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THE IMPOSSIBILITY OF CONTEMPORARY INNOVATIVE ECONOMIC DEVELOPMENT WITHOUT SOCIAL TRANSFORMATIONS: ARGUMENTS FROM NOONOMY THEORY

Abstract: the article examines the problem of the transition of national economic systems to sustainable economic growth amid the current turbulence and fragmentation of the global economy. Based on contemporary macroeconomic dynamics and forecasts from international organizations – such as the International Monetary Fund, the World Bank, and the OECD – it can be observed that global economic growth is slowing, while trade segmentation is deepening, with geopolitical values increasingly taking precedence over market-based ones. At the same time, an analysis of the development of national economic systems (1961–2024) demonstrates that economic growth rates significantly increase during periods when technological advancement is accompanied by profound transformations in society and its social institutions. Today, the innovation system – both at the national level and across the global economy – is no longer capable of ensuring sustainable expanded reproduction while remaining within an exclusively market-based paradigm. This is because innovations driven by technological progress and the accumulation of knowledge come into conflict with outdated social institutions oriented toward economic efficiency and profit maximization. To fully realize the potential of new technologies (such as automation and artificial intelligence), it is necessary to overcome the logic of market fundamentalism and transition to new forms of labor motivation, where creativity and self-realization displace purely material incentives. Social transformations thus become a necessary condition for the deployment of innovation: they create an appropriate institutional environment (new forms of ownership, distribution, and governance) that enables knowledge to become a direct productive force. Without the transformation of social structures and values, technological breakthroughs are either constrained or lead to increasing social inequality rather than qualitative societal development. In conclusion, it is argued that the movement toward a noosociety presupposes a synergy between technological and social innovations.

Keywords: economic systems, innovative development, sustainable economic growth, social transformations, mechanism of “creative destruction”, noonomy.

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没有社会变革就不可能有当代经济创新发展——其智慧经济理论论据

摘要: 本文探讨了在当今世界经济动荡和碎片化的形势下, 各国经济体系向可持续经济增长转型的问题。根据当代宏观经济动态及国际组织 (国际货币基金组织、世界银行、经济合作与发展组织) 的预测, 可以认为全球经济增长速度正在放缓, 贸易分化日益加深, 对这种现象发挥关键作用的已不再是市场价值, 而是地缘政治价值。同时, 对各国经济体系发展 (1961–2024年) 的分析表明, 当技术发展伴随着社会及社会制度的深刻变革时, 各国的经济增长速度会显著提升。如今, 无论是国家层面还是全球经济层面, 创新体系若仅局限于纯粹的市场范式, 便无法确保可持续的扩大再生产。毕竟, 由技术发展和知识积累催生的创新, 与那些以经济效率和利润最大化为导向的过时社会制度产生了矛盾。要充分发挥新技术 (如自动化、人工智能) 的潜力, 就必须突破市场原教旨主义的思维定式, 转向新的劳动激励形式, 让创造力和自我实现取代物质激励。因此, 社会变革成为推动创新的必要条件: 它们营造了相应的制度环境 (新的所有制、分配和治理形式), 使知识能够直接转化为生产力。如果不进行社会结构和价值观的转型, 技术突破就会要么被阻碍, 要么导致社会不平等加剧, 而非推动社会的优质发展。最终得出结论: 迈向“智慧社会”的过程需要技术创新与社会创新的同步推进。

关键词: 经济体系、创新发展、可持续经济增长、社会变革、“创造性破坏”机制、智慧经济。

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Introduction

The topic of innovation and the potential for innovative development is attracting increasing attention from the global scientific community and the general public. It is beyond doubt that it is impossible to achieve a trajectory of sustainable growth and development of national economic systems – and the global economy as a whole – without the expanded reproduction of innovations. Only technological progress allows society to transcend existing resource constraints and advance to a new level of socio-economic reality. It is specifically due to this progress that many pessimistic forecasts by T. Malthus, A. Hansen, P. Ehrlich, R. Batra, and other renowned scholars failed to come to pass. Instead, national and global economic systems have often demonstrated phenomenal and rapid growth in production capabilities and productive forces during certain periods. At the same time, a question arises: what conditions are necessary for scientific and technological progress and the expanded reproduction of innovations to occur?

Contemporary research into the development of national economic systems shows that the transition to an innovative type of reproduction requires the simultaneous action of specific factors encompassing diverse spheres of human activity. In other words, the mere accumulation of breakthrough technological solutions – without considering institutional, cultural, social, and environmental conditions – does not resolve the fundamental contradictions of the socio-economic development of economic systems; rather, it may only aggravate them.

The problem of transitioning to a trajectory of innovative development takes on paramount importance for both national and global economies as they face major challenges like slow eco-

conomic growth, rising socio-economic and cognitive inequality, the climate crisis, and job losses from automation.

