

A Study on The Selection of Logistics Mode of Consumer Goods for Cross Border E-commerce Exporting SMEs[†]

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Abstract

In recent years, China's economy has entered the "new normal", and China's economy and trade have gradually changed from "importing country" to "exporting country", especially under the favorable policy of the Belt and Road Initiative, it has fully stimulated the vitality of China's import and export trade, the transaction volume has increased significantly year after year, and the cross border E-commerce of export has ushered in the golden development cycle. Cross border E-commerce SMEs are the main forces of cross border E-commerce transactions. They are mainly engaged in consumer goods transactions. They have the advantages of large volume, low profit, easy customs clearance and convenient logistics and transportation. However, with the explosive growth of cross border E-commerce exporting SMEs, the industry development dilemma is gradually recognized by enterprises. In terms of the current development status of cross border E-commerce in China, the choice of cross border logistics mode of SMEs is the biggest problem. In order to reverse the situation of short-term profit reduction and even bankruptcy due to logistics mode selections, this study first analyzes and summarizes the research of domestic and foreign scholars in recent years, and finds that scholars' current research mainly focuses on logistics mode impact factor analysis, reverse logistics mode selection, retail logistics mode selection, domestic B2C logistics mode selection and other aspects have not been too much involved in the research on the export logistics mode selection of consumer goods. Then the study analyzes and summarizes the market operation environment of domestic cross border E-commerce SMEs in recent years, and finds that the cost generated by the intermediate links of enterprise operation is the main factor and fundamental reason restricting their development. Therefore, this study focuses on the export logistics mode selection of consumer goods of cross border E-commerce SMEs, which has theoretical and practical significance.

Key words: Cross border E-commerce, SMEs, Logistics mode, Consumer goods

Introduction

Nowadays, China's international status has risen. Favorable policies such as "Made in China 2025" and "Belt and Road Initiative" (BRI) have laid a solid foundation for the development of China's international trade, and China has completed the key move from an "importing country" to an "exporting country." Under this context, cross border E-commerce has developed and achieved explosive growth. The transaction volume of China's cross border E-commerce has increased by more than four times from 2013 to 2020, and the transaction volume in 2019 has reached 1.59 trillion US dollars. The development of cross border E-commerce in China has a relatively large market opportunity. SMEs are the main force in cross border E-commerce transactions. They focus on people's daily consumer goods transactions. They have the advantages of large quantities and small profits, easy customs clearance, and convenient logistics and transportation, which are consistent with the characteristics of rapid development of cross border E-commerce. Statistics from China international E-commerce net work (2020) show that the transaction volume of China's cross-border export E-commerce industry reached 1.25 trillion US dollars in 2018 and

[†]Presented at the Conference in Management: Summer 2022 (July 9, 2022 at Walailak University, Thailand)

1 trillion US dollars in 2017, a year-on-year increase of 14.5 %. In the cross-border export E-commerce industry for consumers, SMEs occupy a dominant position, accounting for more than 70 % of the cumulative annual transaction volume, while large companies with a transaction volume of 10 million US dollars only account for about 2.5 %.

From a domestic perspective, China's SMEs cross border E-commerce exporting companies are mainly concentrated in Fujian, Zhejiang, Guangdong and other coastal provinces and cities with mature logistics. In terms of total volume, Guangdong Province accounts for 56.99 %, which has taken the lead in forming economies of scale. Fujian and Zhejiang Province also accounted for more than 10 % of the total, mainly concentrated in daily consumer goods such as clothing and electronic products. From a foreign perspective, with the improvement of the quality of Chinese products, region and countries such as Europe, America and Japan, as well as developing countries along the "Belt and Road" such as Brazil, India, and Africa, are increasingly favoring "Made in China". Relying on price advantages and category advantages, domestic export products became the world's largest source of goods for cross border E-commerce for the first time in 2016, accounting for 21 % of global transactions.

