

International economic integration: performance assessment

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Abstract The dynamic development of integration processes in the global economy determines the relevance of assessing the effectiveness of international economic integration and examines the mechanisms of cumulative effect formation. Currently, there are no methodological approaches for a comprehensive assessment of countries economic integration effectiveness. However, there are theoretical issues representing the consequences of integration processes development. The research concerns with the effects of international economic integration and their quantitative assessment. The conducted analysis corresponds to the current stage of research. The purpose of the research is to provide a general assessment of international economic integration effectiveness based on the theoretical analysis of integration effects. This research considers the following aspects: systematisation of the types of effects generated by integration; analysis of quantitatively assessing direct integration effects; conditions for achieving a positive effect from a country's participation in integration; indicators of integration effectiveness; a general assessment of integration effectiveness based on indicators of economic dynamics for a number of integration associations; substantiation of promising areas of analytical research based on trends in the development of integration processes. The methodological basis is a systematisation of theoretically substantiated integration effects. However, the interrelationships between them determine the feasibility of using the method of summary indicators to assess the effectiveness of international economic integration. The research considers the practical aspects of analysing integration effectiveness. It aligns with national macroeconomic development goals and economic integration objectives: GDP per capita growth rates, comparative analysis of GDP and export dynamics, export quota dynamics. The basic research methods involve comparative analysis, retrospective analysis, summary indicators, and statistical methodology. The method of summary indicators has a theoretical substantiation and supported by an accessible information base. It is necessary to assess the effectiveness of international economic integration at several levels, assessment criteria, and methods. We performed a comparative analysis of the world's most significant integration associations. As a result, integration has a positive effect based on economic dynamics indicators. However, assessments of effectiveness as a factor in economic growth vary significantly across integration associations. Therefore, to assess the effectiveness of international economic integration there is a need in the additional research on the impact of integration processes on the global economy.

Keywords: international integration; factors of integration effects; conditions of efficiency; customs union; participation in integration; integration processes

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Introduction

Currently, international economic integration is an important characteristic of the global economy. Its fundamental factors are the benefits of the international division of labour, economic interests of national economic entities, internationalisation of economic activity, and growing national economies. Integration processes are uneven across the regions of the world. It is reflected in both qualitative and quantitative characteristics of international integration dynamics. The EU countries have the highest level of international integration. Trade integration within NAFTA is also effective. Eurasia has great potential for integration processes development. In Latin America and Africa, integration does not provide sufficient effect due to the peculiarities of the chosen integration strategy. However, countries that do not consider the development opportunities associated with international integration in their economic strategy have fewer opportunities to ensure conditions for economic growth in the context of globalisation.

The economic issues of international integration were studied along with the political, legal, philosophical, managerial, and sociological aspects of integration processes. The content of economic research is determined

by questions about the essence, signs, forms, mechanism of formation of an interstate association, management of integration development, and the role of the state in integration processes development. The assessment of the effects resulting from international economic integration is one of the most important results of analytical work. In this regard, special attention is paid to studying the conditions ensuring the effectiveness of national integration. The complexity and multidimensional nature of international integration result in the absence of methodological justification to comprehensive assessment of economic integration effectiveness.

The concept of international economic is related to the concept of economic cooperation between countries. B. Balassa distinguished the concepts of "economic interaction" and "economic integration". Economic cooperation is considered as a set of measures aimed at harmonising economic policy. The process of economic integration includes measures to eliminate discrimination within a certain area [1]. International economic integration differs from other forms of economic interaction in a number of distinctive features. These include the formation of conditions for free trade and the movement of factors of production between the countries participating in the integration agreement, implementation of a policy of collective protectionism, coordination of economic policies of the member countries, convergence of economic mechanisms, formation of a single economic space based on international specialisation, structural changes in the economy, establishment of government bodies, tendency towards the unification of legislation, etc.

According to the history of the world economy, the international economic integration has been an important factor in the development of countries and regions. However, the integration processes are contradictory ones. The dynamics of integration processes is characterised by changing models of economic integration. The classification of integration models can be performed according to various criteria. There are linear and nonlinear integration models based on the sequence of stages of integration processes.

Linear models are based on the integration process in different sectors of the economy and varying degrees of process intensity. The sphere of commodity circulation is the basis of integration processes at the first stages of international integration associations formation. Integration in the production sector is characterised by a longer period of formation the prerequisites. Monetary integration is the most difficult stage of integration processes. It requires a number of conditions, has high risks of negative consequences for the economic development, etc. In this regard, the expediency of a gradual deepening of international economic integration is justified.

