness» is often misused and mostly ill-defined; Martin Hellwig (2019) proves that there is no such thing as competition between countries; Martin Wolf (2004), the Financial Times' Chief Economics Commentator, says in his book «Why Globalization Works: the case for the global market economy» that «the notion of the competitiveness of countries, on the model of the competitiveness of companies, is nonsense».

We see from the above opinions of international economists that the concept of the country's international competitiveness has not been clearly formulated so far. In our opinion, the introduction of the category of competitive force of the country and the competitive force of the interstate integration grouping to economics will help differentiate and reduce discussions on the adequacy of the concept of competitiveness at the macro- and mega levels, and make it realistic in terms of explaining real processes in a global competitive environment. One of the explanations is that the concept of competitive force of the national economy is not so easy to consider, since it is not such a well-defined phenomenon as, for example, the competitiveness of the company. The global competitiveness of a country, in contrast to the competitiveness of a company, goes beyond supply and demand and is not limited to making a profit; it sets rules for governments and affects the living standards of the population. The new definition is supposed to help avoid a simplistic interpretation of the term.

The level of the EU Member States international competitiveness is also studied in great detail. Surveys such as the one conducted by Paola Annoni and Lewis Dijkstra (2019) investigate spatial variations in regional competitiveness of the EU Member States compared to the average grouping. Marcin Szczepański (2019) deals with the evolution of the European competition policy, which covers all forms of trade and competition relations. Ivan Arribas, Sami Bensassi and Emili Tortosa-Ausina (2020) attempt to quantify how regional trade agreements either intensify or thwart trade globalization. Eleonora Cutrini (2019) explores regional inequalities in the European Union. Jan in 't Veld (2019) examines the macro-economic benefits of the Single Market by simulating a scenario in which tariffs are reintroduced. Nauro Campos, Fabrizio Coricelli and Luigi Moretti (2019) using the synthetic control method, reveal growth effects from EU membership. Lavinia-Maria Cernescu, Claudia Bitea and Luisa Izabel Dungan (2018) determine the place of Romania, the EU member state, in the Global Competitiveness Ranking and analyze what should be done and when it will be possible for this country to reach

the stage of innovation-driven economy. Maria C. Latorre, Zoryana Olekseyuk, Hidemichi Yonezawa and Sherman Robinson (2020) estimate the impact of Brexit and conclude based on an in-depth macroeconomic analysis that the losses will be for both the UK and the EU. Vasilios Plakandaras, Aviral Kumar Tiwari, Rangan Gupta and Qiang Ji (2020) consider the future economic climate throughout the EU. The European Court of Auditors (2018) review competition rules that are crucial to the proper functioning of the EU single market. Bas Karreman, Martijn J. Burger and Fred van Eenennaam (2019) have dedicated their study to identifying European regions where competition between cluster organizations has been revealed. John Gibert and Eva Muchova (2018) analyze changes in the export shares of the Central and Eastern European economies in the period since the 5th enlargement of the European Union. Martijn Burger, Bert van der Knaap and Ronald S. Wall (2013), in their survey combined data on international economy, business and urban geography and developed the measurement of competition for investment between territories. Nebojsa Stojcic, Perica Vojinic and Zoran Aralica (2018) using synthetic control method, studied the impact of trade liberalization and export changes in the new EU Member States. Lucjan T. Orłowski (2020) argues that a deeper integration of the EU markets is necessary to support accelerated economic growth. The competition policy or cluster support strategy in the European Union (2019) has been fully explored. None of the international economists, however, has singled out the EU's competitive force, calculated the integrated index of the EU global competitive force or ranked international integration groupings according to their competitive force.

3. Identification of the unexplored parts of the general problem

Despite the great attention of scientists to the study of global competitiveness of the national economy, previous studies considered only the index of global competitiveness in terms of a country and did not calculate the index of global competitive force of international integration groupings. The novelty of our study lies in the comparative analysis of the three largest interstate integration groupings from the perspective of their competitive force. The introduction of the new integrated Global Competitive Force Index of interstate integration groupings will help competition policy makers decide which processes of economic integration or disintegration should be preferred in order to increase their competitive force in the global economy.

