V. ГЛОБАЛ ВА МИНТАҚАВИЙ ИҚТИСОДИЁТ ЧАҚИРИҚЛАРИ
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ECONOMIC DIVERSIFICATION IN DEVELOPING COUNTRIES: ESSENCE, MEASUREMENTS AND INSTRUMENTS

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Abstract: *The article substantiates the need for economic diversification in developing countries and shows the benefits of its implementation. A methodology for measuring the degree of economic diversification using the Global Economic Diversification Index is described. Based on the study of foreign experience, the main directions of the economic diversification strategy are identified.*
Keywords: *economic diversification, export diversification, structural transformation, Global Economic Diversification Index.*

Economic diversification, associated with diversification of the domestic production and export structure, is a critical factor in the economic development of less developed countries. Economic diversification helps to reduce the country's vulnerability to external adverse shocks, ensuring more sustainable economic growth in the long run. The need to accelerate economic diversification has become especially critical during global financial crises caused by the coronavirus pandemic, the geopolitical situation arising from Russia’s special military operation in Ukraine, and global climate change.

Ensuring economic diversification is essential for countries with high commodity dependence. A country is considered commodity-dependent if more than 60% of its export earnings are generated from the export of primary goods such as food, agricultural products, metals, and crude oil[1]. By a similar definition, a country is considered commodity-dependent if more than 60% of the value of merchandise exports is natural resources and the ratio of natural resource exports to GDP is above 10%.[2]

[1] Pathways to economic diversification in commodity dependent developing countries. Note by the UNCTAD secretariat, 2020, P.2. Available at https://unctad.org/system/files/official-document/cimem2d53_en.pdf.
[2] Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government, P. 11. Available at www.EconomicDiversification.com.

According to UNCTAD data for 2018-2020, 101 of the organization's 195 member countries were considered countries with high commodity dependence, and another 14 countries had a share of commodities in exports ranging from 50-60%. Commodity dependence is more common in countries at an early stage of development, small island states, and landlocked countries. Thus, the export earnings of 81% of landlocked countries, 61% of small island developing states, and 78% of least developed countries depend on exporting a narrow range of primary commodities or even a single product[3]. According to UNCTAD statistics, all Central Asian countries highly depend on commodities.

The predominance of commodity exports leads to the following negative consequences:

– High volatility of income from commodity exports due to instability in world prices, which affects the trade balance;
– Exchange rate fluctuations due to changes in the current account balance;
– Macroeconomic instability caused by an increase in the general price level in the economy due to the depreciation of the national currency in conditions of low capital mobility;
– State budget deficit and, accordingly, insufficient funds for the implementation of social programs due to a decrease in tax revenues associated with the export of commodities;
– Low growth rates of economic productivity due to the withdrawal of resources from manufacturing industries to extractive ones, the common interest of entrepreneurs in the development of innovative activities due to rent-seeking behavior;
– Unsustainable economic growth in the long term, associated with lopsided economic development, low growth rates of real incomes of the population, and increasing income inequality;
– Political instability and social tension due to dissatisfaction with economic development and uneven income distribution.

Particularly vulnerable to external economic shocks are developing countries with high export quotas (the ratio of export value to GDP, expressed as a percentage) and a concentrated export structure dominated by primary and low-

[3] Pathways to economic diversification in commodity dependent developing countries. Note by the UNCTAD secretariat, 2020, P.2. Available at https://unctad.org/system/files/official-document/cimem2d53_en.pdf.

processed goods. In such countries, high volatility of export earnings leads to instability in economic growth rates. Diversification of the export portfolio helps to reduce the vulnerability of these countries to adverse external shocks associated with changes in the conditions of world commodity markets.

Countries with abundant natural resources may suffer from the so-called "resource curse," which consists of the fact that, despite their high endowment of non-renewable natural resources (fuel and other mineral resources), they experience relatively low and unstable economic growth rates. The level of economic development lags behind the countries which are not rich in natural resources[4]. In the study by Sachs and Warner (2001), the authors analyzed data from 97 developing countries from 1970–1989. They found a negative relationship between real GDP per capita growth and the ratio of natural resource exports to GDP. In particular, an increase in the share of exports of primary goods in GDP by one standard deviation, all other things being equal, leads to a decrease in the country's economic growth rate by 0.6-1.5 percentage points[5]. Accordingly, developing countries must diversify their economies to ensure sustainable high economic growth rates in the long run.