The linear integration model is characterised by a sequential change of integration stages. According to the theory of economic integration by B. Balassa [1], integration is an evolutionary process; it has several main stages: preferential trade agreements – a free trade area – a customs union – a common market for goods and factors of production – an economic union – a monetary union – a political union. The possibility of deepening integration processes during the transition from trade integration to economic integration is associated with the formation of a number of additional factors. The most significant are the unification of the national legislation of the united countries, convergence of the system of norms and standards, formation of interstate and supranational government bodies, coordination of economic, monetary union, and financial policy.

The nonlinear model of integration involves non-compliance with the sequence of stages in deepening integration processes and the use of more complex mechanisms for coordinating the interaction of countries at the initial stages of integration. The nonlinear integration model in the current conditions is often chosen in the absence of the homogeneity of the economies of the united countries. In modern conditions, the nonlinear integration model has a number of modifications, such as "stepwise integration", "concentric circles", "differentiated integration". The first of these models of nonlinear integration presuppose the "core" consists of the most developed countries; around those countries with a lower depth are situated. The model of "differentiated integration" assumes differentiation of the speed of integration processes by countries within the integration association. As a result, the model of multilevel integration is widespread in the current conditions.

More flexible formats of international cooperation have led to an expansion of the classification of integration models. There are models of "negative and positive" and "superficial and deep" integration [2].

"Superficial" integration is the implementation of preferential trade agreements, formation of free trade zones, and customs unions. "Deep" integration involves higher integration stages. Nowadays, a model of cumulative integration [3] considers the range of relations leading to the economic rapprochement of a group of interested states. However, it does not use traditional forms of international economic integration. The cumulative integration concerns with the "FTA+" (free trade area in an expanded format) [4]. It differs in goals and privileges from the corresponding stage of the linear model of integration processes development.

Regardless of the chosen model, it is important to assess the effectiveness of international economic integration, both from the perspective of an individual country and the integration association as a whole. The effectiveness of integration processes is considered as a factor of political interaction between countries. The issues of assessing the effectiveness of international economic integration are still relevant. It determined the development of both theoretical and applied research in this area. The purpose of the research is to assess the effectiveness of international economic integration based on generalised indicators.

Methods

The methodology is aimed at implementing a quantitative approach to assessing the effectiveness of international integration. However, generally accepted methodology for assessing the effectiveness of international economic integration has not yet been developed. Various approaches, methods, and assessment criteria are used in the empirical study of the issue. The methodological foundations of modern research are based on the assessment of theoretically justified effects. Econometric models, gravity models, mathematical models of aggregated gravity, cluster analysis, and the construction of integral indicators are used as analytical tools.

The volume of mutual trade is often used as a generalising indicator of integration development. To measure this indicator, a gravity model is usually used [5, p.127]. The limitations of the basic version of the gravity model in international analysis causes an increase in the number of factors taken into account in the model. A number of assumptions used in the gravity model affect the reliability of the conclusions obtained. As a result, the assessment of the integration effect based on the use of this analytical tool is conditional. The use of gravity models is more appropriate in predictive assessments of the integration potential of trade development between countries. Although, further improvement of methods for assessing international trade based on the use of gravitational trade models is possible [6, p.226].

The choice of the assessment method for the conducted research is based on the study of integration and interconnection effects. The calculations are based on official data from the World Bank. The methods of dynamic series analysis for GDP, exports, population, number of indicators calculated are used. The systematic approach, based on the analysis of official data, allows us to identify the structural features of integration associations economic systems according to the degree of their involvement in international trade. The practical issues of efficiency analysis were considered on the basis of indicators corresponding to the goals of the countries' macroeconomic development and economic integration. The following indicators are calculated and analysed: the growth rate of GDP per capita, a comparative analysis of the dynamics of GDP and exports, the dynamics of the export quota.

The research uses the method of comparative analysis in terms of selected assessment criteria for five integration associations. It is the most significant in the modern global economy. The research was performed using the method of retrospective analysis; it covers the period 2010-2024. The method of generalising indicators is used. The calculation of generalising indicators is based on the application of official statistical data, statistical methodology, and the relationship of economic variables.

