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COMPARATIVE ANALYSIS OF THE STRUCTURES OF RESOURCE-BASED AND HIGH-TECH ECONOMIES: DEVELOPMENT FEATURES, KEY RISKS, AND MODERNIZATION DIRECTIONS

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Abstract. *The article provides a comprehensive comparative analysis of macroeconomic models of resource-based and high-tech types. Using statistical data from international organizations, the study examines structural differences in the formation of gross domestic product, the dynamics of export revenues, and the level of innovation activity. Particular attention is devoted to analyzing the volatility of economic growth depending on the type of economic system. The key risks of resource dependence— including institutional distortions and macroeconomic instability—are identified and classified. Strategic priorities for the modernization of national economies are substantiated through mechanisms of diversification, human capital development, and integration into global value chains.*

Keywords: *economic structure, resource dependence, high-tech economy, value added, volatility, modernization, innovation, R&D, human capital.*

The current stage of global economic development is characterized by a deepening technological divide between core countries that specialize in the creation of knowledge, innovation, and high value-added products, and peripheral countries whose economies remain predominantly resource-oriented. This asymmetry is not merely a matter of different sectoral structures; it reflects fundamentally distinct models of economic organization, institutional capacity, and long-term growth potential. Core economies concentrate intellectual capital, research infrastructure, advanced education systems, and high-tech industries, thereby ensuring continuous productivity growth and structural modernization. Peripheral economies, by contrast, often rely on the extraction and export of raw materials, which makes them highly sensitive to fluctuations in global commodity markets.

Recent global shocks, including the COVID-19 pandemic and escalating geopolitical conflicts, have clearly exposed the differences in resilience between these two development models. Resource-dependent economies experienced sharp declines in export revenues, disruptions in supply chains, fiscal imbalances, and currency instability. Their dependence on external demand and volatile price dynamics led to procyclical budget policies and constrained opportunities for countercyclical stabilization measures. In many cases, limited diversification and weak innovation systems hindered rapid adaptation to new economic

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conditions.

In contrast, high-tech and innovation-driven economies demonstrated significantly greater flexibility and adaptive capacity. Their diversified production structures, strong digital infrastructure, and advanced technological ecosystems enabled a relatively swift reconfiguration of value chains and accelerated digital transformation. Investments in research and development, human capital formation, and institutional quality strengthened their ability to absorb external shocks and sustain medium- and long-term growth trajectories. Moreover, the predominance of knowledge-intensive sectors contributed to higher labor productivity, stable fiscal revenues, and enhanced global competitiveness.

Under these circumstances, an in-depth analysis of the structural parameters of both models becomes crucial for countries seeking to transition from an extensive growth paradigm—based on quantitative expansion of resource use—to an intensive model grounded in innovation, efficiency, and technological modernization. Such an analysis should encompass sectoral composition, innovation capacity, institutional quality, human capital development, financial system maturity, and integration into global value chains. Designing an effective transformation strategy requires not only macroeconomic stabilization but also comprehensive structural reforms aimed at stimulating high value-added production, fostering entrepreneurship, strengthening science–business cooperation, and improving governance mechanisms. Ultimately, narrowing the technological gap is not solely an economic challenge but a strategic imperative for ensuring sustainable development, economic security, and long-term resilience in an increasingly volatile global environment.

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