On the Indicative Approach to Assessing International Trade within the EAEU

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Abstract

The paper analyzes statistical data characterizing the international trade of EAEU member countries, including a structured analysis by product groups and the share of EAEU member countries in mutual trade. It was found that the main volume of goods turnover accounts for the Russian Federation (61.95%), and the share of communication services is 81.22%. Moreover, the authors conducted a descriptive review of scientific sources that characterize international trade using indicators of sector-oriented trade exchange, trade balance, movement of goods, and the level of border transparency. The considered indicators can be used as basic indicators to study and evaluate international trade relations and the main economic indicators of the EAEU countries, which emphasizes the importance of the correctness of their application and the need to reduce the error in the assessment of international trade. It is noted that EAEU member countries have different points of view on international trade, increasing exports and trade transparency. Despite some differences, the countries have significant preferences due to the region's unification.

Keywords

International trade · Export structure · Economic indicators · Scale of trade · Trade transparency

JEL Codes

F40 · O11 · O47

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1 Introduction

The international exchange of goods allows trading countries to accelerate the development of their economies by acquiring a part of imported, more competitive products and helps eliminate the need to produce all the goods and services consumed in the country. This emphasizes the need for a rational and reliable toolkit for assessing the region's international trade.

2 Materials and Methods

The research used methods of analysis and synthesis in the evaluation of statistical data on international trade. Additionally, the descriptive method was used during the collection and analysis of scientific literature to identify the underlying approaches to assessing international trade, which includes selected indicators.

3 Results

Due to peculiarities in the scale of national territories, economic and resource potential, the volume and structure of trade turnover, industry, etc., the EAEU member countries face the same global problems (Vorotyntseva & Filatkina, 2022). Analyzing the international exchange of goods within the Eurasian Economic Union, the author concludes that the goods of groups 25–27, 28–38, and 72–83 of EAEU Commodity Nomenclature of Foreign Economic Activity (TN VED EAEU) predominate in the export turnover of EAEU countries with non-CIS countries. A significant part of imports to the EAEU are complex technical goods, vehicles, chemical products, and food and agricultural implements. Russia accounts for over 80% of such products.

The volumes of mutual trade within the EAEU in 2020 are shown in Table 1.

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Table 1 Volumes of mutual trade of the EAEU in 2020, million rubles

Code of economic activity	Name	EAEU	Including				
			Republic of Armenia	Republic of Belarus	Republic of Kazakhstan	Kyrgyz Republic	Russian Federation
	TOTAL	55,053.94	709.90	14,009.07	5671.88	554.50	34,108.60
A	Products of agriculture, forestry, and fisheries	1571.79	171.50	430.62	254.10	56.07	659.49
B	Mining products	9680.50	9.84	58.54	2036.98	123.73	7451.41
C	Products of manufacturing industries	41,011.65	462.35	13,329.75	3220.56	320.94	23,678.05
D	Selected energy resources	76.10	0.00	0.01	16.54	0.11	59.45
E	Water supply; sewage system, waste disposal, and reclamation services	461.80	4.03	20.06	132.15	37.35	268.22
J	Information and communication services	85.47	0.18	14.19	1.48	0.20	69.42
M	Professional, scientific, and technical services	0.20	0.00	0.02	0.00	0.00	0.19
R	Arts, entertainment, and recreation services	1.61	0.00	0.12	0.00	0.00	1.49

Source: Compiled by the author based on Eurasian Economic Commission (EEC) (2022)

The structure by groups of goods and the share of EAEU member countries in mutual trade is presented in Table 2.

The analysis shows that the Russian Federation accounts for 61.95% of goods turnover, while the share of information and communication services is 81.22%. The Republic of Belarus takes second place with a total share of exports of 25.45%, a share in the manufacturing of 32.5%, and products of agriculture, forestry, and fisheries—of 27.4%. The Republic of Kazakhstan ranks next in terms of the movement of goods.

