

**AI AS A DRIVER OF NATIONAL COMPETITIVENESS:
THE ROLE OF SMART CITIES AND INTELLIGENT LOGISTICS**

**Искусственный интеллект как фактор национальной конкурентоспособности:
роль умных городов и интеллектуальной логистики**

The global competitive landscape is increasingly defined by technological adaption. While artificial intelligence (AI) and Big Data are widely recognized as key drivers, their specific impact mechanisms on macroeconomic performance require deeper analysis. This paper argues that smart cities and intelligent logistics systems serve as the primary tangible channels through which AI enhances national competitiveness. By optimizing infrastructure, these applications directly increase productivity, reduce costs, and improve quality of life, creating a positive effect on a nations' economic standing. The goal of this survey is to analyze how AI and Big Data, implemented in urban and logistics infrastructure, concretely influence the global competitiveness of national economies.

To start with, global competitiveness, as defined by the World Economic Forum, hinges on productivity, which is driven by institutions, policies, and factors that determine a country ss level of prosperity. AI and Big Data act as a general-purpose technologies that enhances these drivers. Smart cities use AI and data analytics to optimize urban services (transport, energy, security). This reduces economic friction (traffic jams, for example), lowers operational costs for businesses, and attracts skilled human capital. Intelligent logistics leverages AI for supply chain management, predictive inventory, and autonomous transportation. This slashes trade costs, increases reliability, and integrates a nation more efficiently into global value chains. Together, the form the «digital nervous system» of a modern economy, where efficiency gains in one sector amplify performance in others.

Today many countries have already started to AI more wildly. For instance, the integrated smart city-state Singapore ss «Virtual Singapore» project is a dynamic 3D model of the city used for planning and stimulation. Its AI-powered traffic management system predicts and mitigates congestion. As the result of this technology the commute times were reduced, fuel consumption became lower and activeness for global tech investment was enhanced. This directly boosts its competitiveness in the infrastructure and «ICT Adoption» pillars of global indices. Moreover, Chinese megacities like Hangzhou have deployed AI-systems, notably «City Brain» to manage traffic signals in real time based on predicted flow. Results reported improvements in traffic speed and emergency

response times. While challenges regarding scalability and data privacy persist, the model demonstrates AI can tackle large-scale urban efficiency, a key hurdle for emerging economies.

The cumulative impact of smart city implementations enhances competitiveness. Smart traffic management reduces commute times by 15–20 %, as reported in the Global Competitiveness 2023. Gartner's Hype Cycle for Smart City Technologies notes that intelligent logistics cuts supply chain costs by 10–15 %. Predictive energy grids save 5–10 % on energy consumption for municipal services, according to the annual digital transformation report at the port. This analysis confirms that AI and Big Data are practical tools boosting national competitiveness through urban modernization and supply chain improvements. Case studies from Singapore, the Netherlands, and China support this causal link.

Key recommendations for policymakers are, first of all, developing national AI strategies with a strong focus on public infrastructure modernization, and, secondly, fostering public-private partnerships to fund and deploy large-scale smart city and logistics projects, establishing robust data governance frameworks to build public trust and ensure cybersecurity.

By treating smart infrastructure as a critical national asset, countries can harness AI and Big Data to secure a durable competitive advantage in the global economy.

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SANCTIONS AND THE EMERGENCE OF NEW ECONOMIC UNIONS

Санкции и формирование новых экономических союзов

The past decade has seen a sharp intensification of the use of sanctions instruments in the global economy and politics. This trend has become particularly evident in connection with the events surrounding Ukraine, which led to the introduction of an unprecedented set of restrictive measures against the Russian Federation and other countries. These processes are having a profound transformative impact on the entire architecture of global economic relations, provoking a revision of supply chains, a reorientation of financial flows, and, most importantly, stimulating the creation of new institutions for economic cooperation. The aim of this study is to comprehensively analyze the key economic consequences of sanctions policy for target countries, initiating countries, and the global economy as a whole, followed by an assessment of the prospects for the formation of new economic unions as a strategic response to the challenges of sanctions pressure.