Research on the Construction of Cross-border E-commerce Export Logistics Mode Evaluation System

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Abstract: Under the impetus of a series of favorable policies such as “One Belt and One Road” and “Internet Plus” in China, many companies have also launched cross-border e-commerce trading business. This paper first analyzes the existing cross-border export logistics model, and builds a cross-border e-commerce export logistics distribution model evaluation index system, which is mainly carried out from four aspects: operating cost, social environment, service quality and macro policy. Through the construction of the indicator system, it provides a reference for the evaluation of the cross-border e-commerce export logistics model.

1. Introduction

Driven by a series of favorable policies such as “One Belt and One Road” and “Internet Plus” in China, many companies have also launched cross-border e-commerce trading business. According to the latest data, there are more than 5,000 cross-border platforms for export in China, and the number of enterprises that export cross-border e-commerce is more than 200,000. According to the latest data from China E-Commerce Research Center, the scale of China's export cross-border e-commerce transactions has reached 7.9 trillion in 2018, a year-on-year increase of 25%. At the same time of technological advancement, there are also requirements for export cross-border logistics models. Therefore, choosing the right logistics model is very important for enterprises. In terms of theoretical research, Pang Yan (2015) pointed out that the following modes of export cross-border e-commerce logistics mode are postal express mode, overseas warehouse mode [1]. Qian Hui, He Jiang (2016) pointed out that when constructing the cross-border e-commerce logistics model selection index system [2]. Li Yang Chunzi (2017) pointed out that after a comparative analysis of several traditional export cross-border e-commerce logistics models [3]. Markus, M (2016) believes that most of today's cross-border e-commerce companies mainly use third-party logistics and self-built logistics models to compare the two international logistics models under the O2O model [4]. Addison (2016) pointed out that the key factor restricting the development of cross-border e-commerce is the cross-border logistics model, which can formulate a complete set of logistics supply chain service solutions to realize the "three-in-one" of information flow, logistics and capital flow [5].The above authors mainly analyze the selection and comparison of cross-border e-commerce logistics models, and propose that they can outsource cross-border logistics business or rely on big data technology to develop business, so that they can concentrate on developing core business and also improve cross-border.

2. Comparative analysis of export cross-border e-commerce logistics model

With the rapid development of e-commerce, the diversification of people's daily needs will increase the demand for logistics, and the progress of e-commerce also drives the development of cross-border e-commerce. As market demand increases, different logistics providers are also developing new services to improve logistics support and security for cross-border e-commerce. The export cross-border e-commerce logistics model discussed in this paper has the following four types: postal parcel international express delivery, third-party logistics, overseas warehouse mode, and

regional innovation mode (9610 mode). Most cross-border e-commerce companies are small and medium-sized enterprises and do not involve self-built logistics. Therefore, only the above four models are compared and analyzed.

2.1. Postal Parcel International Express

With the continuous development of cross-border e-commerce, China Post has launched an international parcel and Hong Kong, Macao and Taiwan e-commerce services for export-oriented cross-border e-commerce enterprises. Unless it is expressly forbidden to mail items, all kinds of small items can be delivered to foreign countries using postal parcels with a quality of less than 2kg. Of course, if the weight exceeds the specified weight, international parcels cannot be used for mailing. International express delivery has priority in all postal, customs, aviation and other departments. Of course, you want to track the status of goods transport by mail. China Post now has a strong global coverage network, strong customs clearance capacity and reasonable transportation tariffs, which has become one of the commonly used delivery methods for cross-border merchants.

2.2. Third Party Logistics

Third-party logistics can also be called contract logistics, which means that trade-type e-commerce enterprises outsource the logistics business to the enterprises providing logistics services in order to better invest in the core industry. Of course, in order to track the state of cargo transportation, merchants should maintain information communication and timely data exchange with enterprises that provide outsourcing services. The third-party logistics of cross-border e-commerce discussed in this paper is mainly for exporting cross-border private logistics. The usual way of operation is to transport goods to overseas through air-cargo, etc., and cooperate with local logistics companies to deliver them to the receiving goods. people. This logistics model is achieved by integrating large quantities of goods into a certain country or region to achieve economies of scale and reduce transportation costs.