Results

The issue of assessing of international economic integration effectiveness has become particularly relevant at the stage of the formation of the Customs Union by the EAEU countries. The unification of countries on the basis of comprehensive coordination of all areas of foreign trade regulation generates both positive and negative effects. The main types of integration effects are described in the "theory of the customs union" [1]. Subsequently, the composition of the effects expanded, and a classification of integration effects

was performed [7, 8]. The following types of effects are distinguished: direct and indirect, static and dynamic, distributive and cumulative.

The direct effects of integration consist in changing market parameters in the export-oriented and import-substituting sectors, protecting the integrated market from external competition, reducing differences in the level of integration association economic development, etc. Indeed, direct effects can be quantified.

The indirect effects of integration are different: they do not have an accurate quantitative assessment. Although they have an impact on the overall performance indicators of the economic system of the integration member countries. They are multidimensional, including an assessment of changes in related sectors of the economy in terms of the output multiplier. The fundamental factor in its formation is a change in market parameters in sectors related to the international market. They are characterised by "cumulative" nature. There is more difficult to assess as increase with the expansion of the composition of the integration association.

Static effects are the consequences arising in the early years, immediately upon any country's accession to the customs union. Static effects of participation in the customs union include the "trade formation" effect and the "trade rejection" effect.

Dynamic effects appear at later stages of the integration association's functioning and include gradually accumulating changes in the economies of the participating countries. It is also proposed to divide the effects of integration into distributive and cumulative ones [9]. In fact, most of the distributional effects are based on a static approach. Cumulative effects correspond to dynamic effects of economic integration.

The composition of static (distributive) effects can be determined by the effects of trade creation, trade deviation, structural adaptation, wealth effect, terms of trade effect, border effect, and "neighbour ruin" effect.

The effect of trade establishment increases trade flows between integration countries. It leads to an increase in the share of intra-integration trade in the foreign trade turnover of the integration member countries.

The trade deviation effect reduces the share of non-integrated countries in the foreign trade turnover of the integration member countries due to a change in foreign trade partners. It can provide the negative effects of the transformation. When a country joins an integration association, the change in trade flows may be due to the fact that imports will be supplied not from a low-price supplier from a country outside the customs union, but from a supplier with a higher price within the integration association. The benefits for consumers result in the state budget revenues loses. Those were previously provided by customs duties.

The effect of structural adaptation is associated with changes in the sectoral structure of united countries' economies due to intensification of specialisation and decrease in the share of import-substituting industries. The use of dynamic models for analysing the structural adaptation of the economy to the conditions of integration makes it possible to formulate those to achieve rather positive than negative effects [2].

The wealth effect is more important in conditions of larger customs union. In this case, the establishment effect will exceed the consequences of the deviation one [7]. The analysis of these effects includes an assessment of supply and demand traded goods elasticity. Indeed, in conditions of elastic demand, the customs union can have a positive effect, despite the effect of trade reorientation. It is proposed to consider this effect as an effect of "trade expansion" [8].

The effect of trade terms is formed by changing the ratio of the price index for export and the price index for imported goods. It can change significantly when forming an integration association. The trade index is greater than one; the wealth of the nation increases due to foreign trade.

The border effect considers costs associated with goods crossing a border. In the context of integration, this effect is significantly reduced.

The effect of ruining a neighbour is explained by negative effect of customs union formation in the third countries. Due to the effect of trade deviation, world prices for goods from third countries may decrease, worsening trade conditions for them [10].

Based on distributional effects, it is possible to assess the necessary economic conditions for establishment an integration association between countries [9].

The cumulative effects of integration are multidimensional and dynamical ones. According to B. Belassa,

a static analysis in terms of trade and redistribution is insufficient for a proper analysis of wealth growth as a result of economic integration [1]. The composition of this group was gradually expanded based on subsequent studies results. The dynamic (cumulative) effects of integration include a number of changes in the economies of merged countries. They generally affect the economic growth of participating countries' economies. This group of effects includes the effect of markets structure changing, effect of economic openness, effect of competition, effect of economic efficiency growth, effect of scale, effect of intra-industry trade growth, effect of investment flows, effect of countries institutional development, effect of eliminating the uneven economic countries development, effect of achieving sustainable development goals.

The effect of changing of markets structure [11], resulting in a more efficiently organised economic space. Changing the sectoral proportions at country integration into association is an objective process. The degree of integration influence on the sectoral structure of the economy varies depending on the country's involvement in the intra-integration division of labour.

