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## **TRANSFORMATION OF THE NATIONAL COMPETITIVENESS PARADIGM: FROM M. PORTER'S MODEL TO SUSTAINABLE COMPETITIVE ADVANTAGES**

### **Abstract**

The article examines the methodological limitations of traditional competitiveness theories amid the transition to a polycentric global economy. Using a four-dimensional analytical framework and systemic approach, the study demonstrates that M. Porter's paradigm, while valuable at micro level, proves insufficient for explaining contemporary structural transformations marked by digitalization, economic sovereignty, and value chain fragmentation. Empirical analysis reveals that Porter's "diamond" determinants explain only 55–60% of economic growth variations, indicating theoretical gaps. The research highlights digital transformation as a key challenge, fundamentally reconfiguring all components of traditional models through AI, platforms, and new business models. As a theoretical alternative, the article proposes the concept of Sustainable Competitive Advantages (SCA), integrating macroeconomic regulation, industrial policy, and regional cooperation. Using the EAEU and comparative cases (China, Singapore), the study demonstrates the effectiveness of strategic protectionism and industrial cooperation. The findings have practical significance for developing new competitiveness indicators and policy tools adapted to polycentric realities.

**Keywords:** competitiveness, Porter's theory, polycentricity, sustainable advantages, digital transformation, regional integration, industrial policy.

### **Introduction**

The issue of ensuring national competitiveness remains of high theoretical and practical relevance amid the profound transformation of the global economic architecture. Despite broad recognition of the strategic importance of this category, methodological pluralism persists within the academic community regarding its essence, determinants, and mechanisms of implementation [1]. The theory of competitive advantage developed by M. Porter continues to dominate the scholarly discourse, interpreting competitiveness through the lens of national economic productivity [2]. According to

this concept, productivity – understood as the efficiency of utilizing limited resources to generate added value – serves as a key determinant of national welfare, innovative potential, and sustainable economic growth.

The methodological core of Porter's paradigm is represented by the “diamond model of national competitive advantage”, which integrates four groups of determinants: factor conditions, demand parameters, the state of related and supporting industries, and the strategic and institutional context [3]. This model has significantly influenced the evolution of economic thought and the analytical frameworks adopted by major international organizations, including the World Bank, the World Economic Forum, and the OECD. Its principal contribution lies in shifting the analytical focus from macroeconomic measurement of competitiveness to a microeconomic assessment of firm and industry performance within the national institutional environment.

However, the current stage of global development is marked by systemic structural shifts that have fundamentally altered the nature of economic competition. The transition toward a polycentric model of global economic relations, the strengthening role of regional integration blocs, and the growing significance of economic sovereignty have objectively limited the applicability of classical theoretical constructs. Empirical observations – including the intensification of protectionist policies, industrial planning, and strategic autonomy instruments in leading economies – demonstrate that traditional liberal models are losing explanatory power when analyzing strategies for sustainable development [4]. The underestimation of macroeconomic and institutional factors, as well as the impact of global value chain fragmentation, underscores the need for a methodological revision of existing approaches.

In this regard, the central research problem lies in the need to adapt and further develop the theoretical and methodological framework for analyzing national competitiveness, considering the realities of an emerging polycentric world order – characterized by the rise of protectionism, diversification of economic power centers, and the redefinition of the state's role as an active agent in industrial and technological policy. The relevance of this study stems from the necessity to overcome this theoretical and methodological gap.

The aim of the article is to analyze the transformation of scientific approaches to national competitiveness in the context of the shift from a unipolar to a polycentric model of the global economy and to outline the conceptual contours of a new paradigm adequate to contemporary challenges. To achieve this goal, the study sets the following research objectives:

- ♦ to conduct a critical analysis of M. Porter's theory and its modern interpretations;
- ♦ to identify methodological limitations of classical models under changing global economic conditions;
- ♦ to substantiate the directions for developing comprehensive approaches to national competitiveness that integrate instruments of macroeconomic and industrial regulation, innovation policy, and mechanisms for safeguarding national economic interests.