2.3. Overseas warehouse

Overseas warehouses are transported to the receiving warehouse by an international freight forwarder, which can be a leased enterprise or a self-built warehouse. When exporting cross-border e-commerce sellers receive orders from consumers, they can ship and distribute goods from their country or neighboring overseas warehouses. This can greatly reduce the transportation time of goods, improve customer satisfaction, effectively reduce the order response time, improve the efficiency of logistics distribution, and also can return and exchange services. Another advantage of overseas warehouses is the fine management of overseas warehouses. Through the system's early warning and monitoring measures, the amount of inventory can be predicted in advance, the number of days in which existing inventory can be sold, and then the logistics time can be calculated, and the goods can be sent overseas in advance. warehouse. This not only saves transportation time but also greatly helps the inventory quantity control.

2.4. Regional Innovation Model (9610 Supervision Mode)

According to the characteristics of local logistics, each region constructs a cross-border export model that meets its own development needs. For example, the Nantong area has created a 9610 regulatory model due to regional restrictions. This collection model is the Nantong government's cooperation in the development of cross-border e-commerce logistics by Nantong Post Express Logistics Branch and Tongzhou District Government, Nantong Customs and other units. This model is mainly for the export of cross-border e-commerce sellers to the unified distribution of goods that need to be sent abroad, and then sent to the receiving place of goods through postal courier. The main process is that overseas consumers purchase goods on the cross-border e-commerce platform, and then the seller delivers the goods temporarily to the customs supervision warehouse, and then the Chinese customs list is released, the report is consolidated, and then the goods are released by Nantong Post. The courier company carries out the transportation of goods.

3. Construction of evaluation index system for cross-border e-commerce export logistics mode

In the process of constructing a cross-border e-commerce export logistics model evaluation system, we must adhere to the principles of science, system, feasibility, independence, comparability and sustainability. This article has read a large number of cross-border e-commerce logistics related documents, following the principles of logistics system construction, we visited the development of cross-border e-commerce in the Yangtze River Delta region such as Shanghai, Suzhou, Nantong, etc., and learned about the development of these regions and some shortcomings. The four indicators of cross-border e-commerce export logistics problems are: operating costs, social environment, service quality, and macro policies. The first-level indicators of these four aspects include 17 secondary indicators, of which the operating costs include five secondary indicators, the social environment includes four, the service quality includes five, and the macro policy includes three. These indicators together constitute a cross-border export logistics model evaluation indicator system of four first-level indicators and 17 second-level indicators.

3.1. Operating costs

The operating cost includes five secondary indicators, namely transportation cost, storage cost, customs clearance cost, out-of-stock cost, personnel equipment management cost, cross-border e-commerce logistics cost accounting for 30%-40% of total cross-border e-commerce cost, and operating cost. For cross-border e-commerce logistics, there is a direct impact. Cross-border e-commerce also has higher transportation costs and higher cross-border customs clearance, which makes the cost higher than traditional domestic logistics, the transportation process is more complicated, and the human and material costs will increase. It will put pressure on enterprises and hinder the development of cross-border e-commerce logistics.

Table.1. Explanation of secondary indicators of operating costs

NO.	Secondary indicators	Explanation
1	Transportation cost	Transportation is the most critical link in logistics activities. Transportation costs directly affect logistics costs. The lower the transportation costs, the higher the logistics efficiency.
2	Warehousing cost	Warehousing cost is the total amount of money that an enterprise will make when carrying out warehousing activities, which directly affects the level of logistics costs.
3	Customs clearance costs	Cross-border e-commerce logistics is different from traditional domestic logistics. Cross-border customs clearance is required, and the fees charged by customs clearance are also part of the overall logistics activity expenditure.
4	Out-of-stock costs	Out-of-stock costs are losses that cannot be achieved without the customer's needs, such as overtime pay, expedited shipping costs, and fines for late delivery.
5	Personnel equipment management costs	Logistics activities are inseparable from the support of personnel and equipment, and the management of personnel and equipment is also an important part of the company's operating costs.