The effect of economic openness is considered as a factor of countries economic growth. The openness of trade attracts foreign and domestic investments, stimulates the pace of capital accumulation, promotes savings and GDP growth [12].

The effect of competition stimulates the innovative development of the economy.

The effect of increasing economic efficiency by formation a more efficient production structure in terms of the comparative competitive advantages of each participating country. If the specialisation is chosen correctly, structural changes in the economy of each country occur in the direction of increasing the share of more efficient industries. It is a factor of increasing the efficiency of the economy, both in the hotel country and the integration association.

The benefits of scale can be exploited precisely in the presence of a capacious sales market. It ensured by the conditions of trade integration of countries [10] and intensification of specialisation. Those effects are as follows:

- The effect of the growth of intra-industry trade is considered as an indirect indicator of the benefits associated with this customs union [10].
- The effect of investment flows [13, p. 134] at transition of direct investments within a trade bloc from a country with a high cost of production to a country with a lower one.
- The effect of institutional development of countries at increasing in foreign trade can impact on the qualitative development of institutions and the transformation of internal rules governing national economies.
- The effect of eliminating the unevenness of countries and regions economic development, i.e. contributing to the improvement of the common good [11].
- The effect of achieving sustainable development goals based on supranational regulation [5].

Therefore, dynamic effects have the positive impact of integration on the economic growth of the participating countries. The effects of international economic integration in each specific case depends on the vector of integration interaction [14]. In general, with the intensification of integration processes the efficiency increases [15]. At the same time, it is important to quantify the assessment of the effects. However, it is quite difficult to make an assessment of these effects due to the high degree of uncertainty of long-term integration processes in the global economy [9].

A quantitative assessment of the positive effects based on a retrospective analysis. Depending on the change in the direction of trade flows, resulting effects are caused by changes in market parameters in those economic sectors participating in international trade. The value of the effects depends on the elasticity of demand for the price in the foreign market of a given product, elasticity of supply for product price, elasticity of demand for the price of imported goods, coefficients of cross-elasticity, changes in the sectoral employment structure, etc. A comprehensive analysis of the consequences in all sectors related to the international market theoretically allows us to assess the cumulative impact of integration on the economy of an individual country – a member of the integration association. This research could be conducted on the basis of generalised information base. Its sources would be official statistics, including input-output tables, dynamics of market parameters by economic sectors in terms of the integration; data on the analysis of supply and demand

for traded goods in partner countries, information on changes in regulatory documents on foreign trade regulation, etc.

Due to the limited information base for such an analysis in the framework of empirical research, it can be assumed that the effects of integration are underestimated.

Therefore, variety of integration effects influences on the selection of criteria for generalised assessment of international economic integration effectiveness based on other methods. Conceptually, such an integration model should be recognised as successful. It ensures the achievement of the set goals [16, p.169]. The international economic integration is based on common economic interests. As a result, the development of integration processes is determined by the common goals of countries economic development and the prerequisites for their faster achievement, and intensification of integration processes. The main goals of a country's participation in international economic integration can be considered an economic growth based on increasing the efficiency of national production, increasing the competitiveness of the economy, strengthening its position in international trade, and gaining access to cheaper financial, labour, material, and technological resources.

The study of the relationship between economic growth and the country's participation in integration associations is an important issue. Based on the theory of endogenous growth, integration provides the conditions for continuous growth [17]. An analysis of the long-term effects of regional trade agreements shows an increase in trade volume. It leads to sustainable economic growth through cooperation and increased market access [18]. In the context of integration, the production function changes under the influence of changes in the economic conditions of the united countries. It provides benefits from medium-term economic growth [12].

Therefore, regional integration is one of the mechanisms of socio-economic growth based on mutual trade of the countries participating in the integration process [19, p. 90]. As a result, indicators of economic dynamics can be considered as indicators in assessing the effectiveness of international integration. At the same time, it is advisable to generalise the analysed indicators for the integration association and consider the economic dynamics in the long term.

Scientific literature considers the share of intraregional trade in the total trade turnover of the countries of the association as criteria for the effectiveness of countries economic integration [19, p.90], share of mutual trade turnover with the countries of the integration association in the total foreign trade turnover, dynamics of mutual trade turnover, GDP growth, export and import growth, capital accumulation, the level of employment [20], index of terms of trade [21], etc.