4. The purpose of the paper is to study the European Union's Integrated Global Competitive Force Index 2019 with which it would be possible to analyze the attractiveness of the European Union in terms of global competitive force. To determine on the basis of the analysis the attractiveness of the EU competitive environment according to 12 criteria, which, in turn, allows for a deeper understanding and ranking of regional integration groupings according to their competitive forces.

5. Results

5.1. Global competitive force of an international integration grouping

Considering the development of contemporary globalization, transnationalization, regionalization, it is obvious that the interstate borders are becoming more transparent. American theorist R. Folk (1999) argues that the growing global economic interconnectedness, brought about by the Internet and global communications which contributed to dynamics of all forms of international economic relations and shape common and simultaneous perception of the news, will dramatically change our understanding of the world order. The state, under the influence of border blurring, will no longer be the dominant force on the world stage. In view of this it is necessary to highlight the significant changes in the world economy competitive environment directly related to the transformational nature of today's global competitive drivers. We argue that the study of the competitive force limiting to a country in the global economy does not correspond to the current development of the world economy.

As of today, interstate integration groupings are the part of the new global economy and the leverage over the distribution of competitive force in international economic relations. The grouping of countries into international integration unions is conducted to improve the population standard of living. Members of international integration groupings unite and form a unified competition policy to compete in the increasingly competitive global market for the distribution

of global competitive force. Therefore, highlighting of the international integration groupings competitive force and its annual assessment is important in the development of the contemporary world economy.

Of significant importance is cooperation of the competitive force of countries grouped in international unions, by which countries differentiate their trade and competitive relations in the international arena. Fierce competition in the global economy encourages international integration groupings to widely use both internal and external indicators of economic growth, to resort to parallel accommodating conduct of member states, to enhance the competitive force of the integration grouping. In our view, the study of the international integration grouping competitive force is primarily about developing a unified model of Member States' market interaction that will help effectively respond to challenges in the context of the global competitive environment ongoing transformation.

The use of the term «global competitive force» regarding the interstate integration grouping is related to its perception as a subject of the world market environment, therefore the national competitive force of a member state is an object. We consider the asymmetric distribution of the competitive potential of the member states as the source of the interstate integration grouping's global competitive force.

The competitive force of an international integration grouping is the main criterion of its economic efficiency as a subject of a global economy, which is provided by the joint competitive advantages of member countries in the competition for markets, resources, place in the world market, for the customer, for profit thus determining the rate of output growth, the innovative development and the ability to win in global competition.

One may emphasize the need for global market participants to focus their activities on the world market on supporting and increasing their competitive force through the creation of interstate integration groupings. It is the right choice towards integration that enhances global competitive force of the country and enables the implementation of a competitive advantage in the international arena.

5.2. Competitive force of the EU Member States

Before proceeding directly to the calculation of the EU Integrated Global Competitive Force Index, we need to consider the competition policy of this grouping and the place of the Member States in the global competitiveness ranking according to the World Economic Forum 2019. It is well known that the European Union is the largest trade and competitive bloc in the world economy.

We will calculate the EU Integrated Global Competitive Force Index based on the Member States data of The Global Competitiveness Report 2019 (Table 1).

The table shows that the EU member states include the top 10 most competitive economies: The Netherlands (4), Germany (7), Sweden (8), the United Kingdom (9) - left the EU in 2020, Denmark (10). It should be noted that most EU countries are ranked 20 to 40 (12 countries in total). According to the World Economic Forum, the least competitive countries are the most recent EU member states: Croatia (63), Romania (51), and Bulgaria (49). This leads us to say that these countries have not been able to receive the full economic and competitive effects of accession, however, if one examines their competitive position before they become the EU Member States (for example, in 2006: Romania (68), Bulgaria (72)), then it is safe to say that they have already had a positive effect of accession and have increased their level of competitiveness by all criteria. The combination and synergy of these effects allows us to speak about the development of the grouping's integrated global competitive force as a whole.