According to the Eurasian Economic Commission (EEC), the initial creation of the union between Russia, Kazakhstan, and Belarus was accompanied by a 32.1% increase in domestic trade in 2011 (to about $62 billion) and another 7.5% increase in 2012. The next phase saw declines of 5.5% in 2013, 11% in 2014, and 25.8% in 2015. By 2015, trade turnover between EAEU member countries dropped to $45 billion. This was followed by a sharp decline in trade turnover to $45 billion. A rebound was recorded till 2018. Then, the volume decreased compared to 2019 in 2020 (Fig. 1).

Foreign trade activities outside the EAEU have also seen a decrease for the region since 2012, declining by 34% in 2015, with similar trends thereafter. Assessing the impact of the EAEU on trade flows is debatable because its creation fell on inflation and the economic downturn in Russia and Kazakhstan.

The decline in prices for petroleum products and raw materials led to a sharp distortion of indicators (in 2015, minerals accounted for 66% of EAEU exports and 33% of EAEU domestic trade). The final outcome was reflected in the foreign trade turnover of EAEU members with all major partners, domestically and internationally.

Recently, the EAEU has primarily focused on creating an investor-attractive market in Russia for partners of different locations and commodity orientation (Smirnov, 2019a). As for investment within the EAEU, the figures are insufficiently high.

In 2020, total exports were 89.3%, down from 2019. The most significant decrease in imports is observed for energy

Table 2 Composition by groups of goods and the share of EAEU member countries in mutual trade in 2020, %

Name	EAEU	Including				
		Republic of Armenia	Republic of Belarus	Republic of Kazakhstan	Kyrgyz Republic	Russian Federation
TOTAL	100	1.29	25.45	10.30	1.01	61.95
Products of agriculture, forestry, and fisheries	100	10.91	27.40	16.17	3.57	41.96
Mining products	100	0.10	0.60	21.04	1.28	76.97
Products of manufacturing industries	100	1.13	32.50	7.85	0.78	57.73
Electricity, gas, steam, and air conditioning	100	–	0.01	21.73	0.15	78.11
Water supply; sewage system, waste disposal, and reclamation services	100	0.87	4.34	28.62	8.09	58.08
Information and communication services	100	0.21	16.60	1.74	0.23	81.22
Professional, scientific, and technical services	100	–	7.45	0.01	1.10	91.44
Arts, entertainment, and recreation services	100	0.00	7.56	0.05	–	92.39

Source: Compiled by the author based on Eurasian Economic Commission (EEC) (2022)

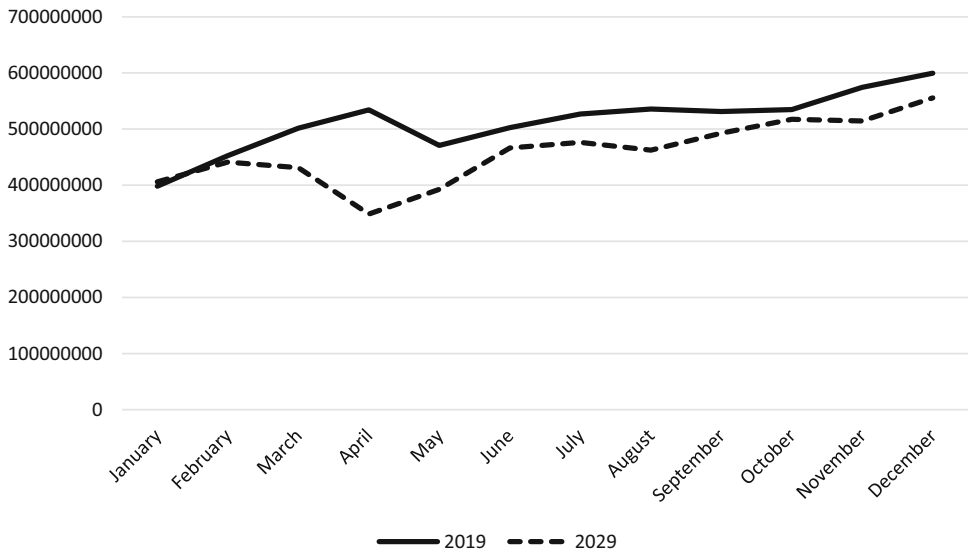

Fig. 1 Dynamics of monthly volumes of EAEU mutual trade, USD. *Source*: Compiled by the author based on Eurasian Economic Commission (EEC) (2022)

goods—70.5%. The shares of the groups of exported goods are shown in Fig. 2.