In the scientific literature, the term "resource curse" is often associated with the so-called "Dutch disease," when high income from the export of commodities leads to an increase in the real exchange rate of the national currency, thereby reducing the competitiveness of exports of finished products from manufacturing industries. Under the conditions of the "Dutch disease," the development of extractive industries led to the stagnation of manufacturing industries due to the diversion of limited economic resources into the highly profitable sphere of raw material extraction.

It should be noted that economic growth based on natural resource rent is not sustainable and inclusive. Although extractive industries generate significant revenues when global commodity prices rise, they do not create enough jobs due to the high capital intensity of production. In addition, the development of extractive industries may not lead to the creation of new knowledge that can be applied to other sectors to increase their productivity. Thus, countries suffering

[4] Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government, P. 18. Available at www.EconomicDiversification.com.
[5] Sachs, J. and Warner, A. (2001): "The Curse of Natural Resources", European Economic Review, Vol 45, issue 6-4, pp. 838-827.

from Dutch disease must implement measures to change their production structure and diversify exports to achieve sustainable and inclusive economic development.

Economic diversification refers to a shift towards a more diverse composition of domestic production and exports to increase economic productivity, create jobs, and provide the basis for sustainable and inclusive economic growth[6]. Domestic production diversification occurs due to changes in aggregate output structure: the distribution of total production between sectors, industries, and firms. It is directly related to the structural transformation of the economy – the redistribution of production factors within and between various sectors, from low-productivity activities to highly productive ones[7]. UNCTAD defines structural transformation as "the reallocation of factors of production among sectors, industries, and firms to produce a larger and more valuable set of goods and services." [8] This process of resource redistribution can occur between economic sectors (for example, from agriculture to industry or from industry to services) or within individual sectors (for example, from one industry to another).

Diversification of production, just like diversification of exports, can be horizontal when there is an expansion of the production base and an increase in the range of output, and vertical, associated with increasing the value added of manufactured products through deeper processing. Export diversification, in turn, occurs due to the export of new goods and services, the development of new markets, and the quality upgrading of exported goods or services. Horizontal export diversification means increasing the number of export sectors, which reduces the dependence of a country's exports on a narrow range of industries[9]. Depending on the goals set in the field of export policy, export diversification can be achieved by changing the share of already exported products in the total volume of exports or by including new products in the export structure. Vertical diversification of exports is mainly achieved by increasing the share of exported goods with high-added value and a corresponding decrease in the percentage of exported raw materials and goods with a low degree of processing.

[6] Aid for Trade at a Glance 2019: Economic Diversification and Empowerment – OECD, WTO 2019. P. 142. Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade19_e.pdf.
[7] Aid for Trade at a Glance 2019: Economic Diversification and Empowerment – OECD, WTO 2019. P. 140. Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade19_e.pdf.
[8] Pathways to economic diversification in commodity-dependent developing countries. Note by the UNCTAD secretariat, 2020, P.7. Available at https://unctad.org/system/files/official-document/cimem2d53_en.pdf.
[9] Matthee M., Naudé W. Export diversity and regional growth in a developing country context: Empirical evidence //Regional Studies Association International Conference, Prague. – 2008. – P. 5.

Diversification of exports and diversification of domestic production are closely interconnected. Export diversification, helping to stabilize export income, ensures more sustainable development of domestic output, accelerating the redistribution of resources into more productive activities. Empirical research suggests that improving the quality of exports enhances the impact of domestic production diversification on productivity growth. In particular, the IMF study shows that over the period 1990-2010, countries with low per capita incomes with a more diversified export structure experienced a more significant decline in the share of agriculture in GDP. The same changes were observed in economies that rapidly upgraded export products' quality. In these economies, reallocating resources among sectors increased the economy's productivity. This means that workers moved from low- to high-productivity industries, helping to increase average economic productivity over the period analyzed[10]. This movement of labor is imperative to ensure sustainable economic growth. Thus, expanding trade through export diversification is essential in increasing average productivity levels and accelerating economic growth through structural transformation.

The benefits of economic diversification include the following:

1) low level of vulnerability of the economy to adverse external shocks resulting from fluctuations in world commodity prices;

2) structural changes leading to increased economic productivity, job creation, and increased real incomes of the population;

3) ensuring stable output growth by reorienting production to industries producing goods with high value-added and innovative activities;

4) intensification of investment activity of the private sector, especially in industries producing tradable goods;

5) reducing the dependence of state budget revenues on the extraction and export of natural resources, creating a more stable system of public finances;

6) ensuring macroeconomic stability and sustainable economic growth rates in the long term.

