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ARTIFICIAL INTELLIGENCE IN ECONOMICS: CHINESE AND BELARUSIAN APPROACHES

Abstract. *The article examines the approaches of China and Belarus to the introduction of artificial intelligence in the economy. Key strategies, examples of AI application in various industries and the main market players are described. The state initiatives, level of investments and prospects of development of this technology are analysed.*

Keywords: *artificial intelligence, economy, China, Belarus, digitalisation, innovation, government policy, IT sector.*

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ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В ЭКОНОМИКЕ: КИТАЙСКИЙ И БЕЛОРУССКИЙ ПОДХОДЫ

Аннотация. *В данной статье рассматриваются подходы Китая и Беларуси к внедрению искусственного интеллекта в экономику. Описываются ключевые стратегии, примеры применения искусственного интеллекта в различных отраслях и основные игроки рынка. Анализируются государственные инициативы, уровень инвестиций и перспективы развития данной технологии.*

Ключевые слова: *искусственный интеллект, экономика, Китай, Беларусь, цифровизация, инновации, государственная политика, ИТ-сектор.*

Artificial Intelligence (AI) has emerged as one of the most transformative technologies of the 21st century, reshaping industries, economies, and societies. Its ability to process vast amounts of data, learn from patterns, and make

decisions with minimal human intervention has made it a cornerstone of modern economic development. From predictive analytics to automation, AI is revolutionizing how businesses operate, how governments formulate policies, and how individuals interact with technology.

This report explores the role of AI in economics, focusing on the approaches taken by two distinct yet fascinating nations: China and Belarus. While China is a global superpower with a state-driven, large-scale AI strategy, Belarus is a smaller, innovation-focused economy leveraging AI to optimize niche sectors. By examining their policies, implementations, and outcomes, we can gain a deeper understanding of how AI is shaping their economic landscapes and what lessons can be drawn for other nations.

Artificial Intelligence refers to the simulation of human intelligence in machines that are programmed to perform tasks such as learning, reasoning, problem-solving, and decision-making. In economics, AI is not just a tool but a catalyst for innovation. It enables businesses and governments to analyze complex datasets, predict trends, automate processes, and create new value chains. The integration of AI into economic systems has led to the emergence of new business models, increased efficiency, and the creation of entirely new markets.

AI's applications in economics are vast and varied. Below are some of the most impactful areas:

1. Predictive Analytics. AI algorithms analyze historical data to forecast economic trends, consumer behavior, and market dynamics. This allows businesses to make data-driven decisions and governments to anticipate economic shifts.

2. Automation. AI-driven automation is transforming industries by reducing labor costs, increasing precision, and improving productivity. From manufacturing to customer service, automation is reshaping the workforce.

3. Financial Services: AI is revolutionizing the financial sector through algorithmic trading, fraud detection, and personalized banking services. It enables financial institutions to assess risk more accurately and offer tailored products to customers.

AI is a technology that automates data processing, analyses large amounts of information and makes decisions based on machine learning algorithms. In recent decades, AI technologies have been actively implemented in the economy, allowing to increase production efficiency, improve forecasting of market processes and reduce customer service costs. China and Belarus have chosen different paths to implement AI in their economies due to historical, political and economic factors.

The People's Republic of China (PRC) sees AI as one of the main tools for economic growth and technological sovereignty. In 2017, the Chinese government unveiled the "New AI Development Plan" strategy aimed at making China a

world leader in this field by 2030. Since then, AI development has become a key part of the country's government policy. China's interest in AI stems from its potential ability to boost GDP, increase labour productivity and enhance national security. As a result, the government has been actively funding research centres and creating special economic zones focused on technology development.

China is actively supporting AI development at the state level with significant investment in research and development. In 2022, investment in AI exceeded 20 billion US dollars. Major cities such as Beijing, Shanghai and Shenzhen have become innovation centres with tax incentives for AI companies. The Chinese government is introducing incentive programmes to build advanced infrastructure for AI adoption and encouraging collaboration between government agencies, universities and private companies.

AI is actively applied in sectors such as:

– Manufacturing: enterprise automation, intelligent control of production processes. The implementation of AI allows Chinese enterprises to minimise human error and reduce production costs.

– Financial sector: data analytics, credit scoring and algorithmic trading. China's largest banks are using AI for risk management and personalised offers to customers.