Some of these indicators are indirect for effectiveness assessment. Therefore, the development of economic integration may be associated both with positive and negative effects. However, country's accession to the integration association may have ambiguous consequences for the internal well-being of the participating countries. Negative effects may be associated with increased competitive pressure. It results in a decrease in national production, reduction in aggregate demand in the domestic market, increase in consumer spending on imported products, decrease in budget revenues as a result of the abolition of customs duties and a decrease in national production, the presence of structural costs in the intersectoral migration of factors of production due to the effect of changing the structure of markets. There may be some contradictions in the interests of countries within integration groupings due to differences in the magnitude of the advantages they receive in the context of integration. It depends on the comparative advantages of countries in the production of traded goods. Negative effects can be considered as integration costs.

To assess the "net effect", it is important to compare the quantitative parameters of positive and negative effects. The technology of this comparison involves the use of various methods for calculating economic quantities to provide both a quantitative and qualitative assessment of the consequences of integration. Although, clear quantitative indicators cannot be calculated for a number of integration effects. However, there is currently no single methodology to accurately assess all the effects of integration [5, p.127].

In case of methodological uncertainty, we have to consider conditions providing a large net positive effect from the country's participation in trade integration at the Customs Union level. These conditions are

assessed during a preliminary analysis. The value of the positive effect will be higher under the following conditions:

- demand for imported goods is more elastic in price; it determines the difference between the volume of imports before and after the country's entry into trade integration;
- larger difference between the costs of national production and the costs of the country participating in trade integration, from which the goods will be imported under the conditions of integration; smaller difference between the production costs of the partner country in trade integration and the production costs of the third country from which the goods were previously imported;
- value of the import duties were before the country joined the Customs Union;
- smaller difference between the import duties imposed by the integration association in relation to countries outside the integration association; amount of import duties previously applied by the member countries of the customs union;
- higher degree of competitiveness of the integration member countries in relation to protected industries before the creation of the customs union;
- larger part of the trade between the countries participating in the integration before the formation of the customs union;
- larger number of countries of the integration union – positive result is predetermined by the effect of economies of scale. An increase in the export sales market establishes conditions for the growth of the most effective types of activities in the economy, ensuring an increase in efficiency.

However, higher share of national products in domestic consumption before the country's accession to the Customs Union provides increasing of country's population wealth.

Faster trade between the members of the integration association decreases the share of foreign trade with other countries in foreign trade turnover.

The higher economic development of countries provides their competition with each other [26, p. 378].

In general, these prerequisites form the excess of the formation effect over the trade rejection effect. It ensures the wealth effect. However, this effect is not similar to all member countries of the integration association. The degree of difference in the effect depends on the difference in changes in domestic prices for traded goods and the elasticity of national supply and demand.

Therefore, to ensure the effectiveness of integration, the role of the state in integration processes is important. Moreover, this issue was paid special attention in scientific research. According to B. Belassa, the role of the state is of fundamental importance at all stages of countries economic unification. It increases in development and deepening integration. Moreover, the state provides an appropriate compromise between administrative and economic regulatory instruments [1]. According to the integration processes in Western Europe, the condition for a country to receive greater benefits from participating in economic integration is the implementation of a coordinated economic policy by the integrating countries. It highlights the special role of the state in the development of integration processes.

The positive economic effect of a country's entry into an international integration association can be assumed based on some empirical patterns. The most effective are "the results of the activities of those interstate associations and union members of the comparable types of civilisations. In this case, economic rapprochement is complemented by common historical, cultural, and religious roots, resulting in a qualitatively new space ..." [22, p. 72]. A prerequisite for transition towards higher levels of integration is the criterion of political compliance with the economic component of the integration process [22, p. 73]. However, it is necessary to consider the homogeneity of the socio-economic systems of the member states as a prerequisite for integration processes.

The issue of integration associations effectiveness is practically significant at considering integration as a tool for managing effectiveness dynamics of the national economic system.

The effectiveness of international economic integration can be assessed in terms of the effectiveness of an individual country's participation, perspectives, factors influencing the development of the global economic system. At the level of an integration association, empirical verification of effectiveness can be performed

on the basis of an appropriate information base. It based on data published by national statistical agencies and international organisations. As an addition, we consider strategic documents for the development of integration associations, countries, and industries of the most important sectors of the economy.