It is necessary to note that the COVID-19 pandemic and the worsening geopolitical situation have affected the indicaors of foreign trade for all geographic locations.

International trade is known to be an important element of a country's economic growth. Bhagwati (2005) and Helpman and Krugman (1895) pointed to other criteria for trade, namely its importance in reducing unemployment, increasing the level and efficiency of income redistribution, and providing economic growth. Solow (1957) also noted that market-oriented trade liberalization provides an opportunity to develop economic indicators.

Intra-industry trade can be described by various pricing correlations, the object of which is the industry products moved across customs borders (according to Balassa) (Smirnov, 2019b). Based on Balassa's studies, Grubel and Lloyd (1975) substantiated a system governing the importance of quality in international trade.

Intra-industry trade (IIT) should be calculated as the difference between trade revenue and the value received from the sale of goods or their purchase in each sector. Accordingly, the WOT index reflects the efficiency of the considered industry. The value of the index tends to be 100; therefore, the import or export of industry products increases. The equality of exports and imports indicates a high value of the index. It is statistically proven that intra-industry trade vertically prevails over horizontal one in bilateral trade (Salvatore, 2013; Tsypin & Vesnin, 2016).

In the works of Wakasugi, we find an algorithm for the fragmentation of production through an index of multilevel trade of one industry. In his work, the author applied the gravity scheme to analyze multilateralism of trade (Wakasugi & Koyata, 1997).

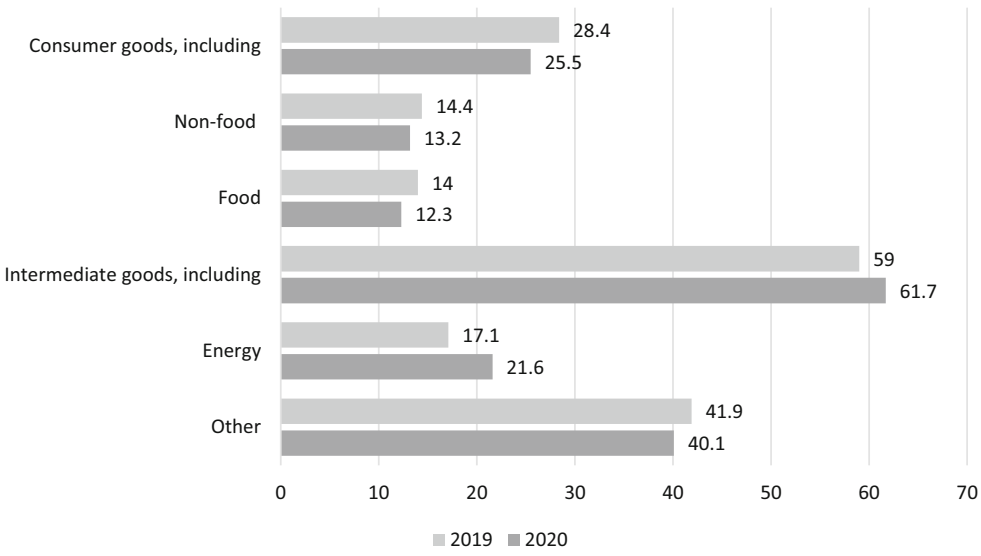

Fig. 2 Shares of export commodity groups of EAEU member countries, %. *Source*: Compiled by the author based on Eurasian Economic Commission (EEC) (2022)

The intra-industry trade indicator is presented below:

$$\mathrm{Imt}_i = 1 - \left(1 - \frac{|\exp_i - \mathrm{imp}_i|}{\exp_i + \mathrm{imp}_i}\ \alpha - 100\right) \quad (1)$$

where:

$\exp_i$—imports of goods of the country i;
imp_i—export of goods of the country i.