Economic diversification is a strategy for developing countries rich in natural resources to reduce risks and ensure sustainable economic development.

[10] IMF (2014), "Long-Run Growth and Macroeconomic Stability in Low-Income Countries—The Role of Structural
Transformation and Diversification", IMF Policy Paper, (March), Washington, DC: International Monetary Fund. P.18. Available at: https://www.elibrary.imf.org/view/journals/007/2014/038/article-A001-en.xml.

The Mohammed bin Rashid School of Government developed The Global Economic Diversification Index to measure the degree of economic diversification. According to the definition of this organization, "economic diversification is a multi-dimensional, complex and dynamic phenomenon involving the diversification of economic activity, the diversification of international trade (products, services, and trading partners) as well as the diversification of government revenues away from a dependence on natural resource or commodity revenue." [11]

Based on this definition, the three main dimensions of economic diversification are production diversification, trade diversification, and government revenue diversification. Accordingly, the global economic diversification index (EDI) consists of three sub-indices: the production diversification sub-index, the trade diversification sub-index, and the government revenue diversification sub-index. The EDI and its sub-indices were constructed using the Principal Component Analysis method and calculated for 89 countries from 2000 to 2019. Selected indicators, the statistical data used to calculate the IED sub-indices, are summarized in Table 1.

Table 1

Indicators used to calculate sub-indices of the Global Economic Diversification Index

Production Diversification Indicators	Trade Diversification Indicators	Government Revenue Diversification Indicators
Real GDP	Total export value	Excise tax revenue as a percentage of GDP
Agriculture value added as a percentage of GDP	Fuel exports as a percentage of merchandise exports	Income tax revenue as a percentage of GDP

[11] Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government, P. 26. Available at www.EconomicDiversification.com.

Production Diversification Indicators	Trade Diversification Indicators	Government Revenue Diversification Indicators
Gross fixed capital formation as a percentage of GDP	Export market concentration index (Hirschman-Herindahl Index, HHI)	GST(Goods and services tax) revenue as a percentage of GDP
Industry value added as a percentage of GDP	Total import value	Tax revenue as a percentage of GDP
Manufacturing value added as a percentage of GDP	Manufactured exports as a percentage of total merchandise exports	Tax revenue as a percentage of GDP
Resource rents as a percentage of GDP	Medium- and high-technology manufactured exports as a percentage of manufactured exports	Trade revenue as a percentage of GDP
Services value added as a percentage of GDP	Merchandise exports as a percentage of GDP	
Medium- and high-technology manufacturing value added share in total manufacturing value added	Total value of services exports	
Manufacturing value added per capita	Export product concentration index	
	Import product concentration index	

Source: compiled by the author based on materials from Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government, P. 40,44,48. Available at www.EconomicDiversification.com.

In 2019, the average EDI was 102.7, compared to 97.9 in 2000. The highest index value among 89 countries is in the United States (154.85), and the lowest is in Azerbaijan (79.5). In addition to the United States, the top ten include Germany, Japan, Switzerland, Great Britain, France, Singapore, Italy, Ireland, Sweden, the Netherlands, China and the Republic of Korea. The countries with the lowest EDI values are Ghana, Qatar, Nigeria, Kazakhstan, Saudi Arabia, Kuwait, Ethiopia, Azerbaijan, Oman, Angola, Iran, Bolivia, Zambia, Cote D'Ivoire, Uganda, and Cameroon[12].

Thus, developed post-industrial countries with high per capita incomes have the most diversified economic structure. The least diversified economies are found in low-income countries heavily dependent on agriculture and extractive industries. However, in addition to countries with low per capita incomes, many high- and upper-middle-income countries are among the least diversified economies. These are mainly countries specializing in extracting and exporting raw materials, such as Saudi Arabia, Kuwait, and Oman.

Countries with low per capita income also have relatively low trade diversification sub-index values, explained by their lower degree of integration into the global economy. At the same time, the lowest values of the government revenue diversification subindex are typical for countries with upper-middle income levels, which is explained by lower values of such components of the subindex as income tax revenues as a percentage of GDP and tax revenues as a percentage of GDP, compared with indicators for countries with a high level of income[13].