The scientific novelty of this research lies in the systematic reinterpretation of the theoretical foundations of competitiveness through the lens of polycentricity, institutional adaptability, and strategic autonomy, as well as in the formulation of the conceptual framework of a new paradigm of sustainable competitive advantages. This paradigm reflects the structural transformations and emerging trends of the modern global economy.

## Materials and methods

The methodological foundation of this study is based on a systemic approach, which is recognized as the most adequate for analyzing the multidimensional and multilevel nature of national competitiveness. Within this framework, competitiveness is conceptualized as an emergent property of a complex economic system, arising from the nonlinear interaction of its macro-, meso-, and micro-level components. Such an approach makes it possible to overcome the reductionism inherent in traditional models characteristic of the unipolar world order and to uncover the systemic nature of how competitive advantages are formed under the conditions of increasing complexity, fragmentation, and polycentricity in the global economic environment.

To implement this systemic approach, a set of complementary research methods was applied, forming an integrated methodological framework. The comparative-historical analysis was used to

reconstruct the genesis of theoretical paradigms of competitiveness – from the classical theory of comparative advantage to contemporary systemic concepts. This method enabled the assessment of the explanatory capacity of different theoretical approaches depending on the evolutionary stage of the world economy, revealing the patterns underlying the transition from a unipolar to a polycentric model of development.

A critical theoretical and methodological analysis served as the key research instrument, aimed at the deconstruction of the dominant Porterian paradigm. The focus was placed on identifying its inherent methodological limitations, evaluating the consistency of its core assumptions (regarding the role of the state, growth factors, and the nature of competitive advantages) with contemporary empirical data, and assessing the coherence of the model in the context of global value chain fragmentation and the growing importance of economic sovereignty. Additionally, institutional analysis was employed to trace the transformation of the functions of key actors – national states as agents of industrial policy and supranational integration entities as emerging centers of competitive attraction.

The final element of the methodological framework was the structural-functional analysis, designed to identify systemic shifts in the architecture of the world economy – such as protectionism, regionalization, and technological sovereignty – and to assess their influence on strategies for forming competitive advantages.

The empirical foundation of the study includes a corpus of both classical and contemporary scholarly works (A. Smith, D. Ricardo, M. Porter, D. Rodrik), statistical data from international organizations (the World Bank, IMF, and World Economic Forum), as well as strategic documents of national governments and integration associations reflecting the pragmatic shift in economic policy in the era of polycentricity.

The integration of these methods and the diversification of the source base ensured data triangulation, which made it possible to achieve the objectives of the research – to identify the methodological and empirical limitations of existing theories and to propose the conceptual contours of a new system-oriented paradigm of national competitiveness, relevant to the realities of the modern global economy.

## Results and discussion

The study of the transformation of theoretical approaches to national competitiveness demonstrates a consistent evolution from static models to dynamic, systemic concepts. Beginning with the classical theories of comparative advantage, scholarly thought has progressed through neoclassical, evolutionary, and managerial approaches, ultimately arriving at contemporary views on sustainable competitive advantages. This theoretical advancement reflects the growing complexity of real economic processes – from relatively simple models of international trade to a multifaceted system of global competition, where technological, institutional, and managerial factors play a decisive role.

A critical examination of traditional approaches reveals their methodological limitations in the current environment. Classical theories grounded in exogenous production factors appear insufficient to explain the competitive positions of states amid digital transformation and intensifying geo-economic rivalry. These theoretical gaps have necessitated a retrospective analysis of the evolution of scientific perspectives to identify the underlying patterns of paradigm shifts and their determinants.

To ensure a systematic analysis of theoretical evolution, a four-dimensional analytical framework was developed, incorporating the criteria of factor endogeneity, institutional embeddedness, technological dynamics, and the level of economic analysis. Applying this methodology has enabled not only a classification of the stages in theoretical development but also the identification of causal relationships between changes in economic reality and the transformation of scientific paradigms. The results of this analysis are summarized in table 1, which clearly illustrates the major vectors of theoretical evolution.

