

## *Retraction*

# **Retracted: Problems and Countermeasures of China's International Trade in Agricultural Products under the Belt and Road Strategy Based on Big Data Analysis Technology in the Internet of Things Era**

## **Security and Communication Networks**

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

## **References**

- [1] Z. Ge, "Problems and Countermeasures of China's International Trade in Agricultural Products under the Belt and Road Strategy Based on Big Data Analysis Technology in the Internet of Things Era," *Security and Communication Networks*, vol. 2022, Article ID 5905964, 5 pages, 2022.

## Research Article

# Problems and Countermeasures of China's International Trade in Agricultural Products under the Belt and Road Strategy Based on Big Data Analysis Technology in the Internet of Things Era

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In order to study the analysis of China's trade development under big data technology, through the analysis of the import and export of trade, the expansion of international trade exports of agricultural products, the adjustment of agricultural structure, the enrichment of import and export markets, the security of agricultural products, and other issues through the Internet of things technology and traditional technology, as well as the comparison of the overall effect, comprehensive performance, and coupling data, it can be seen that the agricultural trade under Internet of things technology is more convenient and faster. The application of network technology makes things better connected with people, changes the previous way of life, speeds up the development process of international trade, and realizes the real intelligent era.

## 1. Introduction

China's agricultural trade ranks first in the world and plays a decisive role in import and export trade. Therefore, this year, the development of agricultural trade has changed, and the export industries are relatively concentrated. The country has great requirements for importing nontariff trade, so it has a great impact on China's agricultural trade. In the context of the Belt and Road, we will carry out research on the international trade of agricultural products, continuously improve the competitiveness of China's international trade of agricultural products, and promote the healthy development of China's international trade of agricultural products. It is proposed that in the intelligent era, people can search for agricultural products through information technology to ensure the quality and safety of agricultural products and quickly buy favorite agricultural products [1]. The promotion of big data technology has improved the quality of agricultural products, ensured the information sources of agricultural products, and optimized the traditional methods, so as to ensure the accuracy and convenience of product sources in intelligent information and

ensure the convenience and rapidity of agricultural products [2]. Xiang et al. aimed at the problems of low data quality, difficult integration, and poor circulation in the existing agricultural product information services, based on the technology of the big data era, designed a big data agricultural product information service cloud platform, used the Internet of things to sense and collect data, completed data conversion, processing, and analysis in the big data center, carried out cloud management, and provided on-demand services for different participants [3]. Caifeixiang In order to promote the development of agricultural informatization, strengthen the connection between big data and agriculture, build a reasonable development platform, strengthen the construction of agricultural informatization, and improve the needs of the times, so that agriculture can develop stably in the big data environment for a long time [4]. Gao and Lei state that it is proposed to combine agriculture and computer under big data and Internet technology, adopt information-based and efficient technology, and promote the process of agricultural informatization based on big data technology [5]. Sunhongmin analyzed the Internet data to help agricultural informatization

management, combined with Internet technology, so as to better promote the direction of agricultural informatization in China [6]. Ding and Du state that this paper points out the current situation of big data application of agricultural intelligence in China, puts forward the construction of a computerized platform based on the current big data application environment in rural areas, and helps rural enterprises grasp the changes of the times brought by opportunities, so as to achieve sustainable development [7]. Wangyuxia proposed that the wide application of Internet technology has brought new innovation to the sales channels of fresh agricultural products, helped to improve channel efficiency and ensure food safety, and ushered in the innovation of the agricultural product model in the intelligent era [8]. This study passed by developing the era of big data for agricultural products, we can effectively solve the problems of capital accuracy and transaction cost in traditional agricultural products. It is more convenient to operate. We can search for the agricultural products we want anytime, anywhere, and buy them quickly. The transaction process is very simple, the transaction increases, and the production cost of agricultural products is reduced. The development of big data technology in the context of the Belt and Road provides huge advantages. Promoting the development of international economy and trade and then help our agricultural products to the world.

## **2. Analysis on the Development Status of China's International Trade in Agricultural Products**

With the increasing trade in agricultural products in recent years, agriculture as a whole has been in a state of net import and the import volume of agricultural products is growing rapidly. On the contrary, the export of traditional agricultural products is indeed showing a downward trend, and the deficit of agricultural trade is becoming larger and larger. Since the reform and opening up, most of China's exports have been carried out in a low-cost and low-cost way. China's development speed is accelerating, and the RMB is also appreciating. Yes, the cost input of traditional agricultural products is expanding, no longer having the original price advantage. At the same time, the export volume of aquatic products and vegetables has a great downward trend. Since China joined the world trade organization, the import and export markets of China's agricultural products have been relatively concentrated, while the export markets are widely distributed. In Europe and North America, the imported agricultural products come from the United States, Australia, Europe, etc. In recent years, with the expansion of China's opening to the outside world, China has conducted exchanges with many countries in the world, forming a diversified international trade market. The number of exports to surrounding countries has decreased, but the export market is still relatively concentrated. On the contrary, the concentration rate of the import market is still on the rise, so the domestic agricultural products have formed an unstable situation. China's agricultural trade export has always relied

