



# Data Analysis and Optimization Research Based on the Interactive Development of Cross Border E-commerce and Logistics

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**Abstract.** Based on the data analysis and Research on the interactive development of cross-border e-commerce and logistics, this paper discusses the interactive development of cross-border e-commerce and logistics, and puts forward optimization countermeasures to promote the interactive development of the two, so as to provide reference for people who pay attention to this topic.

**Keywords:** Cross-Border E-Commerce · Cross-Border Logistics · Interactive Development

## 1 Introduction

Although in China, cross-border e-commerce has just started, it has developed rapidly. The transaction volume is very large, and this huge demand also stimulates the development of logistics industry. In particular, due to the full implementation of the “two zones and one plan” strategy, cross-border e-commerce in Henan Province has also ushered in good development opportunities. According to the data provided by the Department of Commerce of Henan Province, in 2017, the export amount of cross-border e-commerce in Henan Province reached 76.25 billion yuan, while the import value in the same period reached 26.19 billion yuan. Among them, 40.39 billion yuan belonged to B2B export, accounting for 53% of the total export volume; 68.03 million express packages were exported, with a total price of 14.75 billion yuan. According to the monitoring data of Zhengzhou customs, the number of cross-border e-commerce retail imports and exports reached 91.291 million units, with a total transaction volume of 11.41 billion yuan. Compared with the whole trading volume last year, the growth rate reached 58.9%.

For the smooth implementation of cross-border e-commerce business, the effective support of cross-border logistics is necessary to ensure the effective circulation of goods in the global market. Therefore, it can be said that for cross-border e-commerce business, cross-border logistics is the basis to ensure its good operation. However, China’s cross-border logistics management ideas need to be further emancipated, and the concept of development needs to be further improved. Therefore, this paper will further explore

the problems and countermeasures of cross-border e-commerce and logistics interactive development.

## **2 Problems in the Interactive Development of Cross-Border E-commerce and Logistic**

### **2.1 Insufficient Coordination Degree Between Cross-Border E-commerce and Logistics**

In a mature e-commerce logistics system, it not only includes cross-border e-commerce and logistics, but also brings together two main bodies of suppliers and consumers, as well as customs, commodity inspection, translation, payment, network, consultation, communication, technology and media. Based on the cross-border e-commerce platform, the cross-border logistics system has not established an effective coordination mechanism, which has a certain impact on the coordination of the two ecosystems [4].

The cross-border e-commerce platform also failed to propose effective collaboration with consumers and suppliers. While improving itself, the cross-border e-commerce platform does not pay attention to the internal needs of consumers and suppliers. It only pursues trading volume unilaterally, hoping that suppliers can provide low-cost preferential policies for themselves. There is no comprehensive evaluation and supervision of the supplier's credit situation, product quality and other factors, which leads to many false information and serious quality problems in the platform transaction, and dishonesty is common.

The cross-border e-commerce platform and cross-border payment, logistics, communication, information technology, translation, network marketing and supply chain service enterprises, as well as customs, commodity inspection departments, financial departments, industry regulatory authorities, and the media have not fully communicated and effectively cooperated, resulting in the failure of effective coordination. This lack of synergy is also reflected in the internal and external environment. These factors lead to the serious lack of coordination in cross-border e-commerce ecosystem.

### **2.2 Imperfect Cross-Border Logistics Network**

Cross border logistics network system has not been effectively constructed and improved. The main business of domestic logistics companies is non cross-border logistics, lack of experience, and can't accurately grasp the market, let alone cover the foreign market in the short term, so they generally rely on the third-party logistics.

The development level of domestic logistics is different, and the distribution mode and information system are not matched effectively, which makes it impossible to implement the marketing plan perfectly, brings difficulties to the integration and utilization of resources and damages the enterprises in the transaction. Secondly, the phenomenon of logistics information asymmetry often occurs in cross-border e-commerce logistics, which also leads to difficulties in signing and receiving goods on arrival, which makes the consumer experience of various countries worse and their satisfaction decreases [6]. Moreover, due to the poor information transparency of cross-border procurement and

the inability to fully integrate cross-border trade resources, many domestic cross-border e-commerce platforms, such as tmall.com and many domestic cross-border e-commerce platforms, have also encountered the embarrassing situation of “worrying about purchasing but not worrying about sales”. To resolve the negative impact of information asymmetry, cross-border e-commerce must vigorously build big data platform and build intelligent logistics collaborative system to improve information symmetry.

### **2.3 Lack of Specialization in Cross-Border Logistics Operation**

China’s cross-border e-commerce is still lack of specialization in logistics operation. Although China’s cross-border e-commerce industry has gradually ushered in new development opportunities with the advancement of globalization, major e-commerce giants such as Ali, Suning, Jindong and other domestic large-scale e-commerce platforms have begun to focus on the development and system establishment of China’s cross-border e-commerce market. There is no perfect and professional cross-border logistics system, which not only hinders the development of cross-border e-commerce industry in China, but also hinders the development of international cross-border e-commerce industry. One of the biggest problems now is that in the cross-border e-commerce industry, due to strong regional constraints, there is no common payment platform in the international e-commerce industry to meet the different economic needs of different countries.