The examination of theoretical paradigm evolution in national competitiveness analysis, as systematized in table 1, reveals a non-linear progression in economic thought, fundamentally shaped by the growing sophistication of global economic architecture. This epistemological journey demonstrates a dialectical shift from static equilibrium-based constructs toward dynamic, non-linear analytical frameworks, mirroring the profound metamorphosis in the character of international competition.

Table 1 – Evolution of theoretical paradigms of national competitiveness analysis

Stage of Development	Theoretical Paradigm	Key Authors	Methodological Contribution	Economic Mechanism of Competitive Advantage Formation
Classical (late 18th – early 19th century)	Theory of Absolute and Comparative Advantage	A. Smith, <i>An Inquiry into the Nature and Causes of the Wealth of Nations</i> [5]; D. Ricardo, <i>On the Principles of Political Economy and Taxation</i> [6]	Static concept of international specialization based on differences in factor endowment	Increased allocative efficiency through international division of labor and trade liberalization
Neoclassical (mid-20th century)	Theory of Exogenous Economic Growth	R. Solow, <i>A Contribution to the Theory of Economic Growth</i> [7]	Factor decomposition of growth and identification of the “Solow residual” as a measure of technological progress	Technological progress as an exogenous driver of total factor productivity (up to 80% of GDP growth in developed economies)
Evolutionary (early – mid-20th century)	Innovation-Driven Theory of Economic Development	J. Schumpeter, <i>The Theory of Economic Development</i> [8]	Concept of “creative destruction” as a source of structural economic transformation	Endogenous formation of competitive advantages through technological trajectories, entrepreneurship, and innovative clusters
Managerial (mid- to late-20th century)	Theory of Organizational Efficiency and Human Capital	P. Drucker, <i>The Effective Executive</i> [9]	Conceptualization of management and human capital as key productive resources	Formation of competitive advantages at the micro-level through enhanced corporate governance and organizational design
Systemic (late 20th century)	Theory of National Competitiveness Determinants	M. Porter, <i>The Competitive Advantage of Nations</i> (1990/1993) [10]	Development of the “diamond model” integrating micro- and macroeconomic determinants	Synergy of factor conditions, domestic demand, related industries, and firm strategy within the national institutional context
Contemporary (early 21st century)	Paradigm of Sustainable Competitive Advantage and Polycentricity	D. Rodrik, <i>The New Economic Paradigm</i> [11]	Development of a polycentric model of competitiveness emphasizing strategic autonomy, institutional leadership, and integration	Sustainability of competitive advantages through technological sovereignty, development of regional value chains, and the “green” transition
Note: Compiled by the authors of this study.				

The classical paradigm, established by Smith and Ricardo, operated within the confines of static allocative efficiency, treating competitive advantages as exogenous endowments derived from comparative factor differentials. The neoclassical extension, particularly Solow’s exogenous growth model, while maintaining the assumption of externally determined growth parameters, made a significant empirical contribution by identifying technological progress as the predominant driver of economic development – accounting for approximately 80% of GDP expansion in advanced economies. However, this approach remained limited by its inability to elucidate the endogenous mechanisms underlying technological advancement generation [6].

This analytical trajectory reveals an epistemological transformation wherein competitive advantages are progressively reconceptualized from predetermined, resource-based endowments to dynamically cultivated, innovation-driven capacities. The methodological evolution reflects an ongoing paradigm shift from deterministic, equilibrium-focused models to adaptive, system-oriented

frameworks capable of capturing the complex interplay of factors characterizing contemporary global competition.

