I. A. Maksimtsev

TRANSFORMATION OF THE MODERN GLOBAL ECONOMY: PARADOXES AND DEVELOPMENT OPPORTUNITIES

The ongoing global transformation, of which we are both witnesses and active participants, is unprecedented in the history of human civilization and economic activity. The contemporary world has reached an unparalleled level of interconnectedness, enabled by the exponential growth of information technologies, particularly in communication and data transmission. The scale of human impact on the environment has become a decisive force shaping the planet's future. This transition to a new evolutionary stage of the biosphere, driven by intensified human influence, is reflected in V. I. Vernadsky's theory of the noosphere – interaction between people and nature, an intellectual layer of the biosphere where rational human activity becomes the principal driver of development. The term "noosphere" was introduced by Édouard Le Roy, professor of mathematics at the Sorbonne, and geologist-paleontologist Pierre Teilhard de Chardin. At the same time, they took as a basis Vernadsky's 1922–1923 lectures on geochemistry at the Sorbonne. Expanding on this idea, now from the point of view of the multidirectional impact of people on the environment, Dmitry Sergeyevich Likhachev proposed the term "homosphere" to denote the domain of human influence on the environment – both rational and irrational. Given that the destructive impact of human activity vastly exceeds its constructive potential, Likhachev's concept of the "ecology of culture" becomes especially relevant. He identified three historical stages in the relationship between nature and culture: the initial stage of violent appropriation from nature; the second, current stage of rational but still coercive exploitation; and a prospective third stage in the distant future, marked by the end of violence toward nature and culture and their eventual unification. Likhachev's vision is optimistic but may also be

interpreted as a call to move from rhetorical commitments to sustainable development toward genuine implementation at the global level.

As early as 2018, the Club of Rome, in its anniversary report “Come On! Capitalism, Short-termism, Population and the Destruction of the Planet”, defined the present geological epoch as the “Anthropocene” – an era of human dominance in planetary processes, including biogeochemical cycles. Human activity is now the primary determinant of the Earth’s future. But does the global economic system become more efficient under these conditions – in terms of informational symmetry, improved human well-being, equitable wealth distribution, and sustainable development in a changing environment? The answer is far from straightforward. These issues merit discussion not only at the level of fundamental science but also in the context of practical approaches to systemic paradigms such as “economic activity vs. the environment”, “human vs. machine”, and “competition vs. cooperation”, etc.

Several key paradoxes define the current phase of global economic development: We will note only the key ones.

1. Global openness, the development of international value chains, and global liberalization stand in contrast to local economic nationalism, trade and tariff wars, regional protectionism, and the absolutization of economic sovereignty as a development priority. It is evident that today one of the key external factors shaping the development and degree of cohesion within many emerging integration frameworks – including such a promising alliance as BRICS – is the tactical and strategic course pursued by the U.S. Administration. This includes tariff policy measures and a general approach to international engagement characterized by a sequence of bilateral deals (the so-called “Deal” strategy), based on strong bargaining power, pressure tactics, and the pursuit of favorable terms through coercive negotiation. The relocation of export-oriented production from China to India and India's turn toward American military imports dilute the bloc’s focus on shared

development goals and foster a multipolar, so-called “multi-vector foreign policy” orientation among its members.

2. Global consensus around the pursuit of the 17 United Nations Sustainable Development Goals – including, in particular, Goal 16: “promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.” At the same time, however, we observe the passivity of key international regulatory institutions such as the UN General Assembly, the WTO, and others, alongside the managed escalation of military conflicts and the broader militarization of national economies.
3. Shift of developing countries toward more intensive development models and the emergence of new “growth poles” are accompanied, paradoxically, by a widening of global inequality – between world regions, regions within countries, and between developed and developing economies (along the “North–South” axis). This paradox largely stems from the previously noted issue: amid the passivity of international institutions responsible for regulating global trade and other forms of economic activity, the system of international negotiations based on the rule of law (law-based bargaining) has been replaced by one dominated by power-based bargaining.
4. On the one hand – a surge of innovation in the global economy; on the other – a rather slow recovery of economic growth. As of today, only one major economy – India (as one of the few partial beneficiaries of the U.S.–China trade war) – continues to show relatively high rates of economic growth. However, the Ministry of Statistics and Programme Implementation of the Republic of India has revised its GDP growth forecast for the 2024–2025 fiscal year downward, from 6.5–7% to 6.4% (compared to 9.2% growth in the previous fiscal year). This is the lowest growth rate in four years, driven by a weakening of the manufacturing sector and a slowdown in corporate investment. The issue of slow national