In addition to the lack of cross-border e-commerce payment platform system, cross-border e-commerce also has corresponding problems in logistics and transportation services. Although China has a large number of third-party transportation companies with a large base, there are not many third-party transportation companies with relatively large scale, relatively perfect system and quite professional degree. There are only Baogong and Debang in China. At the same time, domestic third-party transportation companies are responsible for domestic transportation as the main business. There is still a lack of experience in cross-border e-commerce logistics in China. In terms of international express delivery, there is no special form of logistics service, only in the form of ordinary express delivery. At present, the only international logistics transportation companies serving China’s cross-border e-commerce industry are EMS, SF express, DHL, UPS, FedEx, etc.

### **2.4 Backwardness of Cross-Border Logistics Distribution and Service**

China’s existing cross-border logistics transportation system is not perfect and needs further improvement. At the same time, considering the factors in the process of consumers’ choice of goods, China’s existing cross-border logistics transportation system has some problems, such as the high cost of commodity transportation, the lack of effective protection of commodity security, and the low efficiency of commodity distribution [3]. Therefore, in order to promote the further development of domestic cross-border e-commerce industry, it is necessary to improve the above problems. Such as improving the existing cross-border logistics transportation system, strengthening the sorting and checking of parcels, improving the existing logistics transportation mode, so as to ensure the safety of goods in the process of transportation, improve the transportation efficiency of goods in the process of transportation, and reduce the loss rate of bags. At the same

time, through the cooperation of cross-border companies, the transportation cost needed in the cross-border transportation process can be reduced.

In addition, the international airport does not have a strong logistics capacity at present. In the process of developing cross-border e-commerce industry, we should focus on the construction of logistics transportation capacity of domestic large-scale international airports to ensure their strong throughput capacity and promote the development of hardware conditions.

## **2.5 Lack of International Environment Coordination**

As cross-border e-commerce industry involves cross-border trade projects with many countries, geopolitical factors, local social environment, cultural and historical background and other issues must be considered in the development process of cross-border e-commerce industry. Due to the differences in hardware conditions between countries, such as the level of national economic development, national legal system, and national logistics information technology, the barriers in cross-border e-commerce business are deepened [5].

In spite of the economic advancement in the process of globalization, different countries still have different standards in terms of commodity inspection system. The differences in standards also deepen the difficulty of further development of cross-border e-commerce industry. By analyzing the types of goods consumers choose in the actual transaction process of cross-border e-commerce, we can know that consumers mainly choose retail as the sales mode and sell less goods at the same time. This makes this kind of goods only applicable to the local inspection system standards, which makes it difficult to legally sell the goods through the cross-border e-commerce industry. By analyzing the types of goods consumers choose in the actual transaction process of cross-border e-commerce, we can know that consumers mainly choose retail as the sales mode and sell less goods at the same time. This makes this kind of goods only applicable to the local inspection system standards, which makes it difficult to legally sell the goods through the cross-border e-commerce industry.

## **3 Countermeasures for the Interactive Development of Cross-Border E-commerce and Logistics**

### **3.1 Further Integration of Cross-Border E-commerce and Cross-Border Logistics**

In order to further develop the cross-border e-commerce industry and cross-border logistics industry, the cross-border e-commerce industry and cross-border logistics industry must be organically combined to improve their respective systems in the actual business, and promote each other through cooperation. Cooperation can be achieved by means of technical capability cooperation, coordination of strategic direction and development goal, vertical system integration of enterprises, sharing of tangible resources, and negotiation and cooperation with suppliers.

Only when the cross-border e-commerce industry and cross-border logistics industry combine organically, cooperate with each other in operation, and improve their existing

systems in cooperation, can cross-border e-commerce industry and cross-border logistics industry further promote and promote each other. In the process of strategic coordination, it is necessary to ensure that the two industries have corresponding planning, technology sharing, information exchange and synchronization, and integration of existing logistics supply chain in the process of formulating industry development goals and development strategies. In terms of commodities, the two industries also need to complete the corresponding collaborative tasks, from the delivery and screening of goods to the real-time location of packages in the process of transportation, and finally to the collection of after-sales consumer feedback. Through the mutual cooperation and mutual promotion of the two industries, the overall satisfaction of consumers is improved.

### 3.2 Improve Cross-Border Logistics Network

In Fig. 1, cross-border logistics and transportation process has relationships with multiple individuals. No matter which component of the transportation process is blocked, the cross-border transportation process will be hindered. Therefore, the different processes of cross-border transport network and the various elements in each component should not only achieve the goal of harmony, but also make actual adjustments according to the status quo. The harmony of cross-border transportation network can show the degree of social and economic development, promote the information integration and resource circulation inside a transportation industry, or between the transportation industry and e-commerce industry, so as to achieve the comprehensive coordination between the cross-border e-commerce industry and the cross-border logistics transportation industry [2].