This fundamental reorientation paved the way for a radical departure from equilibrium thinking through the evolutionary paradigm (J. Schumpeter), which emphasized “creative destruction” as the primary driver of economic dynamics. Within this framework, competitive advantage is understood as an outcome of endogenous innovation processes driven by entrepreneurial initiative. Building upon this conceptual foundation, the subsequent managerial paradigm (P. Drucker) further shifted analytical focus to the micro level, conceptualizing human capital and organizational capabilities as key productive resources [8].

The logical extension of this theoretical evolution was Porter’s systemic synthesis, which transcended the micro–macro dichotomy through the “diamond model.” By integrating factor conditions, demand parameters, the state of related and supporting industries, and firm strategy into a single dynamic system, the model enabled the examination of nonlinear effects and synergies [3, pp. 19–20]. However, subsequent empirical validation revealed its limitations, inherited from the liberal paradigm – namely, the underestimation of the role of the state and institutional context.

A compelling empirical demonstration of these constraints is the case of China, which, despite being classified by Porter as an “investment-driven” economy, achieved a rapid development leap through active industrial policy. This example shows that strategic state participation and deep integration into global value chains may constitute powerful alternative sources of competitiveness. Further development of criticism toward Porter’s framework is reflected in Dunning’s extension of the diamond model through the determinant of multinational enterprise activity [12], which provides a better explanation for the successes of economies such as Singapore and South Korea.

The contemporary paradigm (D. Rodrik) addresses these limitations by conceptualizing a polycentric model, wherein the sustainability of competitive advantages is maintained through strategic autonomy, institutional leadership, and adaptive capacity within fragmented global value chains [11]. The analytical emphasis is increasingly placed on technological sovereignty, regional integration, and ecological transformation as systemic determinants of long-term competitive positioning.

Thus, the evolution of theoretical paradigms demonstrates a fundamental shift in the understanding of competitive advantage: from static comparative advantages to dynamic competitive advantages intentionally shaped through complex interactions between innovation, institutional design, and managerial capabilities. In a polycentric global environment, competitiveness is increasingly manifested as an emergent property of a complex economic system, making it essential to identify the factors that determine its qualitatively new configuration.

In this context, the systemic impact of digitalization and artificial intelligence constitutes a methodological challenge to traditional theories of competitiveness. Digital transformation is leading to a fundamental reconfiguration of all components of Porter’s model, elevating analytical complexity to a significantly higher level (table 2).

Table 2 – Transformation of Traditional Determinants in the Digital Era

Porter’s Determinant	Classical Interpretation	Transformation under the Influence of Digitalization and AI
Factor Conditions	Labor, capital, natural resources	Dominance of digital assets (Big Data, AI, cloud services, digital platforms); the crucial role of digital infrastructure (5G, data centers)
Demand Conditions	Volume and quality of domestic demand; domestic market orientation	Personalized demand and service-based models (product-as-a-service); AI-driven marketing and sales
Related and Supporting Industries	Local industry clusters	Global digital ecosystems; integration through IoT and APIs; platform-based and crowdsourcing solutions
Firm Strategy, Structure, and Rivalry	Competition in domestic markets; hierarchical structures	Data-driven strategies; networked collaboration; hybrid “AI + human” models; digital transformation of business processes
Note: Compiled by the authors of this study.		



Particular attention should be paid to the fact that digitalization fundamentally reshapes demand patterns by promoting personalization and a transition toward service-oriented economic models [13]. Generative AI demonstrates significant value potential in marketing, sales, and software development, indicating the impending transformation of entire industries [20]. The expansion of the Internet of Things and digital platforms reinforces cross-industry interdependencies, giving rise to new digital clusters operating beyond traditional sectoral boundaries [14].

It is important to emphasize that digital transformation is not merely about adopting new technologies, but rather a profound reconfiguration of business processes and organizational culture [15]. Artificial intelligence is capable of automating up to 60–70% of work-related tasks, for the first time exerting its greatest impact on highly skilled labor, which necessitates large-scale reskilling programs by both businesses and governments [13]. In this regard, the state's role is evolving toward building “digital ecosystems,” fostering digital literacy, and adapting regulatory frameworks to govern the ethical use of AI and data protection.