However, with the explosive growth of SMEs cross border E-commerce exports, the industry development dilemma has gradually been recognized by enterprises. In terms of the current development status of cross border E-commerce in China, the choice of cross border logistics modes for SMEs is the biggest problem: complex customs clearance procedures in various countries, long transportation distances, inconsistent logistics import and export policies between countries, and high logistics costs are the main factors that cause long-term and short-term operating losses. The Ali Research Institute predicts that the global B2C E-commerce transaction volume in 2020 will be 3.4 trillion US dollars, and logistics costs will reach 1.02 trillion US dollars. Therefore, solving the problem of selecting the appropriate export logistics mode of consumer goods for small and medium-sized cross border E-commerce enterprises is an important way to greatly improve the efficiency of the cross border E-commerce industry. For this reason, this study is trying to find out: 1) what are the advantages and disadvantages of the existing logistics mode of cross border E-commerce exporting SMEs? 2) what are the factors affecting the logistics mode of cross border E-commerce exporting SMEs? 3) what measures could be done for cross border E-commerce exporting SMEs in selecting the appropriate logistics mode?

The specific objectives of this study are: 1) to evaluate the advantages and disadvantages of the existing logistics mode of cross border E-commerce exporting SMEs; 2) to examine the factors affecting the logistics mode of cross border E-commerce exporting SMEs; 3) to provide suggestions for cross border E-commerce exporting SMEs in selecting the appropriate logistics mode.

Literature review

Scholars have conducted in-depth study on the development environment and development characteristics of cross border E-commerce in China and foreign countries. Mohammed and Rahman (2019) analyzed the reasons for the restricted development of E-commerce in Islamic areas and constructed a model to promote the trust of E-commerce in religious areas. Asosheh et al. (2012) proposed a single-window-based localized cross border E-commerce model to promote customs, delivery, logistics, etc. between Iran and trading countries. Gomez-Herrera et al. (2014) found through a questionnaire survey of relevant practitioners in EU countries that an efficient online payment system is the driving force for the development of cross border E-commerce, while excessive logistics costs and language and policy barriers are cross-border restrictions on the development of E-commerce in the EU. Ghorbani and Bonab (2013) studied the relationship between globalization and cross border E-commerce, and concluded that cross border E-commerce has a great influence on globalization and has accelerated the process of globalization to a certain extent. Li (2019) believes that China's export cross border E-commerce has entered a period of rapid development relying on a wealth of product categories and low prices, and the country is also constantly introducing customs clearance models, tariff rates, and policy subsidies for cross border E-commerce. Yang and Guo (2018) believes that the current export cross border E-commerce is facing problems such as lack of professional talents, difficulties in customs clearance and foreign exchange settlement, and backward logistics services. It is urgent to strengthen the training of cross border E-

commerce talents and establish and improve relevant laws and regulations for export cross border E-commerce. Chen et al. (2019) believe that the United States is currently the country with the largest export volume of China's cross border E-commerce exports, and the Sino-US trade war has a huge impact on China's export cross border E-commerce, especially 3C electronics. For products, it should closely rely on the BRI strategy, vigorously expand emerging markets such as Central Asia and Eastern Europe, and reduce our dependence on the US market. Wang (2019) addressed the current problems of cross border E-commerce payment in China, expounded the advantages and necessity of applying block-chain technology, and proposed specific measures for the application of block-chain technology in cross border E-commerce payment. The competition between trade zones and the customs clearance model are the main challenges it faces. Xiao and Liu (2019), based on the analysis of the current situation of China's cross border E-commerce, quantitatively studied the impact of China's cross border E-commerce on the manufacturing industry, there is a co-integration between cross border E-commerce and the export scale of China's manufacturing industry.