5.3. The EU Integrated Global Competitive Force Index

The Index will help understand what the integration grouping's competitive force means and whether the process of interstate integration of countries contributes to enhancing the competitive force of an individual country and the integration grouping as a whole.

To calculate the EU Integrated Competitive Force Index, we will analyze the Member States on 12 competitive strength criteria, and Global Competitiveness Report 2019 will serve as the basis for our study. The value of the integrated grouping's Global Competitive Force Index will be defined as the average of individual points of EU Member States in 2019. According to our calculations, the EU Integrated Global Competitive Force Index is 72 points out of 100 (Figure 1).

Table 1:
EU Member States in The Global Competitiveness Report 2019

COUNTRY	Institutions	Infrastructure	ICT adoption	Macroeconomic stability	Health	Skills	Product market	Labour market	Financial system	Market size	Business dynamism	Innovation capability	Overall score
Austria	74	89	66	100	95	79	66	67	75	65	69	74	77
Belgium	69	87	67	100	93	79	63	64	79	69	74	71	76
Bulgaria	57	71	73	90	78	68	56	65	60	55	62	45	65
Croatia	52	78	61	90	86	63	53	56	62	50	55	38	62
Cyprus	64	75	62	90	96	72	61	66	58	40	66	46	66
Czech Republic	61	84	68	100	86	73	57	63	68	65	69	57	71
Denmark	77	87	83	100	93	86	67	78	87	60	80	76	81
Estonia	70	76	79	100	84	79	62	70	65	43	70	52	71
Finland	81	83	80	100	93	86	66	72	90	58	78	76	80
France	70	90	74	100	99	72	62	63	86	82	71	77	79
Germany	72	90	70	100	92	84	68	73	79	86	80	87	82
Greece	51	78	65	75	94	70	54	53	49	60	59	45	63
Hungary	56	81	64	90	81	69	52	59	61	63	58	47	65
Ireland	73	77	67	100	95	77	61	76	69	65	77	66	75
Italy	59	84	64	85	100	70	62	57	68	79	66	66	72
Latvia	59	76	80	100	77	76	59	67	57	44	66	42	67
Lithuania	63	77	82	100	76	76	56	69	58	51	66	47	68
Luxembourg	76	85	78	100	93	79	68	74	87	50	66	68	77
Malta	61	75	75	100	93	72	60	67	72	37	59	50	69
Netherlands	79	94	76	100	94	85	70	75	85	74	81	76	82
Poland	56	81	65	100	84	72	58	60	64	74	62	50	69
Portugal	65	84	71	85	94	70	60	63	70	60	70	54	70
Romania	58	72	72	90	77	62	55	62	57	65	60	42	64
Slovak Republic	56	79	69	100	82	70	53	61	64	58	63	46	67
Slovenia	63	78	69	100	90	75	62	64	64	48	70	58	70
Spain	65	90	78	90	100	72	61	61	77	77	67	64	75
Sweden	75	84	88	100	97	84	66	69	88	65	79	79	81
United Kingdom withdrew from the EU 2020	74	89	73	100	92	82	65	75	88	82	77	78	81

Source: Compiled by the author based on The Global Competitiveness Report 2019 by the World Economic Forum