It is worth noting that, despite the high degree of development in this field of research, there remains a gap between the understanding of the mechanism of innovative development – which stimulates technical progress, but generates economic, social, and environmental costs (the so-called “creative destruction” mechanism) – and the practical tools for overcoming them. Existing models either absolutize market competition as the sole driver of innovation – largely remaining within the framework of market fundamentalism – or offer targeted measures that are insufficient to overcome the systemic challenges of innovative development.

Bridging this gap requires a conceptual revision of the paradigm itself. In this regard, the objective of the study is to substantiate the necessity of transitioning from the traditional paradigm of innovative development – based on market competition and the gain from technological advances – to a transformational approach in innovation policy. This new approach is oriented toward resolving social, environmental, and cognitive contradictions and defining key directions for the formation of a new socio-economic order: the noonomy.

Materials and methods

The theoretical basis for this research comprises works dedicated to the historical, institutional, economic, and social aspects of innovative development. Among Western scholars, this includes the works of J. Mokyr (on the role of “culture of growth” and institutional prerequisites for innovation), P. Aghion and P. Howitt (on the mechanism of “creative destruction” and its social consequences), and J. M. Keynes (on the transformation of social norms as wealth grows). Among Russian studies, the works of S.D. Bodrunov and S.Yu. Glazyev are utilized, as they develop the concept of the noonomy as a theoretical reflection of a new socio-economic order.

In this study, the thesis that innovation policy should be guided not only by technological development and the minimization of economic costs but also by the resolution of social and environmental challenges is based on the OECD Program on Transformative Science, Technology, and Innovation Policy (2024). The empirical foundation of the research consists of reports from the IMF, the World Bank, and the OECD, which contain data on the dynamics and forecasts of global economic growth rates, as well as the World Inequality Report (2026).

This study attempts to analyze and synthesize the aforementioned works – merging ideas on the “culture of growth,” the mechanism of “creative destruction,” social norms, the transformational approach to innovation policy, empirical data on inequality, and the noonomic order into a single logical framework to justify the transition toward sustainable innovative development. The scientific novelty and relevance of this research are defined by the absence of such analysis and synthesis in modern scientific literature.

Results and discussion

From the Industrial Revolution to Modern Global Challenges: The Evolution of the Innovation Paradigm

The global scientific consensus regarding the crucial role of innovation in economic development was clearly reflected in the 2025 decision of the Nobel Committee. The Sveriges Riksbank Prize in Economic Sciences was awarded for “explaining innovation-driven economic growth” to

three scholars: one half to economic historian Joel Mokyr and the other half jointly to Philippe Aghion and Peter Howitt.

Joel Mokyr's investigation into the prerequisites for the First Industrial Revolution and sustained economic growth revealed that their emergence was not an inevitable or natural progression. Instead, it was made possible only through the convergence of a complex set of factors. While development prior to the First Industrial Revolution was characterized by isolated innovations and annual economic growth of only about 0.2% until 1800, the post-1800 era saw innovations produced in a continuous stream. As countries industrialized, average economic growth reached 2% per year. In other words, while GDP doubled every 350 years prior to the Industrial Revolution, after 1800, it doubled in just 35 years. Consequently, understanding the driving factors is a necessary condition for the expanded reproduction of innovations and the transition to sustainable economic growth.

One of Joel Mokyr's most significant achievements is his detailed analysis of the factors underlying this expanded reproduction of innovation. The scholar goes beyond a narrow economic approach, interpreting innovation as the result of interconnection of social, political, cultural, scientific and technological conditions. Mokyr pays particular attention to the role of ideas and knowledge; specifically, he explains sustained economic growth after 1800 as a unique combination of scientific progress, technological development, and a "culture of growth" that encourages the exchange of information. Weaker political centralization, fragmentation of power, and cross-country competition created a market of ideas, facilitating their dissemination and the interaction between theory and practice. It was the convergence of all the aforementioned factors that triggered the Industrial Revolution in Great Britain [Mokyr, 2017; Mokyr, 2012]. In contrast, Mokyr emphasizes that an industrial revolution was impossible during that period in China or the Ottoman Empire due to rigid political centralization. Similarly, in African countries, the primary obstacle was the low quality of socio-economic institutions¹.

It is worth noting that the other Nobel laureates, Philippe Aghion and Peter Howitt, examined a different aspect of the problem of sustainable economic growth: how innovations are reproduced over time in the modern economy. To reveal the mechanism of innovation reproduction, the scholars utilized a mathematical model of "creative destruction." The term "creative destruction" was originally introduced by Joseph Schumpeter, who defined it as the process of displacing obsolete technology and inefficient firms with superior ones. At the core of the Aghion and P. Howitt's model lies a paradox: economic growth accelerates precisely under conditions of constant renewal – when some firms disappear to give way to others, new products and new jobs are emerging to replace old ones. In this model, the sole source of long-term growth is an endless cycle: innovation → market entry → destruction of monopoly rent → subsequent innovation².