Based on a comparative analysis of generalising indicators dynamics for the most significant integration associations, it is possible to assess integration processes effectiveness. It is assessed using a system of indicators characterising the dynamics of foreign trade, total GDP of the integration association, and GDP per capita. The compliance of these indicators with the objectives of the study is determined by the calculation based on them. It provides a comprehensive assessment of the dynamics of wealth effect of integration associations by the rate of GDP growth per capita. The growth of wealth is one of the most significant effects of trade integration [8].

Table 1 shows data on the dynamics of GDP per capita for the most developed integrations worldwide. The EAEU data was not considered for the following reasons: First, the founding Treaty on the Eurasian Economic Union was signed on May 29, 2014¹. The one of the most important elements of the unity of foreign trade policy – the unified Customs Code of the EAEU was adopted only in 2017. Secondly, the EAEU economies have a low volume of domestic trade. For instance, Russia and Kazakhstan are focused on exporting natural resources to importing countries outside the union [23]. However, this problem is inherent in the majority of integration associations of countries with emerging markets [19, p. 90].

Table 1 – Comparative indicators of GDP growth per capita, 2010-2024, the most significant international integration associations

Integration associations	Population (mln people)			GDP (\$ bn USD)			GDP growth rate per capita, %, 2010-2024	An increase in the number of participating countries, 2010-2024
	2010 ²	2024 ³	Growth, %	2010 ⁴	2024 ⁵	Growth, %		
EU	506.4	450.4	-11.1	17,082.8	18,309.4	7.2	20.9	+1 -1
NAFTA	461.2	516	11.9	17,771.7	31,290.0	76.1	57.4	-
APEC	2,727	2,973.4	9.0	36,465	63,694.3	74.7	60.3	[10]*
BRICS	3,420.9	3,925.9	14.8	13,903.8	28,754.1	106.8	80.1	5
The SCO	3,001.1	3,441.9	14.7	10,427.7	24,556.3	135.5	105.3	4 / 2
World	6,884.3	8,127.0	18.1	66,364.9	105,435.0	58.9	34.6	H

* Applications for membership

Source: Author

According to presented data, the countries of the leading integration associations had higher GDP growth rates per capita in 2010-2024 compared to the global average. It characterises the positive effect of integration in terms of countries economic dynamics. The exception is the growth rate of GDP per capita in the EU. However, the value of GDP over the last year of the analysed period was influenced by the fact of the UK's withdrawal from the EU (the second largest economy of this integration association). In 2010, the UK's

¹ Development of Eurasian Integration. Ministry of Economic Development of the Russian Federation. Source: https://www.economy.gov.ru/material/directions/vneshneekonomicheskaya_deyatelnost/razvitie_evraziyskoy_integracii/ (accessed on 11.08.2025)

² World Population. IMEMO RAS Official Website. Source: https://www.imemo.ru/files/File/magazines/Osn_pokaz_ME/2015/stat2014_tabl.pdf (accessed on 11.08.2025)

³ World Population Ranking 2024/ United Nations Population Division: World Population Prospects 2024. Source: <https://gtmarket.ru/ratings/world-population> (accessed on 08.11.2025)

⁴ Nominal GDP. Prognostics. Source: <https://prognostica.info/news/nominalnyj-vvp-top-10-stran-briks-2000-2021-gody/> (accessed on 08.11.2025)

⁵ Ranking of countries in the world by the level of gross domestic product 2024. World Bank: Gross Domestic Product 2024. Source: <https://gtmarket.ru/ratings/gross-domestic-product-ranking> (accessed on 11.11.2025)

GDP was 14.56% of the total EU GDP.

Moreover, the comparison base has a great influence on the calculation of dynamic indicators. In this case, there is an effect of an "overestimated base".

Higher economic growth over the analysed period is a common characteristic of other integration associations presented. The marked excess of the growth rates of the total GDP in the SCO, BRICS, and APEC is due to the high growth rates of the Chinese economy. It was stimulated by the growth of investments financed by the large-scale provision of targeted loans.

Foreign trade indicators are used to assess economic integration effectiveness. The export quota indicator has a generalising character. The dynamics of the export quota as a macroeconomic indicator characterises the change in the importance of exports for country economic development (Table 2).

Table 2 – Assessment of export share dynamics in GDP on the most important international integration associations, 2010-2024

Integration associations	Exports /GDP (%)		Δ d exp pp.
	2010	2024	2024-2020
EU	34.02	53.78	19.77
NAFTA	14.91	14.67	-0.24
BRICS	24.78	23.01	-1.77
The SCO	26.46	21.87	-4.59
APEC	22.78	22.58	-0.19

Source: Author

Many indicators of international trade depend on the conjuncture in world markets and often cannot be interpreted by the expediency of a country's participation in an integration structure.