on low-cost and price advantages to export. The added value of this agricultural product is very small, so the profit is not large. Because in the structure of export agricultural products, the proportion of primary processed agricultural products is very high, while the proportion of precision processed agricultural products is relatively small. The added value and value of precision processed agricultural products far exceed that of primary processing. As a result, therefore, according to the change in price, the opposite benefit will be generated economically. If the interests can not guarantee the balance. In the long run, exports will also be affected which hinders the development of the internationalization of China's agricultural products. At present, there is no sustainable trade system in terms of the current situation of agricultural trade development, which leads to the slow development of agricultural trade. Based on the analysis of the import and export of trade, Figure 1 is obtained:

As shown in Figure 1, the analysis chart of the current situation of domestic and foreign agricultural products trade. The trade export volume of China's agricultural products has been growing and relatively stable compared with that of countries and regions along the line. The import volume of agricultural products between China and the countries and regions along the line has also increased rapidly, but the import volume is unstable. China's total imports of foreign agricultural products first rose and then fell. China has always been in the position of trade deficit. Under the background of the Belt and Road, the trade deficit has been alleviated and the development status has been improved.

## **3. Internet of Things Digital Technology Brings Major Opportunities to the Construction of the Belt and Road**

The progress of scientific digitalization, the acceleration of technological upgrading, and the development of information digitalization have promoted the upgrading of traditional industries, which have become the choice of many countries. The (B&R) digital economy continues to operate, promoting the innovative elements of the economy, and thus driving the high-quality transformation of the economy. The (B&R) runs through many major economic countries. It plays an important role in the economy, improving people's livelihood and dealing with crises. It benefits from mutual help. The land Silk Road and the maritime Silk Road are bridges for communication between China and countries along the route. For a long time, transportation has been the most important link in cooperation. Product trading and data updating are inseparable from digital processing. The efficiency of the trading process has been improved through the digital transformation of the network. In combination with the perfect infrastructure under the strategic background, it has driven the interconnection between countries and built an all-around and multidirectional. The combined information exchange network has realized the multilevel sustainable development of many countries along the line. China and countries and regions along the belt and road are

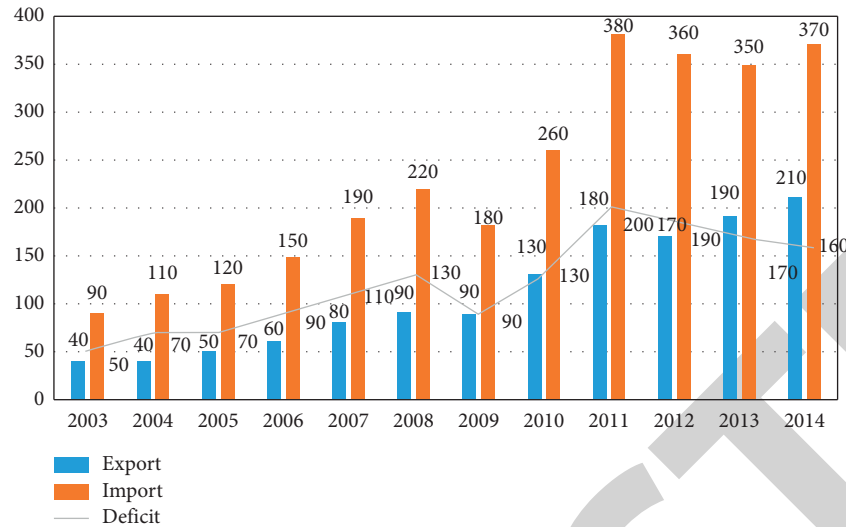


FIGURE 1: Current situation of domestic and foreign agricultural trade (%).

mainly engaged in interindustry trade. Trade complementarity is greater than the competition, and trade potential is large. The creation of new trade with a variety of intelligent technologies is a symbol of the digital era. Wangxiaoyan The unbalanced development of informatization in the countries along the belt and road, the relatively backward international standardization of the digital economy, the imperfect traditional hardware infrastructure, and the incomplete information service system pose great challenges to the digital cooperation of the Belt and Road. It is necessary to improve the construction of information infrastructure and digital economic cooperation and release the “digital economy” of the Belt and Road. [9]. Lu (2020) proposes that (B & R) firmly implementing the digitalization of the development path is not only an opportunity but also a challenge. It will be able to realize the efficient interconnection of regional cooperation digital information networks faster [10]. The development of new trade is even more inseparable from the free flow of the Belt and Road cooperation data. We will promote the effective integration and in-depth penetration of digital information technologies such as mobile Internet, computers, big data, artificial intelligence, and regional chains with traditional international trade, improve the new trade system, and open up new trade paths that affect the pattern of world trade.