There are many influencing factors in the logistics mode of cross border E-commerce. Leung et al. (2002) proposed a robust optimization model to solve the problem of cross border logistics in an uncertain environment, so as to minimize the total cost under different economic growth environments. Qian (2019)) conducted research on the optimal selection of B2C cross border E-commerce logistics models, and evaluated them from four perspectives: Logistics system cost, logistics service quality, enterprise characteristics, and external environmental impact. These factors build a logistics model selection model. Amer (2017) first outlines the six factors that affect the performance of third-party logistics in an offshore outsourcing environment, namely communication, trust, culture, system compliance, work agreements and standardization. Then put forward guidelines to improve the performance of cross-border third-party logistics in terms of cost efficiency and on-time delivery. Chen (2018) took F International Express Co., Ltd. as an example, carried out optimization research from the aspects of transshipment efficiency, customer service level, and operating cost, and proposed different influencing factors to optimize cross border logistics. Li (2018) summarized the existing express logistics evaluation system, and summarized its own evaluation system based on research needs, including five first-level impacts: Tangibility, reliability, responsiveness, safety, and economy and 26 secondary influencing factors. Feng (2019) analyzed the cross border E-commerce logistics model from the 4 levels of the target market environment, product characteristics, logistics costs, and logistics service capabilities. Wei (2018) took Ali Express as an example, and constructed an evaluation system with 6 influencing factors as first-level indicators and 15 influencing factors as second-level indicators. The first-level indicators include the level of customer service and the level of informatization, logistics costs, operational capabilities, enterprise scale and logistics status. After a quantitative analysis, the author believes that the "cross border logistics alliance model" is the logistics model most in line with the long-term development of Ali Express. Yang and Guo (2018) first classifies existing research indicators from a macro and micro perspective. The macro aspects mainly involve politics, economy, society, technology, etc.; the micro aspects mainly involve cross border E-commerce companies themselves and third parties. Logistics platforms, consumers, etc. Then, the author established the 5 main influencing factors of information system construction, logistics system cost, international transportation quality, transportation theme capability, and external environment maintenance and dig deep into them.

In summary, the most important thing for the mature operation of cross border E-commerce export of consumer products is that the company must choose a suitable logistics model. In the selection process, it must also comprehensively consider the various elements of the entire industrial chain.

Wang (2020) used 2 market theories to establish a comprehensive performance evaluation model for E-commerce logistics. Through the comparison of logistics performance factors, it is found that cross border logistics payment is the bottleneck of the current development of cross border E-commerce. Golicic (2012) based on grounded theory, studied the impact of PPP mode on cross border logistics in a quantitative way, and concluded that the performance of PPP partnership is significantly related to the quality of cross border logistics. Mahamaro (2017) established an overseas warehouse with a distribution-location model in sub-Saharan Africa. Through data collection and cost analysis, it was found that if an overseas warehouse is set up at a predetermined location, for Chinese cross border E-commerce companies, the delivery time

of the company has been reduced from 60 days to 24 h, which greatly promotes the development of China-Africa E-commerce. Li et al. (2018) based on the idea of system engineering, analyzed the advantages and disadvantages of domestic and foreign enterprise logistics distribution models in the E-commerce environment, and used the combination of Delphi method, AHP, and Super Decision Systematic selection method, empirical analysis of batch E-commerce companies. Shu (2016) used the matrix decision-making method to analyze the 4 logistics modes of overseas warehouses, international express, fourth-party logistics and postal parcels in two dimensions: the proportion of logistics costs and the importance of logistics timeliness. Liu (2019) based on the Analytic Hierarchy Process and took Guangzhou Baiyun Auto Parts City as an example to choose the end logistics mode of auto parts B2B E-commerce, and finally obtained that the enterprise self-operated logistics model is better than the supplier distribution model and third-party logistics. The result of distribution mode and enterprise logistics cooperation alliance mode. Zhang (2018) analyzed and selected the fresh food E-commerce logistics model, mainly using the matrix decision method to analyze the enterprise capability factors and customer preference factors, and gave selection suggestions.

The results show that scholars have conducted sufficient research on the development status of cross border E-commerce and cross border logistics and various logistics modes, which laid a solid foundation for the research of this study. However, previous study focused on a specific foreign trade company, and there are still few studies on the choice of export cross border logistics mode. The research of this study adopts the comprehensive evaluation method, compare the 5 more widely used logistics modes, and provide reference for other foreign trade companies in the same industry to choose the logistics mode.

Hypothesis of the study

H1: Cross border logistics total cost is one of the factors affecting logistics mode of cross border E-commerce.

H2: Customer service level is one of the factors affecting logistics mode of cross border E-commerce.

H3: Logistics operation capability is one of the factors affecting logistics mode of cross border E-commerce.

H4: Informationalization level is one of the factors affecting logistics mode of cross border E-commerce.

H5: Size and capability of the enterprise is one of the factors affecting logistics mode of cross border E-commerce.

Methodology

This study adopts the method of convenient sampling and collects data in the form of online questionnaires. Based on the objectives of the study, target respondents included in this study are small and medium-sized cross border E-commerce enterprises, cross border logistics enterprises, third-party services providers, and freight enterprises.