Accordingly, innovation is of dual nature: on one hand, it carries a creative principle, representing something new and inventive; on the other, a destructive principle, as it displaces companies which use obsolete technology.

Such dynamics spark a conflict of interest between new entrants striving to enter the market and existing players attempting to protect their positions. Lobbying often serves as a

¹ Naumenko, N. Revolution of the Mind: Why the 2025 Nobel Prize in Economics Was Awarded. URL: <https://nplus1.ru/blog/2025/10/17/economic-nobel-2025> (accessed on: 10.02.2026).

² Economic growth requires destruction and chaos. Why the 2025 Nobel Prize in Economics was awarded. URL: <https://www.banki.ru/news/daytheme/?id=11018541> (accessed on: 10.02.2026).

protective tool aimed at restricting market entry. Furthermore, established firms frequently invest in new technologies less than would be beneficial for the society. The latter is attributed to the fact that companies are reluctant to lose resources invested in legacy technologies, leading them to intentionally restrict investment and slow the transition to new systems [Aghion, Howitt, 1990].

At the same time, the mass adoption of new technology often leads to technological unemployment, creating social tension. Practice shows that even when possessing advanced technology, enterprises and the government may deliberately restrain its widespread adoption to avoid a sharp rise in unemployment and give the labor market time to adapt. Consequently, the government faces the need for a delicate balance: stimulating innovation for growth while mitigating the social consequences of this process – potentially by temporarily limiting the pace of technological transformation for the sake of long-term stability.

In other words, the Aghion-Howitt model of the innovation reproduction demonstrated a controversial, non-linear relationship between competition and innovation; that is, not only weak but also excessive competition can contribute to a slowdown in innovation.

Thus, the research by J. Mokyr, P. Aghion and P. Howitt demonstrates that sustainable economic growth is the result of a continuous process of renewing ideas, institutions, and technologies. In this regard, it is essential to develop inclusive institutions designed to address a twofold task: on one hand, supporting competition, protecting property rights, and ensuring investment in science, education, and culture; on the other, achieving a balance between supporting operating companies and allowing new players to enter the market.

This twofold task faced by the governments today resonates strikingly with ideas expressed long before the formalization of the theory of “creative destruction.” As early as in 1931, J. M. Keynes sought to look beyond the horizon of the current crisis in his essay *Economic Possibilities for Our Grandchildren*. It is worth noting that this essay was published during the Great Depression – a period when the very possibility of further economic growth was called into question and secular stagnation was being predicted. J. M. Keynes did not share this pessimistic outlook; he pointed out that the emerging contradictions and the economic crisis were connected with extremely rapid technological changes to which the economic system was not able to adapt. The scholar quite accurately predicted economic growth and a four-to-eightfold increase in public welfare over the next 100 years [Keynes, 2009, p. 63]. At the same time, J. M. Keynes demonstrated that further social and economic development, upon reaching a high level of public prosperity, is determined by the necessity of significant social transformations – primarily involving changes in social norms. Indeed, if financial incentives to work lose their potency at high levels of welfare, then social norms must reflect intangible incentives to work, to create intangible values, and to form a different perception of time (where the present plays a greater role than the future) [Keynes, 2009].

Consequently, social factors and non-market values take on increasing importance. This is confirmed by the global development experience of nations from the second half of the 20th century to the present. If we examine the time interval from 1961 to 2024, the average annual growth rate of global GDP stands at 3.46 %. Within this period, a peak growth of 6.6 % was achieved in 1964, while the minimum value (–2.8 %) was recorded in 2020.

At the same time, it is evident that economic growth rates in developed countries surged significantly after World War II, when technology development was accompanied by deep transfor-

mations of society and social institutions themselves. This period, known as the “Thirty Glorious Years” (*Les Trente Glorieuses*), saw average annual growth rates of 2.5 % in the United States and 3.8 % in Western Europe.

Currently, despite the resilience shown by the global economy in the face of a series of shocks (COVID-19, sanctions, armed conflicts), its growth rates are yet to reach the historical average annual global GDP growth rate of 3.46 % (Fig. 1).