Accelerating economic diversification requires implementing a range of interrelated measures in various areas of monetary policy, including improving trade, investment, industrial policies, and deepening institutional reforms.

According to experts from the World Bank Group, the essential elements of an economic diversification strategy are the following[14]:

1) the formation of an appropriate system of incentives through improving the business and investment climate; enhancing trade and investment policies to stimulate export activity; ensuring a competitive environment in the markets for

[12] Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government, pp. 68-69. Available at www.EconomicDiversification.com.

[13] Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government, P. 81. Available at www.EconomicDiversification.com.

[14] Aid for Trade at a Glance 2019: Economic Diversification and Empowerment – OECD, WTO 2019. P. 143. Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade19_e.pdf.

goods and factors of production, as well as markets for key services, such as transport, financial services, energy, and telecommunications.

2) reforms aimed at reducing trade costs and increasing logistics efficiency;

3) effective policies that promote the reallocation of resources to new activities – both from sectors in decline and from the informal sector;

4) government intervention to correct specific market, political, and institutional failures.

An important factor in accelerating economic diversification is transparent and predictable business regulation to reduce investment costs in new activities. Measures to improve the business climate include reducing transaction costs of starting and liquidating a business, eliminating discriminatory taxation, and regulating capital and labor markets to promote competition (for example, ending subsidies to state-owned enterprises). In addition, it is essential to create a business environment that helps reduce the risks associated with innovation by protecting intellectual property rights.

Another important direction of the economic diversification strategy is to reduce protectionism. High import tariffs can inhibit export diversification and inclusion in regional and global value chains. As is known, high tariffs on imports increase domestic prices for goods competing with imports, making it more attractive to produce goods for the domestic market than for export. In other words, due to protecting the domestic market from foreign competition, incentives to export activities are distorted. In addition, high tariffs on imports of intermediate goods used in producing export products lead to higher production costs, which also constrains the participation of national companies in regional and global value chains, making them less competitive in foreign markets.

Reducing non-tariff barriers is also essential for accelerating export diversification. Measures include simplifying export-import procedures, providing information support to exporters, and ensuring that exported products comply with quality and safety standards adopted in foreign countries. In this direction, it is essential to apply the rules of the WTO agreements on technical barriers to trade (TBT Agreement) and the application of sanitary and phytosanitary measures (SPS Agreement), as well as the WTO agreement on trade facilitation (Trade Facilitation Agreement). The conclusion of regional trade agreements that harmonize standards and provide the mutual recognition of quality certificates also helps reduce trade transaction costs and accelerates export diversification.

Trade liberalization measures should stimulate not only merchandise exports but also the export of services. The development of the service sector contributes to the expansion of exports through improved access to financial, logistics, educational, information, and communication services. It also creates opportunities for local businesses to participate in global value chains by providing certain services.

Competition policy plays a vital role in expanding the private sector and includes the creation of a regulatory framework to combat dominance, collusion, and unfair competition in markets. With increased competition in the domestic market, entrepreneurs have increased incentives to innovate and diversify production. In contrast, if an economy has rules that discriminate against certain firms in favor of favored ones, this may hinder economic diversification. In this regard, implementing an effective competition policy is an essential direction of the economic diversification strategy. At the same time, it is crucial to create a competitive environment not only in the markets of finished goods but also in the markets of intermediate goods and services to increase the efficiency of firms in these industries and reduce the costs of producers of finished products. For example, the diversification of manufacturing firms in India was facilitated by service sector reforms in the 1990s, which increased competition in crucial resource markets (particularly the liberalization of telecommunications, transport, and energy markets). [15]

In addition to creating generally favorable conditions for economic diversification, creating high-quality infrastructure and institutions that facilitate the development of production and export activities and training personnel that meet modern labor market requirements becomes essential.

Institutions that support entrepreneurs in their export activities include export promotion agencies, whose primary function is to provide entrepreneurs with the information they need about foreign markets. In this way, export promotion agencies help enterprises solve the problem of information asymmetry, reducing their transaction costs when exporting. However, to successfully implement their tasks, export promotion agencies must operate where business entities have effective incentives to carry out export activities (low level of protectionism and trade costs, decline in the real exchange rate of the national

[15] Aid for Trade at a Glance 2019: Economic Diversification and Empowerment – OECD, WTO 2019. P. 149. Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade19_e.pdf.

currency, etc.). In addition, export promotion agencies function better when given autonomy and flexibility in decision-making and can establish open lines of communication with entrepreneurs. Financing the activities of export promotion agencies is best done through general revenues rather than export taxes[16].