– E-commerce: personalised recommendations, logistics, demand forecasting. Online platforms such as JD.com and Taobao are applying AI technologies to improve shopping convenience and customer experience.

– Public administration: smart city systems, facial recognition, and predictive analytics for public safety. Government agencies in China are actively adopting AI to manage urban traffic and monitor public order.

Chinese tech giants such as Alibaba, Tencent, and Baidu are actively developing AI. For instance, Baidu is investing in autonomous transport, while Alibaba is introducing AI technologies in logistics and online commerce. Huawei and SenseTime are working on the development of advanced facial recognition algorithms, and iFlytek is developing voice control and translation systems.

Referring to Belarus, with its developed IT competences, it relies on exporting IT services and creating innovative products. In 2020, the "Concept of AI Development in Belarus" was approved, which defines the priority areas of technology implementation in the economy. In contrast to China, Belarus puts the main emphasis on the private sector, which actively develops AI products oriented towards international markets.

The main regulators of AI in Belarus are the Ministry of Communications and Informatisation and the High Technology Park (HTP). The country has "Decree No. 8 on the development of the digital economy", which creates favourable conditions for IT businesses. The development of AI in Belarus is accompanied by tax incentives for HTP residents, as well as support programmes for startups and machine learning research.

In Belarus AI is actively applied in:

– Financial sector: development of chatbots, anti-fraud systems, personalised financial services. Banks in Belarus have started to actively implement machine learning technologies to assess the creditworthiness of customers.

– Industry: intelligent forecasting and resource management systems. Belarusian enterprises use AI to improve energy efficiency and production process planning.

– Medicine: algorithms for diagnosing diseases, processing medical images. Startups such as DeepDee are developing AI solutions for early detection of eye diseases.

– Transport: projects to implement smart transport and automated logistics systems. Minsk is implementing pilot projects to introduce AI into the city's transport system.

The largest AI players in Belarus are EPAM Systems, Itransition, and startups such as Flo Health and OneSoil, which work with data analytics and agricultural technologies. Flo Health, for example, is developing an app to track women's health, using machine learning for personalised recommendations.

Benchmarking: China's approach to AI is characterized by a top-down, state-driven strategy with significant investments in research and development. The government plays a central role in shaping the AI ecosystem, providing funding, and setting regulatory frameworks. In contrast, Belarus's approach is more decentralized, with a focus on fostering innovation through its IT sector and startups. The government provides support through policies and incentives, but the private sector plays a more prominent role in driving AI development.

China's large-scale implementation of AI across various sectors has resulted in significant economic gains, particularly in manufacturing, FinTech, and e-commerce. The country's ability to leverage its vast data resources and technological infrastructure has given it a competitive edge in the global AI race. Belarus, on the other hand, has focused on niche areas such as IT, agriculture, and healthcare. While the scale of implementation is smaller compared to China, Belarus has achieved notable successes in optimizing resource usage, improving healthcare outcomes, and enhancing educational experiences.

Both countries face challenges in their AI journeys. China grapples with issues related to data privacy, ethical concerns, and the need for international collaboration. Belarus faces challenges related to limited resources, the need for skilled talent, and the integration of AI into traditional industries. However, both countries have opportunities to further leverage AI for economic growth. China can continue to lead in AI innovation and expand its global influence, while Belarus can capitalize on its IT expertise and develop AI solutions tailored to its unique economic context.

The integration of AI into economics is reshaping the global economic landscape, and both China and Belarus are making significant strides in this domain. China's state-driven, large-scale approach has positioned it as a global leader in AI, with substantial economic gains across various sectors. Belarus, with its focus on innovation and niche applications, has achieved notable successes in optimizing resource usage and improving outcomes in key sectors. As AI continues to evolve, both countries have the potential to further harness its power to drive economic growth, enhance productivity, and improve the quality of life for their citizens.

In summary, China and Belarus are taking different approaches to developing artificial intelligence in the economy. China focuses on large-scale public investment and integration of AI into strategic industries. Belarus relies on private sector development and export of IT services. Both countries are demonstrating success in their approaches, and cooperation between them in the field of AI can become a promising area for developing bilateral economic ties. Belarus can utilise China's experience in scaling AI solutions, and China can take advantage of Belarusian IT talent and innovative startups.

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BIG DATA AND DIGITAL MARKETING STRATEGY OPTIMIZATION

Abstract. *The rapid advancement of big data technology is leading the digital marketing industry into a new era of change, and optimising digital*