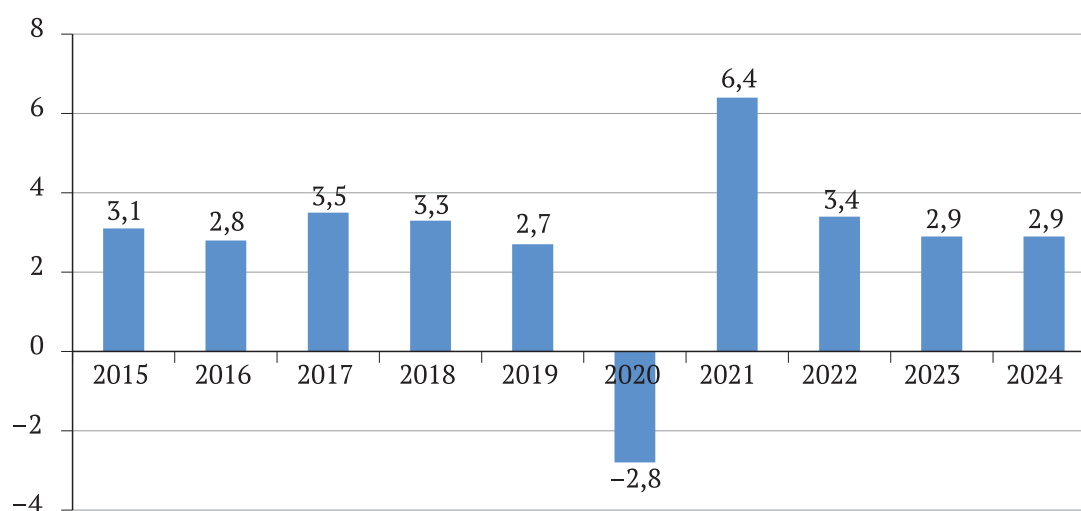


Fig. 1. Annual Global GDP Growth, %

Source: Compiled by the author based on official data¹

For 2025, various estimates from the IMF, the World Bank, and the OECD project global GDP growth to range between 2.3% and 3.2%². Overall, no deep recession is projected through 2027; however, there is a high probability of a global economic slowdown, with growth rate averaging approximately 2.5%.

It is worth noting that the consequences of the COVID-19 pandemic were not limited to public health; the pandemic undermined social stability, the financial system, and the functioning of many industries. Amid such upheaval, the aggravated geopolitical crisis triggered disruptions in global supply chains, a restructuring of trade flows, and the fragmentation of the global economy. The reaction to these processes has been a rise in protectionism, a push for greater economic autonomy, reduced interdependence, and, consequently, the division of the global economy into mega-blocks. In these blocks, trade agreements are no longer based on market values (profit maximization, free trade, entrepreneurship, etc.) but rather on geopolitical values, unfair competition, and a predatory “cheap resources at any cost” strategy.

These trends have contributed to a deepening segmentation of world trade and global value chains. There has been an accelerated growth in turnover between countries with similar geopo-

¹ Annual Global GDP Growth. URL: <https://ru.tradingeconomics.com/world/full-year-gdp-growth> (accessed on: 15.11.2025).

² IMF: World Economic Outlook Global Economy in the Shadow of War. URL: <https://www.imf.org/ru/publications/weo/issues/2026/04/14/world-economic-outlook-april-2026> (accessed on: 04.04.2026); World Bank: Global economic prospects for 2026–2027 URL: <https://invexi.org/ru/press/world-bank-global-economic-prospects-for-2026-2027/> (accessed on: 04.04.2026); OECD Economic Outlook. URL: https://www.oecd.org/en/publications/oecd-economic-outlook-volume-2025-issue-2_9f653ca1-en.html (accessed on: 04.04.2026).

litical stances: their mutual trade grew on average 4% faster per year compared to trade between geopolitically distant nations. A trade reorientation has occurred: the U.S. has reduced its purchases from China (with imports dropping from 21.8 % to 13.7 %) while increasing them from Mexico (rising to 15.4 %). A similar gap has widened between Russia and the EU. Under these conditions, neutral intermediary countries – such as Mexico, Vietnam, the UAE, and Turkey – have emerged as winners. It should be noted that the division of trade into blocks is projected to persist in the short term; however, it will become increasingly difficult for intermediary countries to maintain their neutral status¹.

As a result, the global economic system operates in an environment of instability, high uncertainty, and internal contradictions, with the social and economic development vectors of different countries diverging significantly.

Despite these negative phenomena, the long-term forecasts of reputable international organizations for the global economy remain relatively optimistic. On March 15, 2024, IMF Managing Director Kristalina Georgieva outlined two possible scenarios for the global economy over the coming century: a “low-ambition scenario” and a “high-ambition scenario.” Both scenarios project positive economic growth and rising standards of living. Specifically, in case of the “low-ambition scenario,” global GDP is expected to roughly triple, with standards of living doubling compared to today. While in case of the “high-ambition scenario,” global GDP would grow 13-fold, and standards of living ninefold². However, the report emphasizes the urgent need to address economic inequality and environmental issues, which continue to escalate.