Therefore, the analytical insights presented demonstrate that Porter's contribution, while remaining foundational, requires conceptual expansion to adequately respond to contemporary imperatives of technological resilience, strategic autonomy, and sustainable competitive positioning. A modern paradigm of competitiveness must integrate both the classical determinants and new systemic factors – including digitalization, technological sovereignty, and the architecture of regional value chains – thereby forming a multi-level analytical framework suited to the challenges of an increasingly polycentric global economy.

Thus, the accumulated body of criticism and empirical contradictions reveals a systemic inadequacy of the classical paradigm based solely on productivity and micro-level analysis. The underestimation of the state's role, macroeconomic context, and the strategic design of industrial structure – inherited by Porter from the liberal tradition – renders his model vulnerable in the conditions of polycentricity and geoeconomic rivalry. Overcoming this methodological crisis requires a transition to a more comprehensive paradigm that would integrate the microeconomic efficiency of firms with macro-strategies of national technological sovereignty and value chain resilience. Such a synthesis makes it possible to reconceptualize the very nature of competitive advantage in the 21st century, viewing it not as a given revealed through clusters, but as the result of the purposeful formation of complex, shock-resistant economic ecosystems.

Addressing this paradox reveals the methodological limitations of an approach based solely on productivity indicators. As scholars, including Pilipenko, rightfully argue, what matters is not the absolute level of productivity as such, but the technological mode of production within a given industry: in Haiti, workers sew balls manually, while U.S. factories rely on robotic production lines [16]. This example clearly demonstrates that labor productivity alone does not play a decisive role in determining a country's competitiveness or overall level of welfare, which contradicts Porter's initial assumptions.

Other factors prove critically important, including technological complexity, product quality and global brand value, and – most importantly – the industrial architecture within which these advantages are realized (high-tech versus low-tech sectors). This case makes it evident that competitive advantage in the modern economy is shaped not at the level of individual firms or even clusters, but at the level of technological paradigms and industrial ecosystems capable of generating and capturing a greater share of value added.

This methodological constraint becomes particularly relevant in the context of the transition toward a knowledge- and digitally-based economy, in which traditional factors of production are giving way to data, algorithms, and platform-based solutions. Consequently, a new paradigm is required – one that integrates technological sovereignty, the quality of industrial structure, and innovation capacity as system-forming elements of national competitiveness, establishing a multi-layered analytical framework that corresponds to the emerging polycentric global economic architecture and new technological trajectories.

The identified limitation is closely tied to another core element of Porter's framework – its emphasis on the firm-level dimension of competition, wherein firms, rather than national economies, are seen as the primary actors in international competition. This methodological premise implies that early-stage economic development can be achieved through attracting foreign direct investment and pursuing a catch-up strategy [3]. However, critics argue that an exclusive focus on the micro-level

overlooks systemic disparities akin to Reinert's paradox. Consequently, further research has revealed a significant dependence of such strategies' effectiveness on the quality of national institutions. Empirical evidence shows that countries with well-developed institutional systems achieve 40–50% higher returns on foreign investment [17], reaffirming the necessity of incorporating the macro- and mesoeconomic context, which extends beyond the original Porterian model.

Within Porter's framework, economic development is conceptualized as a sequential progression through four stages of competitiveness, where factors of production and investment serve as means of development, innovation functions as an instrument, and wealth represents the ultimate goal. However, this model contains a methodological limitation – its inability to explain regressive scenarios, i.e., a country's return from the wealth stage to the previous innovation stage. As L.S. Shekhovtseva rightly notes, competitive advantage at each stage is ensured by a specific combination of determinants, including factor conditions, demand characteristics, the development of related industries, and corporate strategies [18].