3.2. Social environment

The social environment includes four secondary indicators, namely infrastructure construction, professional talent development, political and cultural differences, and demand and cognition. Taking Nantong as an example, the region has advantages in home textiles, but most foreign trade enterprises are mainly based on the traditional foreign trade situation, and cross-border e-commerce transactions are not high, which indicates the demand for cross-border e-commerce and logistics for many enterprises. The cognitive situation needs to be improved. The language and culture differences in the

platform trading will make the cross-border e-commerce logistics more difficult. Nantong's infrastructure construction is not mature enough, and the loss of talents is also serious.

Table.2. Explanation of secondary indicators of social environment

NO.	Secondary indicators	Explanation
1	Infrastructure construction	Railway, waterway, aviation and road transportation are common transportation modes of logistics. The infrastructure construction of the system will improve the efficiency of logistics and transportation.
2	Professional talent training	Establishing a sound training mechanism for professional talents can greatly promote the development of cross-border e-commerce and logistics.
3	Political and Cultural Differences	Cross-border e-commerce logistics is a logistics activity between two countries. Political and cultural differences such as language and habits will hinder the development of cross-border e-commerce logistics.
4	Demand and Cognition	People's perception and demand for cross-border e-commerce logistics directly affects the import and export transaction volume of cross-border e-commerce, and the increase in demand will promote the development of e-commerce logistics.

3.3. Quality of service

Service quality includes five secondary indicators, namely, logistics mode selection, logistics information level, and risk handling capabilities, Order processing speed, return and exchange mechanism, logistics service will determine the efficiency of cross-border logistics, will also affect the customer's shopping experience, and have an important impact on corporate customer loyalty.

Table.3. Explanation of secondary indicators of service quality

NO.	Secondary indicators	Explanation
1	Logistics mode selection	Different logistics modes, transportation cycle and service quality are different, which affects the development of cross-border e-commerce logistics.
2	Logistics information level	Cross-border e-commerce is a foreign trade transaction mode based on network. The level of information, such as network coverage, will affect the management and time of product distribution, thus affecting the quality of logistics services.
3	Dealing with risk capabilities	In logistics and transportation, risks and interests are at the same time. Reducing risks has always been a concern of enterprises. Logistics risks directly affect logistics costs and logistics efficiency.
4	Order processing speed	The order processing response speed includes the delivery speed of the product and the response speed of the customer service. The speed of the order will directly affect the customer's satisfaction, so the faster the order processing speed, the higher the logistics service quality.
5	Return and exchange mechanism	The products that the customer knows on the trading platform are limited, and the product will be returned in the later stage. The transportation time and transportation country will increase the difficulty of returning goods.

3.4. Macro Policy

The macro policy includes three secondary indicators, namely, government support, relevant laws and regulations, and difficulty in customs clearance. Cross-border e-commerce transactions involve two countries. The government's support and related policies will promote cross-border e-commerce logistics. development of.

Table.4. Explanation of the secondary indicators of macro policy

NO.	Secondary indicators	Explanation
1	Government support	The government issued policies to encourage the development of cross-border e-commerce enterprises, and the self-development ability of SMEs is insufficient. The government's support will make up for these deficiencies to some extent.
2	Relevant laws and regulations	A sound legal and regulatory system can regulate the development of cross-border e-commerce and its logistics.
3	Difficulty of Customs Clearance	Due to the customs supervision of cross-border e-commerce logistics, the difficulty of customs clearance will directly affect the logistics and transportation cycle and increase logistics costs.

4. Conclusion

China's cross-border e-commerce industry has developed rapidly in recent years, but the cross-border e-commerce industry is still in the initial stage of development. Cross-border e-commerce must be completed with cross-border e-commerce logistics. Logistics accounts for the importance of cross-border e-commerce operations. The sex is getting higher and higher, cross-border e-commerce logistics lags behind the status quo of cross-border e-commerce development. In some regions, such as China's Yangtze River Delta region, cross-border e-commerce enterprises need to choose an export cross-border e-commerce logistics model suitable for their own development. This not only affects the level of logistics costs, the speed of logistics efficiency, the quality of customer satisfaction, and thus the development of the company's own interests. This paper first analyzes the existing cross-border export logistics model, and builds a cross-border e-commerce export logistics distribution model evaluation index system, which is mainly carried out from four aspects: operating cost, social environment, service quality and macro policy. Through the construction of the indicator system, it provides a solid foundation for the evaluation, analysis and application of the next stage indicator system.

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