Such optimistic forecasts raise doubts because they lack specific measures to address the systemic issues required to reach these projected targets.

Specifically, the World Inequality Report 2026 shows a significant disparity in earnings, revealing that the wealthiest decile of the global population currently commands more income than the remaining 90% combined. Furthermore, the bottom half of the population receives less than 10 % of the total income. This wealth imbalance is even more pronounced in asset ownership: the top 10 % control 75% of global capital, while the bottom 50 % possess merely 2 % (Figure 2).

At the same time, the wealthiest 0.001% (fewer than 60,000 multi-millionaires) own three times as much wealth as half of the world’s population. Their share has grown from 4% in 1995 to 6% today, underscoring the persistent nature of inequality.

Furthermore, the World Inequality Report 2026 notes that while the climate crisis represents a collective challenge, its effects and causes are distributed extremely unevenly (Figure 3).

As shown in Figure 3, the poorest 50% of the population account for only 3% of emissions associated with private capital ownership, while the top 10% wealthiest account for 77%. The concentration is even more pronounced at the top decile: the wealthiest 1% is responsible for 41% of emissions in this category, which is nearly double the total share of the bottom 90%. This inequality correlates directly with vulnerability: groups with the lowest emission levels – primarily populations in low-income countries – are exposed to the greatest climate risks. Conversely, the primary emitters possess the resources for effective adaptation and mitigation.

¹ Monitoring of the global economy and geopolitical risks. URL: <https://wec.hse.ru/mirror/pubs/share/1021755033.pdf> (accessed on: 18.02.2026).

² Georgieva K. The Economic Opportunities of My Grandchildren. URL: <https://www.imf.org/ru/news/articles/2024/03/08/sp031424-kings-college-cambridge-kristalina-georgieva> (accessed on: 21.02.2026).

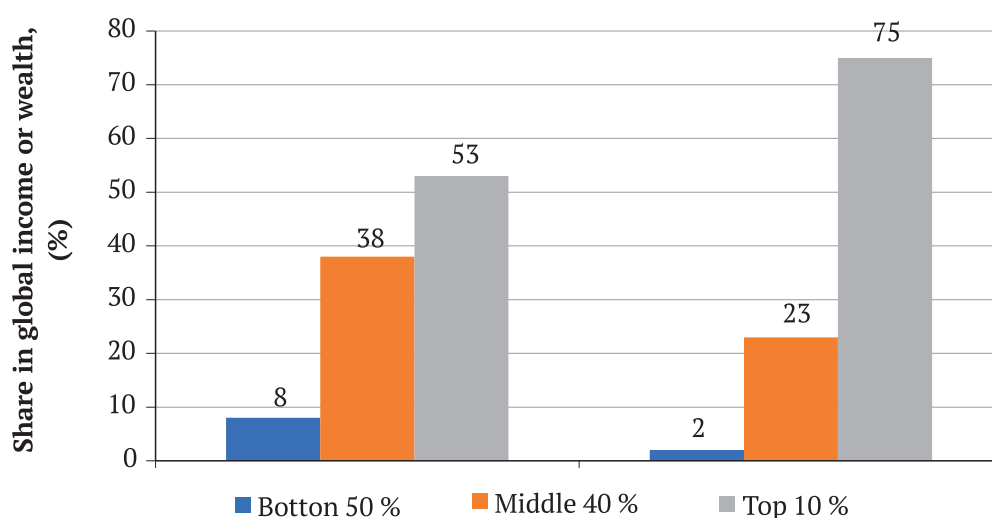


Fig. 2. Share of Global Income or Wealth by Population Group, 2025

Source: World Inequality Report (2026)¹.