This study intends to use Likert scale as the questionnaire design to determine the importance of various indicators affecting the selection of export cross border E-commerce logistics mode. Likert scale can convert qualitative investigation into quantitative data, and judge the correctness of selected indicators by analyzing the data, so as to provide a basis for the selection of logistics mode. The questionnaire design of this study is divided into 2 parts: The first part includes screening items, background information items and sample characteristic information items. It mainly sets questions related to the basic information of the interviewees and enterprise background, a total of 7 questions. The second part is the core variable items, including indicators at all levels affecting the selection of cross border E-commerce logistics mode (5 primary indicators and 22 secondary indicators). The questionnaire design of this study adopts a 5-level scale. The answers are: strongly disagree, disagree, neutral, agree and strongly agree, and the scores are 1, 2, 3, 4 and 5 in turn. In the questionnaire design of this study, all questions are single choice. The respondents of this questionnaire are enterprises closely related to cross border E-commerce. In order to ensure the universality of the survey content, the whole survey adopts convenient sampling method.

Results

In terms of logistics cost, international commercial express builds its own distribution network for enterprises, serving more than 220 countries around the world, with the highest logistics cost. The cross-border special line logistics adopts the first air transportation and the last dispatch mode, and the logistics cost is second only to international commercial Express. Although international postal parcels are also transported all over the world, because their global network is a collection of national postal networks, the transportation cost is lower than that of commercial express and special line logistics; overseas warehouse and container cargo transshipment belong to batch transshipment, which has the advantage of large-scale transportation, and the single piece cost is the lowest.

In terms of customs clearance methods, relying on UPU and postal clearance, the inspection rate and fastening rate of international postal parcels are relatively low, and the customs clearance capacity is the strongest; International Commercial express will clear customs for commercial express companies, and the tariff generated will be paid by the sender or recipient using DTP or DDP. The customs clearance capacity is slightly lower than that of international postal parcels. The cross-border special line logistics adopts 9610 collection customs clearance or express customs clearance. Generally, tax is included and the customs clearance capacity is medium. In the overseas warehouse mode, the first journey is transported to the overseas warehouse by air or sea, and the general trade bill declaration method is used for export, so the customs clearance ability is weak. Customs clearance method and sea transportation of goods collection and transshipment the outer warehouse is basically the same.

In terms of coverage, international postal parcels and international commercial express services cover a wide range all over the world. The first and last journey of overseas warehouse mode are less affected by the region, and the coverage is general. Due to the large-scale special line transportation, the coverage of cross-border special line logistics and freight collection and transshipment mode is weak.

In terms of transshipment timeliness, international commercial express > cross-border special line logistics > overseas warehouse > goods collection and transshipment > international postal packet.

In terms of customer service quality, international commercial Express has invested the most in customer service information system, customer service personnel professionalism, compensation scheme and other aspects, and won the highest customer service quality. The cross-border special line logistics, overseas warehouse, collection and transshipment modes are mainly operated and managed by freight forwarders or medium-sized logistics companies, and the quality of customer service is relatively general. Due to the low price of goods transported by international postal parcels and no additional services such as mail loss, delay and damage, the customer service capacity is the lower of the 5 logistics modes.

Due to the characteristics of fast timeliness, high transshipment cost and many transportation restrictions, international commercial express is mainly suitable for goods with low express cost in the trading volume and extremely sensitive timeliness. International postal parcels are mainly applicable to light and small E-commerce parcels less than 2 kg. They are positioned to serve B2C and C2C E-commerce customers, and the order value is generally no more than US \$50. The cross-border special line logistics mode is applicable to small pieces of goods within 3 kg, collection of goods in the first journey and distribution in the last journey. The overseas warehouse mode is generally applicable to sellers who need to prepare goods in advance and have moderate timeliness requirements, and the goods are mainly heavy goods of more than 20 kg. The cargo collection and transfer mode is applicable to goods that are not sensitive to time, have low value and are not easy to deform in the logistics process.