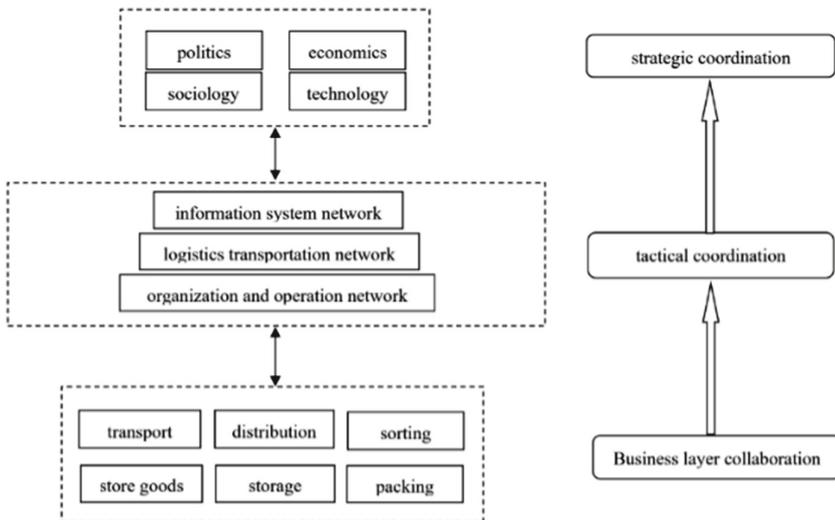


Fig. 1. Hierarchy of logistics network system

### **3.3 Realize Professional Operation by Means of Logistics Outsourcing Business**

At present, many cross-border e-commerce companies have contracted out the cross-border logistics business, which is operated by the third-party logistics. With the help of the third-party professional resources, cross-border logistics and operation are realized, so as to achieve the cross-border circulation of goods. The third-party logistics includes both traditional cross-border logistics parties, cross-border logistics resources, as well as the rapid rising third-party logistics and the fourth-party cross-border logistics resources. In the cross-border e-commerce industry, outsourcing some resources to a third party has its obvious advantages. Especially in the logistics system of exporting countries, the logistics of commodities is operated by the third-party logistics resources, which can not only improve the efficiency, but also reduce the cost [1]. In practice, many cross-border e-commerce companies have benefited from it. For example, the business volume of traetelo has reached a growth rate of over 200%.

### **3.4 Reasonable Application of Overseas Warehouse and Border Warehouse Mode**

Overseas warehouse can greatly reduce the transportation cost, reduce the transportation time, so as to avoid many risks in the transportation process. And the overseas warehouse can realize fast return and exchange service with obvious efficiency. Through the overseas warehouse, the goods can be delivered locally in the consumer's country, which is easy to make consumers feel good about it, and achieve zero distance with consumers and realize the advantages of localization of goods.

While e-commerce operators establish overseas warehouses, border warehouses are also gradually rising. The border warehouse is derived from the overseas warehouse. It not only has the advantages similar to the overseas warehouse, but also has the advantage that the overseas warehouse does not have. For example, when the situation in a country is unstable, currency devaluation, people protest, inflation, and harsh taxation, especially when the political situation is turbulent, the government imposes high taxes on overseas goods, and the advantages of border warehouses are very obvious.

### **3.5 Pay Attention to the International Environment and Take Advantage of the Push of the Environment**

In the process of promoting the coordinated development of cross-border e-commerce logistics, the primary focus is to analyze the complex environment of the target country, such as politics, economy, law, science and technology. Especially, it is necessary to pay attention to the project links which will have a more obvious impact on cross-border e-commerce industry.

In the cross-border transportation industry, we must have a good understanding of the current logistics situation of the target importing countries. Before carrying out cross-border transportation services, enterprises must understand the relevant laws and policies, people's living habits and other issues of the target importing country, and have a certain basic understanding of the political and economic development level of the importing country. On the basis of sufficient understanding, the exchange with the

target importing countries of commodities can make up for many differences caused by geographical factors, and more effectively solve the difficulties and problems that may exist in the process of trade, so as to further promote the development of cross-border e-commerce logistics coordination.

## 4 Conclusion

In terms of cross-border e-commerce research, the existing research results in China are not as many as other types of Commerce, and there is a lack of systematic guidance in the theoretical system, and there is no mature theoretical support. Similar to the domestic e-commerce mode, the development of cross-border e-commerce industry and the development of cross-border logistics transportation system are in the same line. Only when the two industries achieve coordinated development and common progress can we ensure the development prospect of cross-border e-commerce industry in China.

This paper focuses on the development mode of cross-border e-commerce and the synergistic development of cross-border e-commerce and cross-border logistics and transportation industry as the main research subjects, and concludes that there are problems of synergistic dysfunction, imperfect cross-border logistics network, insufficient operational specialization, backwardness of logistics distribution and service, and insufficient synergy of international environment in the development process of cross-border e-commerce industry and cross-border logistics and transportation industry. Based on the analysis of these problems, targeted solutions to the synergistic problems are proposed: mutual adaptation and promotion of cross-border e-commerce and cross-border logistics, improvement of cross-border logistics network, realization of professional operation with the help of logistics outsourcing business, reasonable application of overseas warehouse and border warehouse mode, attention to the international environment and timely use of environmental thrust, aiming to promote good cooperation and synergistic development of cross-border e-commerce logistics in China through these solutions.

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