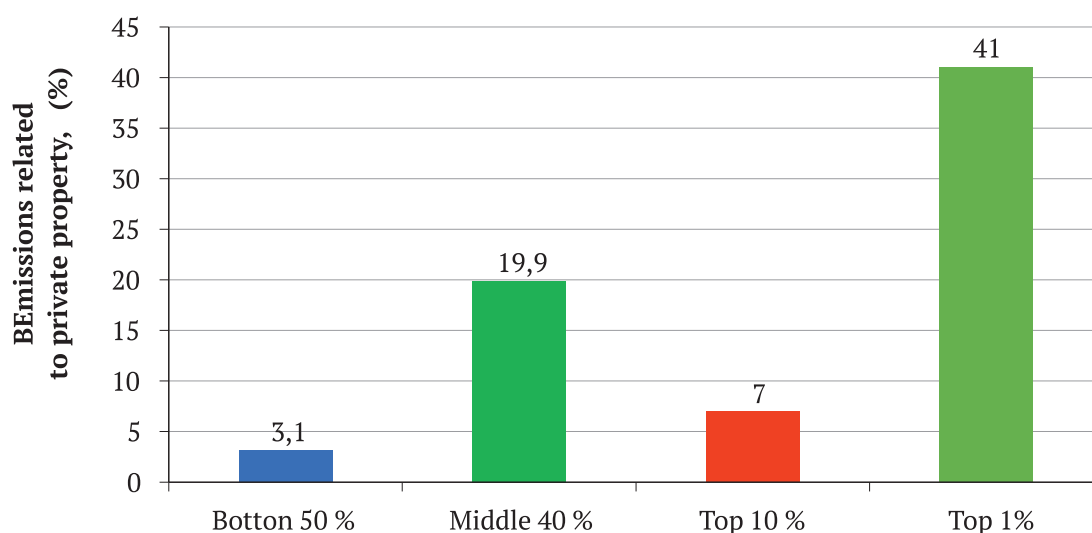


Fig. 3. Private Property-Related Emissions, 2022

Source: World Inequality Report (2026)².

Consequently, such a high degree of inequality in standards of living and wealth significantly restricts the reproduction of the human capital necessary for innovation and, more broadly, intensifies social and political tensions within society.

Thus, the analytical data on the growth of economic and climate inequality and the nature of their interrelationship – as presented in the World Inequality Report 2026 – demonstrates that neither “low-ambition” nor “high-ambition” growth scenarios are achievable without a fundamental transformation of technological development mechanisms. What is required is a tran-

¹ World Inequality Report (2026). URL: https://wir2026.wid.world/www-site/uploads/2025/12/WIR26_Executive_Summary_Russian.pdf (accessed on: 15.02.2026).

² World Inequality Report (2026). URL: https://wir2026.wid.world/www-site/uploads/2025/12/WIR26_Executive_Summary_Russian.pdf (accessed on: 15.02.2026).

sition from policies that stimulate “innovation for the sake of innovation” to policies where innovation serves as a tool for solving social and environmental challenges, aligns with shifts in societal values, and prioritizes cooperation and partnership. This exact methodological foundation is established in the OECD Program on Transformative Science, Technology, and Innovation Policy, which introduces a transformative approach to innovation policy (the details of which are given in Table 1)¹.

Table 1
Comparative analysis of traditional and transformative approaches to innovation policy²

Traditional Approach	Transformative Approach
• Focused on producing knowledge, technology, and innovations to increase competitiveness and economic growth; • Driving Force – Concepts of scientific excellence (based on publication activity) and economic effects; • Oriented toward initial stages of innovation cycle (scientific and technological achievements); • Concentrated exclusively on creating novelty; • Supports specific, fragmented, and unrelated management systems; • Assumes a narrow range of innovation policy instruments and aims to increase their efficiency	• Aimed at solving economic and social problems to achieve Sustainable Development Goals; • Driving Force – Broadly defined values aligned with transformation goals (interdisciplinarity, risk-taking, creation of additional social/environmental value); • A more holistic approach, encompassing infrastructure investment, the creation of new markets, support for related skills and behaviors, and the formation of collaborative spaces and new partnerships; • Actively promotes the decommissioning of technologies that cause social and environmental damage; • A systemic approach coordinated across multiple levels of management; • An experimental and flexible policy toolkit at the intersection of multiple thematic areas (e.g., environment and security)

The analysis of the works by J. Mokyr, P. Aghion, P. Howitt, and J. M. Keynes, alongside the World Inequality Report and the OECD Agenda For Transformative Science Technology And Innovation Policies, leads us to a central conclusion: the transition to sustainable economic growth and innovative development requires the resolution of fundamental contradictions (specifically social, environmental, and cognitive) that go beyond the purely market-driven paradigm of “creative destruction.” By integrating these ideas, we come to understand that modern technology requires more than just a “tune-up” of old institutions; it demands the formation of a fundamentally new social order. The concept of noonomy aims specifically to serve as the theoretical reflection of this order, referred to as the New Industrial Society of the Second Generation (NIS.2).

¹ OECD Agenda For Transformative Science Technology And Innovation Policies. URL: https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/04/oecd-agenda-for-transformative-science-technology-and-innovation-policies_5ced463a/ba2aaf7b-en.pdf (accessed on: 17.02.2026).

² OECD calls for a transformation of innovation policy. URL <https://issek.hse.ru/news/930524717.html> (accessed on: 17.02.2026).

