

## RESEARCH ON THE IMPACT OF DIGITAL ECONOMY ON CHINA'S EXPORT OF AGRICULTURAL PRODUCTS TO RUSSIA

Valeev Sultan

Major International Trade, School of Economics, Shanghai University

### ABSTRACT

This paper investigates the impact of digital economy developments on the structure, efficiency, and dynamics of China's agricultural exports to Russia. With the advent of e-commerce platforms, digital logistics, blockchain traceability, and fintech innovations, trade relationships between the two countries are increasingly shaped by digital technologies. Using recent trade data, case studies, and theoretical insights from international trade and digital economics, this study highlights the opportunities, challenges, and policy implications for optimizing cross-border agri-trade in the digital era.

**Keywords:** Digital economy, agricultural exports, China-Russia trade, e-commerce.

### INTRODUCTION

Over the past two decades, the China-Russia economic partnership has grown substantially, with agricultural trade emerging as a crucial area of cooperation. Amid geopolitical realignments, sanctions, and evolving consumption patterns, China has increased its imports of food and agricultural goods, while simultaneously enhancing its export capacity in agro-based sectors. A key driver behind this expansion is the rise of the digital economy, which has redefined trade logistics, transparency, and market access. This research seeks to unpack how digital infrastructure and tools contribute to the structure and success of China's agricultural exports to Russia. As China strives to transform from a traditional agrarian exporter to a tech-enabled agri-powerhouse, digital innovations have started to reframe cross-border trade models, reduce transaction costs, and create new market channels, particularly in neighboring economies like Russia.

### MATERIALS AND METHODS

The digital economy encompasses the integration of digital technologies into economic activities, involving e-commerce, digital payments, logistics tracking, data analytics, and AI-based supply chain management [1]. In the context of agriculture, these tools help streamline production forecasting, ensure quality control, and simplify export-import protocols. China's leadership in digital platforms such as Alibaba, JD.com, and Pinduoduo has not only revolutionized domestic distribution of food products but also enabled small and medium agricultural enterprises (SMEs) to access international markets through Business-to-Business (B2B) and Business-to-Consumer (B2C) interfaces.

In the case of China-Russia trade, the strategic geographical proximity, coupled with the China-Mongolia-Russia Economic Corridor under the Belt and Road Initiative (BRI), provides logistical advantages. Digital logistics services, including real-time tracking via Internet of Things (IoT) and cross-border customs digitization, have accelerated clearance procedures, reduced spoilage risks, and improved delivery timelines for perishable goods such as fresh fruits, vegetables, seafood, and dairy products [2]. Furthermore, the application of blockchain technologies in agricultural exports allows Chinese producers to document every stage of the production process, increasing consumer trust in Russian markets that prioritize food safety and traceability.

## RESULTS AND DISCUSSION

Moreover, digital marketing and localization have facilitated deeper market penetration. For example, Chinese agribusinesses now employ targeted advertising through Russian-language interfaces, influencer partnerships, and platforms like VKontakte and Yandex. Market to tailor their approach to Russian consumers. This not only increases visibility but also enhances brand positioning and customer feedback loops.

Financial technology (fintech) is another enabler. Digital payment systems such as Alipay and WeChat Pay, when integrated into cross-border payment gateways, allow for smoother B2B transactions. These innovations reduce currency conversion risks and bureaucratic banking procedures, making Chinese exports more competitive and agile in responding to Russian demand [3].

However, challenges remain. Regulatory fragmentation between China and Russia regarding food safety standards, digital taxation policies, and customs protocols still create barriers to seamless digital trade. In addition, discrepancies in digital infrastructure between urban and rural areas of Russia may limit consumer access to online agri-products. There are also concerns regarding cybersecurity, data privacy, and platform monopolies that could hinder fair competition in the digital marketplace.

Despite these issues, case studies indicate progress. For example, Chinese companies exporting honey, mushrooms, and processed soy products have successfully partnered with Russian distributors through digital supply chain integration. The use of AI-driven demand forecasting tools has allowed exporters to align shipments with seasonal consumption patterns in Russian cities, reducing inventory waste and optimizing logistics.

From a macroeconomic standpoint, the digital economy enhances China's export competitiveness by improving efficiency, transparency, and adaptability in a volatile global trade environment [4]. It empowers agribusiness actors at all levels, from smallholder farmers using mobile apps for pest control to conglomerates employing big data analytics for regional targeting.

## CONCLUSION

The digital economy is proving to be a transformative force in China's agricultural export strategy toward Russia. By integrating digital tools across the value chain — from production and certification to marketing and distribution — China has been able to enhance trade volume, reduce transaction frictions, and meet evolving consumer expectations in the Russian market. However, to sustain this momentum, both countries must engage in bilateral digital trade harmonization, invest in shared infrastructure, and adopt regulatory frameworks that balance innovation with oversight. Future trade growth will not depend solely on physical output but on how effectively nations can embed digital agility into their trade systems. Therefore, fostering digital collaboration within Sino-Russian agri-commerce not only promises economic benefit but also lays the foundation for a more resilient and intelligent regional trade ecosystem.

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