According to Table 2, the role of exports as a factor of economic development has increased significantly only in the EU. It indicates a significant impact of the integration of European countries into the economic growth of the EU. The change in structural characteristics is explained by differences in the dynamics of the compared indicators. The assessment of international trade importance for economic growth is also based on a comparison of exports and GDP for the analysed integration associations (Table 3).

Table 3 – Assessment of international trade importance for economic growth member countries of the most important international integration associations, 2010-2024

Integration associations	Average annual growth rate, 2010-2024 (%)		Comparison of the average annual growth rates of exports and GDP (k)	% of export growth per 1 % of GDP growth
	export	GDP		
World	103.43	103.36	1.00065	0.06482
EU	103.84	100.50	1.03326	3.32559
NAFTA	104.00	104.12	0.99880	-0.11986
BRICS	104.77	105.33	0.99471	-0.52873
The SCO	104.87	106.31	0.98646	-1.35369
APEC	104.00	104.07	0.99937	-0.06294

Source: Author

The calculations were performed according to the data of the World Bank. The average annual indicators allow us to obtain a more objective assessment, levelling the influence of random factors on the dynamics of the analysed values. The calculated data show the average annual growth rate of global exports for 2010-2024. It corresponds to the growth rate of the global GDP. For each percentage of the average annual increase in the MVP, there is a 0.06% increase in the corresponding export value. A comparison of the indicator reflecting

percentage of export growth accounts for 1 percent of GDP growth by integration associations shows differences in the average annual dynamics of exports and GDP. However, it is one of the most important indicators of integration effectiveness. Indeed, each integration group is the basis of integration processes forming conditions for higher-level inter country interaction. As a result, the development of international trade within the framework of the integration association ensures the growth of macroeconomic indicators of the united countries and is a factor of positive economic dynamics.

According to Table 3, trade integration is effective only within the EU. In the EU, for every percentage increase in total GDP, 3.3% of exports increase. Therefore, the international trade within the framework of this integration is an important factor in the growth of production within the framework of the association. To a significant extent, it is the evolutionary nature of the integration processes in the EU and the well-established economic mechanism for managing the united economy. In general, Western European integration acts as a mechanism for the socio-economic growth of countries based on mutual trade between states participating in integration processes. This result was conceptually substantiated by well-known scientists who revealed the theoretical essence of integration effects.

For other integration associations, there is no positive relationship between export growth and GDP growth. It is explained by the lower efficiency of economic integration between the merged countries. Objective reasons for this situation include the later dates of the creation of integration associations compared to the EU, the lower economic homogeneity of the integration member countries, difficulties in agreeing on a common foreign trade policy, more diversified goals for the creation of integration unions, more global nature of the composition of countries.

The researches to assess the effectiveness of international economic integration consider the impact of integration processes on global economy development. This issue can be considered based on the dynamics of the structural indicators of the global GDP and global exports. The difficulties in interpreting the calculated values are related to several integration associations. They form ambiguous conclusions on structural characteristics. It is possible to compare the economic development rates of countries participating in international economic integration and the global average growth rates. The presence of faster economic dynamics in integration associations is evidence of the positive impact of integration processes on global economic development. However, global averages are formed at the expense of all countries, including fundamental differences in the implemented development model do not correspond to progressive structural changes in the global economy. As a result, the conclusions obtained on the basis of such comparisons will differ in a conditional nature. The calculations are presented in Table 4.

Table 4 – Assessment of the dynamics of the share of the most significant international integration associations in world exports and global GDP, 2010-2024

Integration associations	Share of global exports (%)		Share in MVP		Coefficient of change		Ratio of changes d exp and d MVP
	2010	2024	2010	2024	export shares (d exp)	MVP shares (d MVP)	
EU	40.3	26.6	25.74	17.37	0.6600	0.6746	0.9784
NAFTA	17.8	18.8	26.78	29.68	1.0562	1.1082	0.9530
BRICS	27.1	23.1	20.95	27.27	0.8524	1.3017	0.6548
The SCO	22.0	18.5	15.71	23.29	0.8409	1.4823	0.5673
APEC	58.9	55.7	54.95	60.41	0.9457	1.0995	0.8601

Source: Author

For all integration associations, the rate of change in the share of global exports lags behind the rate of change in the share of global GDP. The degree of difference in the dynamics of these structural characteristics varies significantly among the integration unions represented.