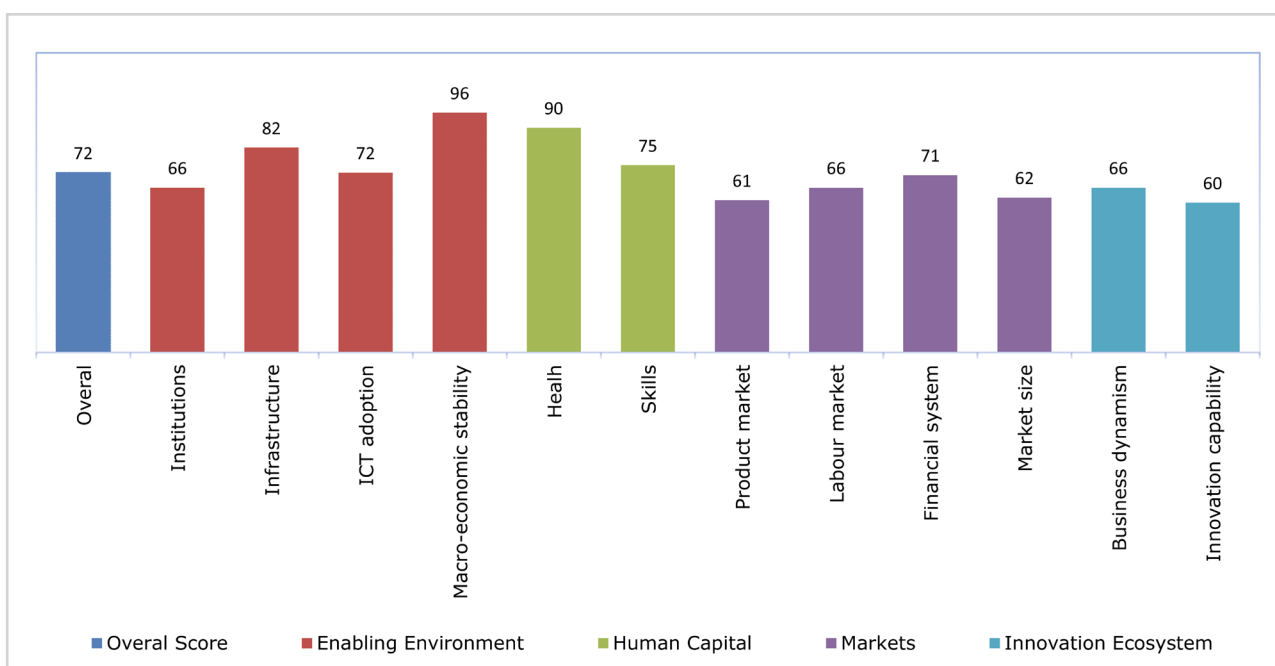


Figure 1:
EU Integrated Global Competitive Force Index 2019
Source: Calculated by the author based on The Global Competitiveness Report 2019 by the World Economic Forum

The results of a comprehensive integrated assessment of the competitive force of 28 EU Member States demonstrate a high overall competitive force index of the grouping, indicating the EU's impact on global competitive processes. The EU Global Competitive Force Index can be used both as an indicator of the separate international integration grouping's development and as a global criterion for the effectiveness of interstate integration groupings in the transformation of international competitive relations.

5.4. The EU in the ranking of the largest interstate integration groupings according to their competitive force

Throughout human history there were three industrial revolutions - the industrial, technological, and the digital one. The era of the Fourth Industrial Revolution is a period in which digitalization plays a vital role in manufacturing, and innovative technologies such as virtual reality, the Internet of Things, artificial intelligence and robotics are dramatically changing the way people work and live. Uncertainty is one of the key features of Industry 4.0. This era is just beginning to gain momentum and so it is still impossible to determine its impact on humanity's future. According to Klaus Schwab, only 25 countries are ready for the Fourth Industrial Revolution, mostly EU Member States, USMCA and ASEAN. This fact indicates that cooperation (in other words, co-operative competition) of countries helps them (and does not inhibit) achieve economic growth and affects their competitive potential in the global economy. Thus, the Revolution 4.0 requires global, not national solutions. The countries able to cooperate with other international players will benefit from the new era. This confirms the urgency of our research and proves the importance of monitoring the integrated global competitive force index of international integration groupings.

The ranking of the global competitive force of the three largest integration groupings is based on a comparison of the integrated competitive force indices of the EU, USMCA, ASEAN in the global market and the construction of a schematic ranking based on them (see Figure 2). That is, in our opinion, the quantitative assessment of the global competitive force of integration groupings should be determined annually for the purpose of monitoring and analyzing the processes of economic integration and disintegration.

When examining the global competitive force integrated indices of the three largest integration groupings USMCA, EU, ASEAN, we concluded that the EU is ranked second in the ranking and, according to the global competitive force, is a powerful integration grouping. The USMCA and the Association of Southeast Asian Nations are ranked first and third, respectively (Figure 2).