#### 4. The Influence of b& r on the Development of International Trade of Agricultural Products

The continuous development of the B&R in international trade has broadened the links with other countries, At the same time, we will optimize the structure of agricultural trade, explore new trade growth points, optimize the communication structure, accelerate cooperation in products, horticulture, and nonedible animal products, appropriately increase product imports, and promote trade balance to benefit both sides. It has solved the problems among

countries, expanded economic and trade cooperation areas, and improved new cooperation methods. We will combine the agricultural products of other countries to help develop a variety of products in other regions, promote the agricultural development model in border areas, expand the scale of industrial cooperation, and especially promote the all-round development of major fields in other countries in China. It has been analyzed that the quality of trade can not be separated from the structure of products. Under the leadership of the current policy, the introduction of a new climax to the socialist market economy has ushered in a new opportunity for agricultural trade, which has brought a new direction to the farmers' planting and production enterprises [11]. Yangxiaoxia (2019) states that the strategy and its impact on trade will help China to expand the export scale of agricultural products, optimize the agricultural industrial structure, and help China to diversify the import market, so as to promote the healthy development of cooperation [12]. Zhenghui (2021) with the promotion of the “the Belt and Road” initiative, the development path of international trade in agricultural products of countries along the belt and road has been expanded, and China's international trade in agricultural products has also ushered in a great development space. The establishment of strategic thinking has played a very important role in the past economy and is conducive to helping China and the world establish the direction of common development. The implementation of the strategy has also had a far-reaching impact on trade, established economic cooperation relations, and promoted in-depth development.

#### 5. Problems and Countermeasures in the Development of International Trade in Agricultural Products

5.1. Analysis on the Overall Effect of China's International Trade in Agricultural Products under Different Technologies. Internet informatization is applied to all regions, it is applied to various regions for data analysis to help people solve many

problems. Based on the research on the development of China's agricultural trade, it analyzes the development of agricultural trade under different technologies from the aspects of production links and information processing and obtains the following Table 1.

In Table 1, through the overall effect data of China's agricultural trade development under different technologies in the above table, it can be clearly seen that the development of agricultural products under the Internet of things technology is more practical, and the latest information of agricultural products can be known at any time for convenient and fast transactions.

In order to better compare the overall effects of the development of China's international trade in agricultural products under different technologies, a visual Figure 2 is drawn according to the data in Table 1.

As shown in Figure 2, the overall effect of China's agricultural trade development under different technologies. It clearly shows the gap between network technology and ordinary technology. It can more intuitively see that the overall practical value is higher, bringing more convenient services to people.

*5.2. Comprehensive Efficiency Analysis of China's International Trade in Agricultural Products under Different Technologies.* A long time ago, many people wanted to use the Internet to solve the problems left over by agricultural products. With the continuous change of the network information age, people have entered a real information and intelligent era, which has ushered in innovation in the agricultural trade economic era. Now, according to the efficiency, convenience, and practicality, the development of agricultural trade is analyzed, and Table 2 is drawn.

Table 2 shows the comprehensive efficiency analysis data of international trade of agricultural products under different technologies. It can be seen from the data that intelligent technology is significantly better than traditional technology, ensuring the accuracy and work efficiency of the prepared data.

In order to further evaluate the development of international trade in agricultural products under different technologies, visual analysis is carried out according to the data in Table 2, and Figure 3 is drawn.

As shown in Figure 3, it shows the visualization of a comprehensive performance evaluation of agricultural trade under different technologies. It is very intuitive to see that intelligent technology can well drive the international trade of agricultural products, promote development issues and help rapid development, which fully illustrates the efficiency, convenience, and practicality of big data technology.

*5.3. Analysis on the Coupling Degree of China's International Trade in Agricultural Products under Different Technologies.* Due to the rapid entry of information, intelligence, and automation into the economy and society, it has driven the information value for people's free and all-round development, which has also led to the rapid growth of agricultural trade, and people's attention and cognition to it are also

TABLE 1: Overall effect analysis of China's international trade in agricultural products under different technologies.