Noonomy as a Strategic Response to Civilizational Challenges

The concept of noonomy developed under the supervision of S. D. Bodrunov, Corresponding Member of the Russian Academy of Sciences, marks the exhaustion of the industrial-capitalist model. Its key contradictions – resource depletion, financialization, cognitive inequality, and the crisis of the classical “Economics” paradigm – cannot be resolved within the framework of the existing system. Noonomy represents an intellectual-creative paradigm that organically incorporates all the trends we have identified and elevates them to a new level [Bodrunov, Glazyev, 2023].

Let us examine more closely how the noonomy responds each of these challenges and trends.

1. Overcoming the “creative destruction” paradox through solidarism and cooperation. It is worth noting that in the Aghion-Howitt model, innovation has always a dual nature (creation for some and destruction for others). In the noonomy, however, this contradiction can be overcome. The foundation of this new order is solidarism: the cooperation of interests for the public good and a conscious striving for compromise and social cooperation [Bodrunov, 2024, p. 19]. In our view, this does not negate competition as such, but rather shifts its focus. While in the Aghion-Howitt model firms compete for exclusivity (the right to own technology and gain rent), in the noonomy, the focus shifts toward inclusivity and creativity. In other words, firms cease to compete by hiding knowledge for the sake of gaining monopoly rent. Instead, they begin to compete based on their ability to attract talents and the speed of horizontal cooperation. It is this very factor that determines a significant long-term economic effect, which is eventually capitalized by the market, even though with a substantial time lag. At the same time, in the short term, the market is unable to adequately evaluate the economic effects of developing horizontal links and their capacity to reproduce new knowledge. This occurs because of difficulties in the monetary valuation of intellectual deliverables and the failure to account for effects related to the critical emergent properties of horizontal system – such as resilience, adaptability, and identity – which determine a firm’s functioning in the long run. Moreover, within this competitive environment, less effective horizontal networks reorganize and adapt without the bankruptcy of individual units (specifically, firms). Comparison of these two types of competition is presented in Table 2.

Table 2
Comparison of the Two Types of Competition

Competition in the Industrial-Capitalist System	Competition in the Noonomy
for exclusivity	for inclusivity
Hiding of knowledge	Speed of cooperation
Gain of rent	Attraction of talents

Source: Compiled by the author

The phenomenon of open innovation during the COVID-19 pandemic serves as an example of this new type of competition. Under the conditions of the pandemic crisis, many companies and research centers voluntarily decided not to hide knowledge and not to gain monopoly rent. The Oxford-AstraZeneca COVID-19 vaccine was distributed on a non-profit basis, and open platforms united thousands of small firms and researchers without patent barriers. In this competitive struggle, the winners were those networks that demonstrated maximum speed in horizontal cooperation and talent attraction, rather than those that concealed data. Companies with less

effective results did not go bankrupt; instead, they reoriented themselves, transferring resources and information to more successful networks. It should be noted that following the acute phase of the pandemic crisis, many companies returned to a patent-based functioning model. Nevertheless, this phenomenon of open innovation clearly demonstrated that horizontal cooperation and solidarism are effective when a social aim dominates over private gain.

Thus, while P. Aghion and P. Howitt explained the mechanism for accelerating growth through “creative destruction,” the noonomy offers a path toward “creation” that is not accompanied by destructive social consequences. The latter implies a shift in the focus of competition – a transition from the gain of monopoly rent to the augmentation of collective intellectual capital.

2. Developing of J. Mokyr’s ideas: from “culture of growth” to “noo-human.” Similarly, while J. Mokyr revealed the importance of a culture that encourages the exchange of information, S.D. Bodrunov, within the concept of noonomy, develops this thesis toward the formation of the “noo-human” – a creator in meaning-making for whom creativity and development become the highest values [Bodrunov, 2025, pp. 19-20]. This aligns with the very changes in social norms and the transition to intangible incentives about which wrote J. M. Keynes. The process of socialization, identified as one of the four vectors of noo-transformation, implies that individuals acquire increasing social responsibility, with their behavior being shaped by moral values rather than mere market gain. Consequently, J. Mokyr’s “culture of growth” is transformed into a culture of creative self-actualization.

However, it is beyond doubt that economic growth and rising prosperity do not automatically produce such a “noo-human.” The historical experience of recent decades shows that time liberated from necessity can be filled equally well with either creative activity or hedonistic consumption. Therefore, the transition to a noosociety is impossible without a purposeful cultural and anthropological policy that shapes the corresponding values and behavioral models.

3. Responding to the OECD transformative approach: from “knowledge economy” to noonomy. The OECD transformative approach requires orientation toward societal values and the solving of social tasks. Noonomy, however, establishes a logic where their alignment emerges from the structure itself, rather than being achieved through an additional mediating link. A fundamental distinction is drawn between the “knowledge economy” and noonomy. While the knowledge economy continues to capitalize on intellectual products by turning them into commodities, noonomy marks a departure from this capitalization in favor of open ecosystems and horizontal cognitive cooperation. By introducing the concept of the “crystallization of noonomy” as a network model, the theory demonstrates that the creativity itself and the cooperative production of meanings become the core of development [Bodrunov, 2025, p. 23].