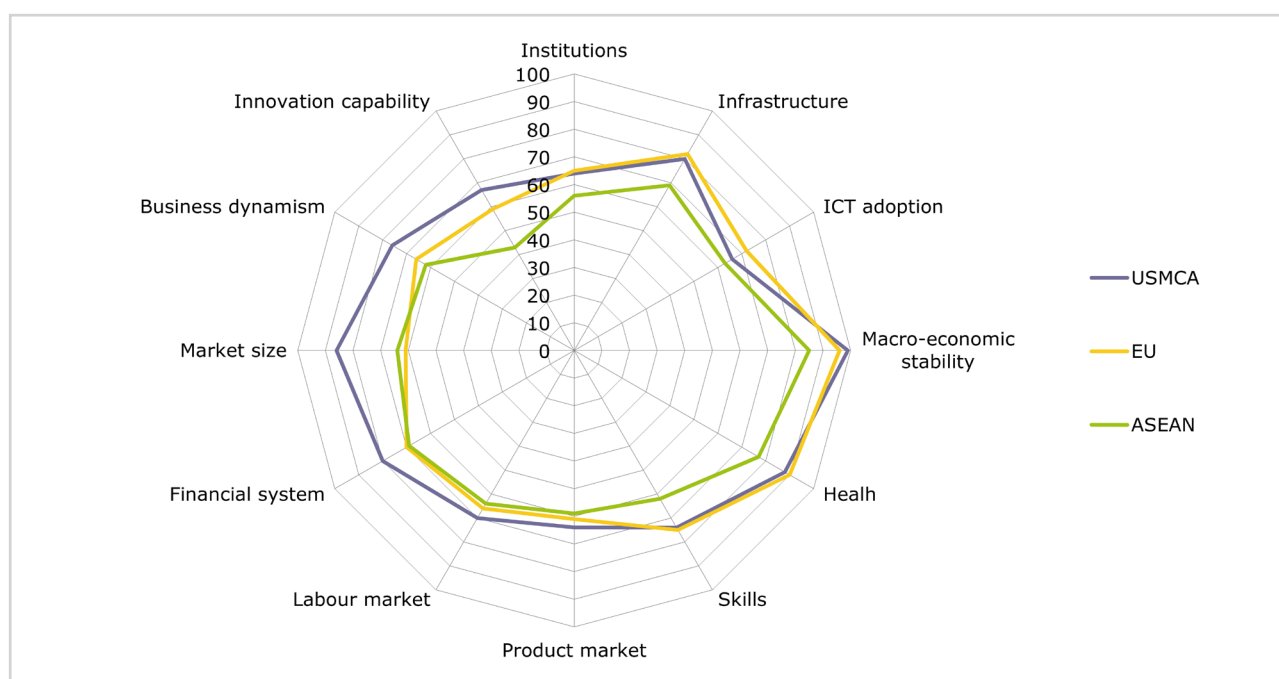


Figure 2:
Integrated Global Competitive Force Index for USMCA, EU and ASEAN
 Source: Calculated by the author based on The Global Competitiveness Report 2019 by the World Economic Forum

The figure schematically shows the comparison of 12 competitiveness criteria of interstate integration groupings. By 2 subindices and 5 criteria (institutions, infrastructure, ICT adoption, health, skills) the EU has the best points compared to the USMCA and ASEAN, under all other criteria USMCA ranked first and ASEAN on any criterion does not occupy leadership positions.

6. Conclusions

First, the global competitive force of international integration groupings has been singled out, as a separate category, which has not been in the focus of economic research so far. The country's competitiveness and the global competitive force of the international integration grouping are developing synchronously as processes of the same direction. The competitive force of an integration grouping may be a prerequisite for enhancing the global competitiveness of a country aiming at integrating or disintegrating into any integration grouping.

Second, the European Union's Integrated Global Competitive Force Index has been calculated based on Member State data from The Global Competitiveness Report 2019.

Third, the comparative analysis of the three largest interstate integration groupings according to their global competitive force was made which demonstrated that the European Union ranks second in the ranking (72 points out of 100 possible).

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