Grouping	Production link	Processing information
General network	59.63	46.78
Intelligent network	76.52	63.75
$T$	6.284	6.346
$p$	0.042	0.036

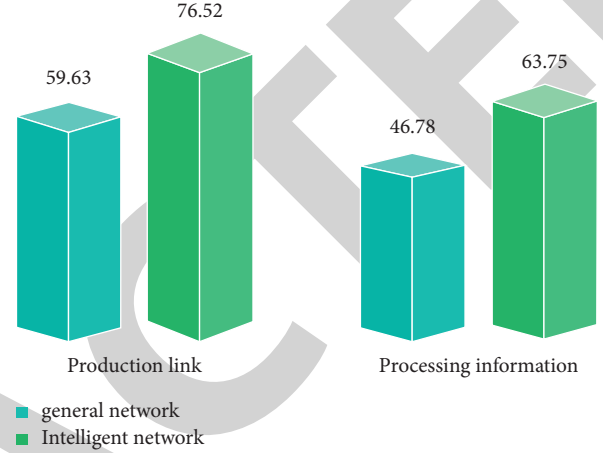


FIGURE 2: Overall effect of China's international trade in agricultural products under the belt and road strategy under different technologies.

TABLE 2: Comprehensive efficiency analysis of agricultural trade development under different technologies.

Comprehensive analysis	Traditional technology	Internet of things technology
Efficiency	68.32	83.12
Convenient	43.89	67.14
Practical	55.02	78.88

increasing rapidly. Based on the analysis of the coupling degree of the development of agricultural products trade under two different technologies, the following Table 3 is obtained.

Table 3 shows the comparison of the coupling degree data of China's international trade in agricultural products under different technologies. It is obvious that the coupling degree data results under the Internet of things technology are better than those in common technologies, and the coupling degree data of the two different algorithms are  $t < 10$ ,  $p < 0.05$ , which is statistically significant.

In order to better compare the coupling degree of China's international trade in agricultural products under different technologies, a visual analysis is made according to the data in Table 3, and Figure 4 is drawn.

As shown in Figure 4, the visualization of the coupling degree data of the development of China's international trade of agricultural products under different technologies. It is very intuitive to see that the coupling degree in the development of China's international trade of agricultural products under intelligent technology is better, and the

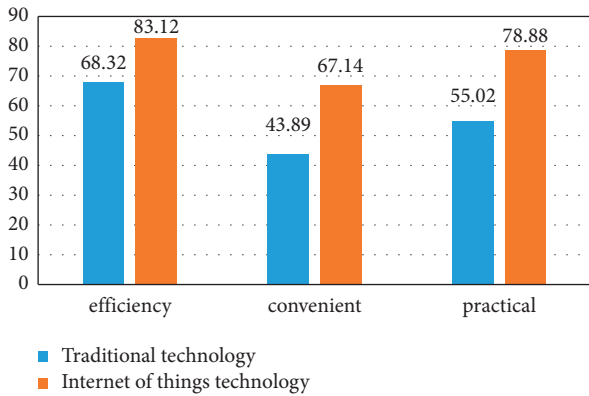


FIGURE 3: Comprehensive efficiency analysis of agricultural trade development under different technologies.

TABLE 3: Analysis on the coupling degree of China’s international trade in agricultural products under different technologies.

Grouping	Coupling degree	
	Before use	After use
General network	70.26	78.28
Intelligent network	87.42	96.36
<i>t</i>	7.312	7.096
<i>p</i>	0.043	0.037

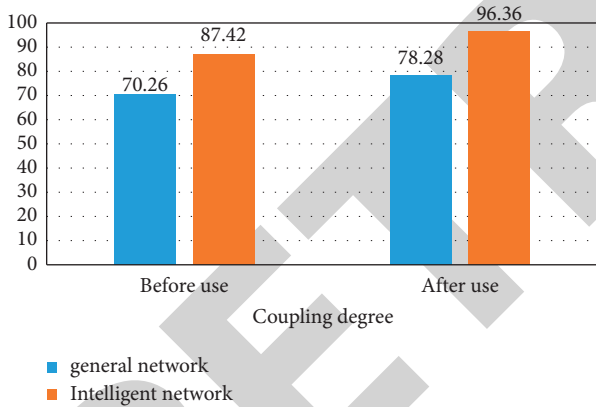


FIGURE 4: Visual map of China’s international trade in agricultural products under different technologies.

mutual integration effect of the coupling degree is also better. The application of big data helps the rapid development of trade.

### 6. Conclusion

In the context of the Belt and Road, it has brought a new upsurge to China’s agricultural trade and provided a lot of development space for world trade. The countries along the belt and road are developing countries with sufficient resources and great potential. The establishment of good cooperative relations has brought great impetus to the economy and brought a new international pattern to the agricultural industry. However, under the leadership of the computer age and the wide application of information

technology, the traditional concept of agricultural trade has been changed, a new information system has been established. The structure of agricultural products is improved, new trade ideas have been created, cooperation and exchanges with countries along the line have been strengthened, and international connectivity has been realized that achieved win-win results. With the increasingly close international contacts, China’s agricultural export structure has been adjusted, China’s trade system has been further improved, and the form of trade has been changed. Thus, the agricultural level has been improved and international trade has been promoted.

### Data Availability

The data underlying the results presented in the study are available within the manuscript.

### Conflicts of Interest

The author declares that there are no conflicts of interest.

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