According to calculations, the EU and NAFTA show identical changes in terms of their share of global exports and global GDP. The coefficient calculated on the basis of comparing the changes in the share of the integration association in world exports and world GDP for the EU and NAFTA is close to unity. It reflects the situation when the countries' foreign trade has real prerequisites for the economic development of the countries participating in the integration. The other integration associations during the analysed period show a decrease in the share of world exports with an increase in the share of GDP. It indirectly indicates a lower efficiency of economic integration. Deeper integration processes characterise Western Europe and North America. The Asia-Pacific region demonstrates high integration potential.

In general, the economic benefits of integration outweigh the costs associated with any integration process. It is proven by the practice of the leading integration groupings – the EU and NAFTA.

The result of a comparative assessment of integration associations in world exports and GDP for BRICS and SCO is a reflection of the diversified goals of the creation of these associations. Maximising the economic well-being of citizens is a goal of the state's foreign trade policy. Moreover, the range of actors responsible for its development is not limited to national governments. As a result, the economic effectiveness of foreign trade policy may reflect more private interests than the national wealth [25].

The higher values of the calculated APEC structural parameters reflect the specifics of the region as the most dynamically developing, and also characterise the integration potential of this association. Under the appropriate conditions it will ensure the effectiveness of integration within the association. Therefore, integration processes proceed unevenly across the regions of the world. It is manifested in both qualitative and quantitative characteristics of the most important parameters dynamics forming under the influence of international economic integration. The EU is characterised by a high level of effectiveness of international integration.

Increasing the effectiveness of integration processes is important in the context of growing global instability and the challenges facing countries become more complex [19, p. 92]. Meeting a number of conditions will contribute to improving the effectiveness of international economic integration:

- gradual intensification of integration processes;
- common customs tariff for a particular product group at the level of the lowest tariff among the integration member countries before the formation of the common customs area;
- dynamically development of integration processes for transition to higher levels of integration; it ensures higher efficiency in the use of production factors;
- open integration groups to expand the membership of member countries; it ensures the formation of positive dynamic effects;
- transparent rules governing integration relations between countries, clear interpretation in the relevant situation, etc. [26]

These conditions are aimed at increasing the dynamic effects of integration, both by intensifying integration processes and expanding the membership of the countries of integration associations. Therefore, integration processes will ensure the growth of the global economy. However, this association develops effectively within its borders, there are no contradictions between integration associations, and countries out of integration.

Conclusion

In the modern global economy, integration unions differ in their development trajectory. New integration formats are emerging. Therefore, the EU experience is becoming less significant. However, the calculations show the effectiveness of the European integration model.

The new integration unions have an interregional character in terms of the number of participating countries and a "globalised" nature of their activities. Currently, there is a tendency for the development of integration processes between countries of different world geographical regions. The member states of an integration association may not have common state borders and be located on different continents. The establishment of international economic integration mega-formats, new formats based on project cooperation

reflects the trend of increasing complexity of integration processes.

The dominance of nonlinear integration models allows to assess the effects of integration in the considered areas. However, there are some previously identified patterns with limited extrapolation interval.

International economic integration is a complex and multifaceted phenomenon. Its economic benefits can be achieved both through traditional factors and cooperation in other areas. In the current conditions, integration processes are influenced by a political factor determining the development of strategic cooperation with friendly countries. In fact, it means dividing the global economy into blocks based on common values, rather than based on economic expediency. At the same time, new factors for integration processes development have emerged based on the increasing role of global value chains. It reflects the processes of production internationalisation. Therefore, the number of factors determining global integration processes has increased in terms of the diversity of integration formats.

In these conditions, the importance of assessing the international economic integration effectiveness is increasing with the growth of methodological justification complexity of research in this area. Using the method of generalising indicators in combination with a factor analysis of evaluation criteria dynamics will provide an opportunity to illustrate the advantages of international economic integration and analyse the effectiveness of new integration formats.

The study of issues of assessing international economic integration effectiveness develops on the basis of theoretical analysis, generalisation of empirical research results, and integrated approach to further study of integration processes.

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CONFLICT OF INTEREST

The author declares no conflict of interest.

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