4. Solving issues of technological unemployment and economic inequality. Technological unemployment is the most acute problem generated by “creative destruction.” Noonomy proposes viewing this process not as a threat, but as the liberation of human lifetime for creative self-actualization. Digitalization and automation (NBICS convergence) lead to a reduction in mechanized labor. However, it is specifically within the framework of the New Industrial Society of the Second Generation (NIS.2) that the conditions are created for transitioning to “non-mechanized” activities – intellectual and creative work based on unique human qualities. The latter requires the modernization of education and retraining systems to foster soft and creative skills [Bodrunov, 2025, pp. 21-22]. The formation of relevant institutions is already underway, as evidenced by the EU’s adoption of the Council Recommendation on micro-credentials for lifelong learning and employability on June 16, 2022. These recommendations are designed to harmonize the develop-

ment and recognition of micro-credentials across the European Union, encompassing both the public and private sectors.

However, it must be noted that today we are witnessing not only economic inequality but also cognitive inequality. The capacity for creativity, the generation of new meanings, and complex intellectual activity is naturally distributed unevenly throughout the society and develops inconsistently under the influence of the social environment. In this regard, there is a looming danger of transitioning from a class-based society to a caste (feudal) society, established upon a new technological foundation. Accordingly, it is essential to ensure the development of educational and scientific institutions aimed at reducing cognitive inequality, while also creating an environment where everyone can find their own kind of creativity (not necessarily limited to advanced technology).

5. The diffusion of ownership as the foundation for new production relations. Noonomy also accounts for real shifts in ownership structures – the so-called diffusion of ownership. Individual property rights are transforming into flexible and more alienated forms of ownership and use (e.g., shareholding, associative ownership, public-private partnerships, etc.). This creates the prerequisites for a new type of economic motivation, where ownership and use are no longer rigidly tied to the individual, giving way to collective and network-based forms [Bodrunov, 2022, p. 20]. In such an environment, innovations are created not for the gain of monopoly rent (as in the Aghion-Howitt model), but for the development of the entire ecosystem.

Thus, noonomy serves not merely as an abstract theory, but as a strategic response to global civilizational challenges.

Conclusion

The analysis conducted has demonstrated the limitations of the traditional market paradigm within the framework of the current “creative destruction” mechanism as described by P. Aghion and P. Howitt. In this model, innovations inevitably generate technological unemployment, cognitive and economic inequality, and external environmental costs. The core problem lies in the fact that competition for monopoly rent induces hiding of knowledge and blocks the potential for horizontal cooperation. Consequently, further adherence to the logic of “creative destruction” without a shift in strategic objectives leads not to sustainable development, but to the reproduction of systemic crises. Drawing on the ideas of J. Mokyr and J. M. Keynes, it can be stated that technological and institutional conditions alone are insufficient. A “culture of growth” that encourages information exchange must be supplemented by a purposeful cultural and anthropological transformation. What is required is a transition to a policy where innovation becomes a tool for solving social and environmental challenges, rather than an end in itself.

The concept of noonomy (S.D. Bodrunov) offers exactly such a mechanism. It resolves the paradox of “creative destruction” through solidarism and cooperation, shifting the focus of competition from the gain of monopoly rent to the augmentation of collective intellectual capital. In doing so, the noonomy explains how to organize “creation” without destructive social consequences.

The noonomy assumes the formation of the “noo-human” – a creator in meaning-making for whom creativity becomes the highest value (developing the ideas of J. M. Keynes and J. Mokyr). Within this framework, technological unemployment is reframed as the liberation of time for “non-mechanized” creative activities. At the same time, the diffusion of ownership creates the material foundation for a new type of economic incentive – one oriented toward the development of the entire ecosystem rather than the protection of individual assets.

The study identifies cognitive inequality and the threat of a new caste society as the primary challenges of our time. Without the purposeful development of educational and scientific institutions aimed at reducing cognitive inequality and fostering an environment for diverse forms of creativity, technological progress will only solidify elite access to innovative activity.

Ultimately, sustainable innovative growth is impossible within the industrial-capitalist paradigm based on competition for exclusivity. The only way to achieve a trajectory of sustainable economic growth – while avoiding the traps of inequality, environmental catastrophes, and social conflicts – is through the formation of a new social and economic order. Transitioning to this order requires more than just technological change; it demands purposeful cultural, anthropological, and institutional transformations that prioritize solidarism, cooperation, and the augmentation of collective intellectual capital.

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