economic growth remains a central concern for most governments. At the same time, newly announced tariff restrictions by the U.S. Administration are prompting transnational corporations worldwide to reconsider their supply chains, risk management systems, and strategic development plans. Consequently, in the short and medium term, the acceleration of innovation is unlikely to produce a commensurate effect on economic growth.

5. Emergence of new, super-innovative production sectors has been accompanied by a rise in innovation across all industries, including traditional extractive sectors – thus, all sectors are becoming high-tech. On the one hand, this accelerates innovation cycles and intensifies competition among major corporations across the board. As a result, capital investment needs are growing, which may indicate a rising risk of global inflation and overheating in money and other financial asset markets. These trends are already observable as a result of the U.S. Federal Reserve's return to a policy of quantitative easing (the Federal Funds Rate was lowered to 4.25–4.5% in December 2024 and remains unchanged), along with forecasts of rising inflation in the U.S. – inflation that will likely be exported to the rest of the world.
6. Growing importance of business communities – and, at the same time, of individual initiatives – driven by the development of modern communication networks. What we are seeing is a shift toward distributed business models based on platform solutions – that is, toward business ecosystems. As a result, a set of business units emerges, interacting within a horizontally oriented network based on both explicit and implicit contractual relationships. At the same time, an individual consumer of a product or user of a service retains the ability to influence the reputation of any company by expressing their opinion in the online space. This complicates the operations of transnational corporations across all sectors without exception.

In general, these paradoxes illustrate the fundamental dichotomy of the present global economic stage: fragmentation vs. interconnectedness. Production chains remain international, manufacturing processes are still distributed, and strategic alliances, industrial clusters, and business ecosystems are developing at the corporate level, while integration blocs are forming at the state level. Yet, these trends coexist with economic militarization, protectionist policies, and outdated competitive strategies that contradict the system of international law, fracture established supply chains and erode the legal foundations of the international economic order.

Nevertheless, we are entering an era defined by situational alliances, both among companies and states. Alliances will become more short-term in nature due to the overall increase in uncertainty and the acceleration of production and economic cycles. Their composition will partially change over time, requiring all actors in the global economy to respond more quickly and demonstrate greater flexibility in decision-making.

Despite geopolitical setbacks – including the U.S.'s second withdrawal from the Paris Climate Agreement in January 2025 – countries remain committed to the Sustainable Development Goals. This underscores the importance of circular economy models and industrial symbiosis ecosystems, where waste from one enterprise becomes raw materials for another. These models typically emerge locally and expand regionally – such as through the Baltic Industrial Symbiosis project. The development of such projects is driven not only by their economic feasibility in terms of externalities (effects) for the enterprises themselves and the regions in which they are located, but also by the shift toward a new paradigm of environmentally conscious thinking. This transition also calls for reforming economic education. Universities must not only train professionals but also cultivate civic consciousness and a sense of responsibility for regional and national futures. In this context, St. Petersburg State University of Economics

prioritizes student-led network projects, team initiatives, and startups. Our students study existing inter-firm and cross-border networks and propose innovative solutions – often through youth programs associated with major international forums, such as the Youth St. Petersburg International Economic Forum.

From a conceptual standpoint, interaction between countries can be analyzed at micro-, meso-, and macro-levels through the lenses of community economics, institutions of collective action, and common-pool resource governance, as well as networked digital platform economies – not limited to bilateral or multilateral investment projects but extending to environmental and social initiatives.

We welcome collaboration with all colleagues who share an interest in this important area of development.