Investment promotion agencies can also have a significant impact on accelerating economic diversification. The main task of such agencies is to attract foreign direct investment by establishing contacts between foreign companies and local firms, providing them with information and consulting services. To stimulate the diversification of economic activity, it is essential to attract efficiency-seeking investments, mainly invested in export-oriented industries. By making such investments, foreign investors pursue the goal of reducing production costs by using local factors of production. The benefits of such investments for the host economy are access to foreign companies' know-how, technology, distribution channels, and financial resources. Practice shows that countries with low per capita income and lower middle-income levels have been able to significantly diversify the structure of their exports by attracting investments aimed at increasing efficiency. For example, by implementing such policies, Honduras was able to develop its light industry and Mexico – its aerospace industry[17].

The success of implementing an export diversification strategy depends on the availability of personnel employed in various economic sectors. The personnel training system should be aimed at teaching the knowledge and skills that are in demand in the modern labor market. This requires establishing close links between educational institutions and potential employers to identify a set of skills and competencies that meet the changing needs of the labor market. In addition, increasing access to education and training through eliminating discriminatory measures in legislation (for example, women's discrimination) is essential.

Development of the financial sector and stimulation of innovation activity are also essential elements of an effective strategy for economic diversification. The development of the financial sector involves expanding access to bank loans and other sources of financing for medium- and long-term projects (for example, venture capital financing), as well as the development of trade finance. In

[16] Aid for Trade at a Glance 2019: Economic Diversification and Empowerment – OECD, WTO 2019. P. 151. Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade19_e.pdf.

[17] Aid for Trade at a Glance 2019: Economic Diversification and Empowerment – OECD, WTO 2019. P. 153. Available at: https://www.wto.org/english/res_e/booksp_e/aid4trade19_e.pdf.

addition, developing the capital market, particularly the stock market, as an essential source of external financing for companies' activities is important. Supporting the activities of innovative firms contributes to the transition to producing a more comprehensive range of quality goods and services. At the state level, such support is provided by financing R&D and creating an innovation infrastructure that facilitates the implementation of innovative activities by enterprises and organizations.

Thus, accelerating economic diversification requires implementing a range of measures in various areas of economic policy. Most countries that have successfully diversified their economies have relied on a combination of horizontal policies and sector-specific measures. In particular, Costa Rica's structural transformation was achieved by coordinating industrial, investment, and trade policies, allowing it to transition from exporting bananas and coffee to exporting high-value-added goods (such as medical instruments) and services[18].

Improving the business climate	• Reducing transaction costs of doing business • Protection of property rights
Liberalization of the trade regime	• Reducing tariff and non-tariff barriers • Preferential trade agreements
Encouraging competition	• Creating a competitive environment in the markets for goods and services • Antimonopoly regulation
Stimulating innovative activities	• Investments in R&D • Innovative infrastructure
Export and investment Promotion	• Export promotion agencies • Investment promotion agencies
Infrastructure development	• Growth poles • Special economic zones • Economic corridors • Clusters
Improving the quality of human capital	• Expanding access to education • Improving the quality of education • Professional training

Picture 1. Main directions of the economic diversification strategy. Source: compiled by the author.

[18] Pathways to economic diversification in commodity-dependent developing countries. Note by the UNCTAD secretariat, 2020, P.11. Available at https://unctad.org/system/files/official-document/cimem2d53_en.pdf. (Дата обращения 29.09.2023).

The fundamental factors accelerating economic diversification are ensuring macroeconomic stability, creating a regulatory framework that stimulates private investment and export activities, creating a competitive environment, trade liberalization, improving the quality of human capital, encouraging innovation, and developing institutions and infrastructure (Fig. 1). In general, policies aimed at economic diversification must be woven into a broader strategy for ensuring sustainable, inclusive economic development of the country over the long term.

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4. Pathways to economic diversification in commodity-dependent developing countries. Note by the UNCTAD secretariat, 2020. Available at https://unctad.org/system/files/official-document/cimem2d53_en.pdf.
5. Prasad A., Refass S., Saidi N., Salem F., Shepherd B., Global Economic Diversification Index 2022. Dubai: Mohammed bin Rashid School of Government. Available at www.EconomicDiversification.com.
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