A systemic analysis reveals an implicit connection between Porter's model and the liberal economic paradigm, which presupposes minimal state intervention. However, statistical data indicate that countries consistently implementing the minimal-state-intervention model exhibit 1.5–2 percentage points lower productivity growth rates compared to those applying selective industrial policy, thereby challenging the universality of the liberal approach in today's economic environment [19]. This theoretical orientation has found institutional embodiment in the “service state” model promoted by international organizations.

The significance of Porter's approach is reinforced by its integration into the global competitiveness indicator system. Nevertheless, a regression analysis of World Economic Forum data for 2010–2023 reveals that only 55–60% of cross-country variation in economic growth rates can be explained by the determinants of the Porter Diamond [20], indicating substantial theoretical gaps in the model.

The subsequent evolution of competitiveness theory is associated with the concept of Sustainable Competitive Advantage, which emphasizes the firm's ability to generate long-term profitability [16]. Firms possessing unique competencies maintain profitability levels 25–35% higher than the industry average even during economic crises [21]. However, under the conditions of intensifying polycentricity, the continuing focus on the corporate level of analysis limits the explanatory potential of this approach.

The theoretical legacy of M. Porter evolved further through the cluster concept. Using econometric analysis of U.S. state development, scholars confirmed the significant role of clusters in shaping export potential [22]. Yet, a paradoxical situation emerges: while Porter's framework continues to dominate international competitiveness rankings, the leading countries themselves are beginning to revise its foundational assumptions.

A clear illustration of this trend is provided by a Harvard Business School report [23], which acknowledges the necessity of revising competitiveness assessment methodologies. Among the key issues identified are STEM labor shortages and the need to reintroduce Keynesian elements into economic policy.

Concurrently, new theoretical approaches have been emerging in academic discourse to adapt classical principles to current realities. The framework “The Determinants of National Competitiveness” [24] shifts the focus toward long-term sustainability, incorporating factors such as the reserve currency status.

In the context of an evolving multipolar global economic architecture, the regional level of analysis acquires particular relevance. The “New European Competitiveness Index” [25], designed for supranational regulatory purposes, demonstrates an attempt to adapt classical theories to new global challenges.

The conducted analysis of the evolution of competitiveness theories reveals the methodological limitations of existing approaches – including Porter's fundamental model – stemming from their orientation toward a unipolar world order. Despite the continuing analytical value of Porter's “Diamond Model” as a systemic tool for examining competitiveness determinants, its explanatory potential is substantially constrained within the emerging polycentric global architecture. This underscores the need to reconceptualize traditional approaches through the lens of sustainable competitive advantages that align with contemporary economic realities.

A critical re-evaluation of Porter's theory in the context of current global challenges makes it possible to formulate a system of criteria for sustainable competitive advantages, thereby extending

classical principles. The key characteristics of such advantages include the capacity to generate stable GDP growth, uniqueness and difficulty of replication, resilience to external shocks, and long-term competitive durability. These criteria form the methodological foundation for developing new approaches to managing national competitiveness, capable of overcoming the limitations of traditional models.

In this context, regional integration mechanisms acquire particular significance as instruments for shaping sustainable competitive advantages that complement Porter's concept of cluster-based development. Contemporary research demonstrates the effectiveness of the following approaches:

- ♦ strategic regional protectionism, which creates a safeguarded environment for the development of critical industries;
- ♦ utilization of the integration scale effect to strengthen the positions of national companies;
- ♦ deepening specialization and cooperation within regional value chains.

For instance, the study by V.L. Abramov and P.V. Alekseev empirically demonstrates the dialectics of forming sustainable competitive advantages within the Eurasian Economic Union, where investment cooperation serves as a system-forming factor in the development of the production sector. An analysis of the 2012–2016 dynamics reveals a paradoxical situation: despite a general decline in gross capital formation, there is a significant differentiation in investment attractiveness across the Union's member states – ranging from 65% of GDP in Kazakhstan to 18.8% in Russia. This case clearly illustrates the methodological limitations of Porter's approach, which fails to account for critically important aspects of regional integration, such as legal harmonization, the formation of a common financial market, and coordination of monetary policy.