Unbalanced economies remain significant worldwide, leading to financial dependence. In a study of OECD countries, Wakasugi proves that globalization causes a multifaceted movement between the values of cross-exchange rates and the equilibrium of trade exchange.

First, globalization has led to vertical and horizontal changes in the structure of the flow of goods. This increased the interchangeability of goods moved across borders and shifted the emphasis on the interdependence of trade exchange equilibrium and cross-rates. Second, changes in supply logistics and deepening of the country's trade specialization increased the stratification between the types of goods moved, which, in this case, reduced the interdependence of cross-courses and trade exchange equilibrium.

Significant is the criterion of trade balance (Tbal), reflecting the difference between the price level of mutually moved goods, considering the real value of national currencies. Such a calculation is in demand in studies to measure specific sectoral economic indicators, such as competitiveness, trade deficit, or trade balance.

The value of the criterion can be estimated from the following equation:

$$\mathrm{Tbal}_i = \exp_i - \mathrm{imp}_i \quad (2)$$

where:

$\exp_i$—exports of goods of the country i;
imp_i—import of goods of the country i.

Export/Import (Ex/Im) is a split of the inter-movement of goods, expressed as a percentage.

The Ex/Im indicator is calculated using the following equation:

$$\mathrm{ExIm}_i = \frac{\exp_i}{\mathrm{imp}_i} \times 100 \quad (3)$$

where:

$\exp_i$—exports of goods of the country i;
imp_i—imports of goods of the country i.

One cannot but agree with Fujii, who links trade transparency to the ratio of total trade turnover to GDP; the transparency indicator is often used in cross-country studies (Fujii, 2017).

The volume of trade in relation to GDP is influenced by various factors. They include trade orientation, the scale of markets, transport logistics, specialization of production, and consumption. Fujii notes that such a set of multiple factors, though convenient, makes it difficult to interpret its effects documented in different contexts. That is, the degree of trade transparency is also an indicator of economic transparency.

Trade openness makes possible a greater transfer of technological ways, methods, means, and tools, as well as the pursuit of upward economic performance.

The openness of trade is defined by dividing the sum of imports and exports by the GDP for a given period.

The level of trade openness is calculated using the following equation:

$$\mathrm{To}_i = \frac{\exp_i - \mathrm{imp}_i}{\mathrm{GDP}} \quad (4)$$

where:

$\exp_i$—exports of goods of the country i;
imp_i—imports of goods of the country i;
GDP—the gross domestic product of the observed object for a certain period.

A mathematical calculation gives an idea of the transparency of the economy and the increase in trade if the numerator tends to the denominator's value.

Indicators of the degree of openness of economies are determined by the following equation:

$$\mathrm{To}_i = \frac{\exp}{\mathrm{GDP}} \quad (5)$$

where:

exp—the export efficiency of the studied object;
GDP—the gross domestic product of the studied object.

This ratio clearly shows what affects the growth or decline of the economy: an increase or decrease in the volume of exports, respectively.

The above indicators provide a theoretical basis for economic indicators for the EAEU member countries.

The formation of the EAEU led to the emergence of such a global phenomenon as the implementation of the megaproject "Greater Eurasia" (Arsentieva, 2021). The Treaty on the Eurasian Economic Union, the EEU Customs Code, is a codified set of customs laws.

If necessary, appropriate amendments are made to the Customs Code of the EAEU, which are aimed at the ever-changing relationship between government agencies and business enterprises, strengthening business comfort and ensuring the safety and security of the logistics chain of international trade. Amendments to the Customs Code of the EAEU are caused by the need to modernize management mechanisms in the customs sector, providing for the elimination of social, economic, psychological, and moral barriers to international trade.

4 Conclusion

To summarize, the EAEU member countries have a significantly different road map of foreign trade activities, partnership, transparency, and other control points. This situation does not prevent effective mutual trade and trade with third countries, although there are subjective reasons for the decrease in trade turnover. The formation of the EAEU partnership solves the economic problems of all countries in the region, including access to new markets and the removal of trade and customs exemptions.

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