The practical significance of the study lies in the authors' proposed directions for improving the EAEU's competitiveness strategy, including stimulating industrial cooperation, creating transnational corporations, and gradually forming a unified economic space – measures fully aligned with the challenges of a polycentric global economy.

In this regard, it appears scientifically justified to reconsider the existing economic policy paradigm, proposing a synthesis of innovation-driven development and regional integration, with an adaptation of Porter's theoretical framework to new realities. The strategic priority should focus on the structural transformation of national economies based on breakthrough technologies, coupled with the strengthening of regional industrial and technological alliances.

Implementing such an approach would make it possible to develop a sustainable model of competitiveness – one that preserves the methodological value of Porter's legacy, yet remains adequate to the challenges of a polycentric global economy, ensuring long-term competitive advantages for national economies under the new geo-economic conditions.

## Conclusion

The present study has revealed a systemic transformation in theoretical paradigms of competitiveness – a sequential transition from static models of comparative advantage to dynamic concepts of sustainable competitive advantages within the emerging polycentric global economy. A critical analysis, based on the application of a four-dimensional analytical framework (factor endogeneity, institutional embeddedness, technological dynamics, and level of economic analysis), has demonstrated that while M. Porter's dominant model retains analytical value at the micro level, it exhibits significant methodological limitations when applied to contemporary geo-economic realities. Empirical findings establish that the determinants of the “competitiveness diamond” explain only 55–60% of variations in economic growth rates, confirming the necessity for conceptual expansion of the analytical toolkit.

As a scientifically grounded direction for methodological improvement, the development of a multi-level indicator system is proposed, directly derived from the transformation of traditional determinants in the digital age identified in this research. Key components of this system should include: a technological sovereignty index reflecting the depth of control over critical technology value chains; a value chain resilience indicator accounting for risks associated with dependency on foreign digital platforms and solutions; and a measure of regional integration depth. Practical implementation of this system could be achieved through modifications to international competitiveness assessment methodologies initiated by national governments and international organizations, thereby resolving the identified paradox between theoretical rankings and actual economic policies of leading nations.



To ensure practical implementation of the sustainable competitive advantages paradigm, the adoption of a selective industrial policy methodology is proposed, the necessity of which has been empirically validated through analysis: statistical evidence indicates that economies employing this approach demonstrate 1.5–2 percentage points higher productivity growth rates. The specific policy toolkit relevant for governmental economic planning should include: technological trajectory mapping to identify “windows of opportunity” within the new technological paradigm shaped by digitalization and green transition; project-based financing mechanisms for breakthrough R&D through public-private partnerships; and regulatory regimes designed to protect emerging competitive advantages.

The development of regional integration mechanisms acquires particular practical significance, consistent with the identified trend of strengthening regional centers of competitive gravity. The EAEU case demonstrates the effectiveness of approaches such as strategic regional protectionism, leveraging integration scale effects, and enhancing cooperation within regional value chains. A specific policy proposal involves creating joint technological programs in critical industries like microelectronics and pharmaceuticals, where scale effects and reduced dependency on global supply chains are essential for forming competitive cross-border clusters.

Thus, a new paradigm for managing national competitiveness – aligned with the challenges of a polycentric global economy – must integrate Porter’s micro-level analytical framework with macroeconomic regulation, institutional design, and technology-driven strategic development. This will establish a multi-level system for forming sustainable competitive advantages based on the principles of polycentricity, institutional adaptability, and strategic autonomy identified in this research, while accounting for the systemic impact of digital transformation on all components of competitiveness analysis.

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## **ҰЛТТЫҚ БӘСЕКЕГЕ ҚАБІЛЕТТІЛІК ПАРАДИГМАСЫНЫҢ ТРАНСФОРМАЦИЯСЫ: М. ПОРТЕР МОДЕЛІНЕН ТҰРАҚТЫ БӘСЕКЕЛІК АРТЫҚШЫЛЫҚТАРҒА ДЕЙІН**

### **Андатпа**

Мақалада полицентрлі жаһандық экономикаға көшу жағдайында дәстүрлі бәсекеге қабілеттілік теорияларының әдіснамалық шектеулері қарастырылады. Төрт өлшемді талдамалық шеңбер мен жүйелік тәсіл негізінде М. Портердің парадигмасы микро деңгейде өзекті болғанымен, цифрландыру, экономикалық егемендікке ұмтылу және құн жасау тізбектерінің фрагментациясы сипаттайтын қазіргі құрылымдық трансформацияларды түсіндіруде жеткіліксіз екендігі дәлелденеді. Эмпирикалық талдау нәтижелері Портердің «ромб» детерминанттары экономикалық өсімнің өзгеруінің тек 55–60%-ын ғана түсіндіретінін көрсетеді, бұл теориялық олқылықтардың бар екендігін айғақтайды. Зерттеуде жасанды интеллект, цифрлық

платформалар мен жаңа бизнес-модельдер арқылы дәстүрлі модель компоненттерінің түбегейлі қайта құрылуына алып келетін цифрлық трансформация негізгі сын-қатер ретінде атап өтіледі. Теориялық балама ретінде макроэкономикалық реттеуді, өнеркәсіптік саясатты және өңірлік ынтымақтастықты біріктіретін тұрақты бәсекелік артықшылықтар (Sustainable Competitive Advantages, SCA) тұжырымдамасы ұсынылады. ЕАЭО тәжірибесі мен Қытай және Сингапур мысалдары стратегиялық протекционизм мен индустриялық кооперацияның тиімділігін көрсетеді. Алынған нәтижелер полицентрлі әлем жағдайына бейімделген бәсекеге қабілеттілікті бағалау көрсеткіштері мен экономикалық саясат құралдарын әзірлеу үшін практикалық маңызға ие.

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## **ТРАНСФОРМАЦИЯ ПАРАДИГМЫ НАЦИОНАЛЬНОЙ КОНКУРЕНТОСПОСОБНОСТИ: ОТ МОДЕЛИ М. ПОРТЕРА К УСТОЙЧИВЫМ КОНКУРЕНТНЫМ ПРЕИМУЩЕСТВАМ**

### **Аннотация**

В статье исследуются методологические ограничения традиционных теорий конкурентоспособности в условиях перехода к полицентричной глобальной экономике. На основе четырехмерного аналитического фреймворка и системного подхода показано, что парадигма М. Портера, сохраняя значимость на микроуровне, оказывается недостаточной для объяснения современных структурных трансформаций, обусловленных цифровизацией, стремлением к экономическому суверенитету и фрагментацией цепочек создания стоимости. Эмпирический анализ выявляет, что детерминанты «ромба» Портера объясняют лишь 55–60% вариаций экономического роста, что указывает на наличие теоретических лакун. В работе акцентируется роль цифровой трансформации как ключевого вызова, приводящего к фундаментальной реконфигурации всех компонентов традиционных моделей посредством ИИ, цифровых платформ и новых бизнес-моделей. В качестве теоретической альтернативы предлагается концепция устойчивых конкурентных преимуществ (Sustainable Competitive Advantages, SCA), интегрирующая макроэкономическое регулирование, промышленную политику и региональную кооперацию. На примере ЕАЭС и в сравнении с опытом Китая и Сингапура демонстри-



руется эффективность стратегического протекционизма и индустриального сотрудничества. Полученные результаты обладают практической значимостью для разработки новых индикаторов конкурентоспособности и инструментов экономической политики, адаптированных к условиям полицентричности.

**Ключевые слова:** конкурентоспособность, теория Портера, полицентричность, устойчивые преимущества, цифровая трансформация, региональная интеграция, промышленная политика.

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