This study adopts Likert scale to determine the importance of various indicators affecting the selection of cross border E-commerce logistics mode. Likert scale can convert qualitative investigation into quantitative data, and judge the correctness of the selected indicators by analyzing the data, so as to provide the basis for the selection of logistics mode. The questionnaire design of this study is divided into two parts: the first part includes screening items, background information items and sample characteristic information items. It mainly sets questions related to the basic information of the interviewees and the enterprise background, a total of 7 questions. The second part is the core variable items, including indicators at all levels affecting the selection of cross-border E-commerce logistics mode (5 primary indicators and 22 secondary indicators). The questionnaire design of this study adopts a 5-level scale. The answers are strongly disagree, disagree, neutral, agree and strongly agree, and the scores are 1, 2, 3, 4 and 5, respectively.

In the questionnaire design of this study, all questions are single choice. The research objects of this questionnaire are enterprises closely related to cross border E-commerce, and the interviewed enterprises are distributed in various regions in China. The respondents are the decision-makers or important participants in the decision-making of the respondent enterprises. In order to ensure the authenticity and objectivity of the survey content, the whole survey sampling process adopts the method of convenient sampling.

Descriptive statistical analysis on the data obtained from the questionnaire to understand the distribution of the respondents in terms of position, working experience, roles, and attribute of the organization.

Position	Frequency	Percentage
Staff	338	67.6 %
First-line manager	84	16.8 %
Middle and senior manager	50	10.0 %
Cross border E-commerce experts	28	5.6 %
Work experience	Frequency	Percentage
2 years and below	227	45.4 %
2 - 5 years	164	32.8 %
5 - 8 years	86	17.2 %
Over 8 years	23	4.6 %
Roles in cross border E-commerce	Frequency	Percentage
Cross border trading enterprises	308	61.6 %
Cross border logistics enterprises	72	14.4 %
Cross border E-commerce platform	82	16.4 %
Cross border E-commerce professionals	38	7.6 %
Attribute of the organization	Frequency	Percentage
State-owned	37	7.4 %
Private	442	88.4 %
Wholly foreign-owned	13	2.6 %
Sino foreign joint-ventures	8	1.6 %

After the analysis of literature, the study adopts total cost of cross-border logistics, customer service level, logistics operation ability, information level, and size and capability of the enterprises as the first-class evaluation indicators; transportation and distribution cost, storage cost, operation and management cost, labor cost, safety, response time, customer service attitude, commodity tracking, complaint handling rate, accuracy, transportation timeliness, cargo damage and packet loss rate, operation integrity rate, storage technology, transportation technology, order management technology, process management technology, enterprise staff size, enterprise user size, enterprise profitability, enterprise asset scale and enterprise transportation network scale are used as secondary evaluation indicators.

Variable	Criteria	Mean	S.D.	Mean
Cross border logistics total cost	Transportation and distribution cost	4.355	0.738	4.215
	Storage cost	4.192	0.972	
	Operation and management cost	4.428	0.632	
	Labor cost	4.125	0.841	
Customer service level	Safety	3.938	0.715	4.032
	Response time	4.054	0.918	
	Customer service attitude	4.141	0.826	
	Product tracking	3.964	0.791	
	Complaint handling	4.117	0.864	
Logistics operating capability	Accuracy	3.859	0.808	3.935
	Transportaing time	4.024	0.827	
	Cargo damage and loss	4.137	0.713	
	Operation intact rate	3.843	0.884	
Informatization level	Storage technology	4.182	0.779	4.105
	Transportation technology	4.027	0.943	
	Order management technology	4.213	0.866	
	Process management technology	3.916	0.816	
Size and capability of the enterprise	Enterprise staff scale	4.192	0.471	3.818
	Enterprise user scale	3.723	0.435	
	Enterprise profitability	4.017	0.469	
	Enterprise asset scale	3.758	0.476	
	Enterprise transportation network scale	3.866	0.379	

Conclusions and discussion

With the steady implementation of national strategies such as “made in China 2025” and the solid promotion of favorable policies such as Belt and Road Initiative, more and more Chinese products are favored by international consumers. Cross border E-commerce has become an important means of China's foreign trade and global trade activities, and cross border E-commerce logistics has become an important carrier of cross border E-commerce. However, with the explosive growth of cross border E-commerce exporting SMEs, the industry development dilemma is gradually recognized by enterprises. In terms of the current development status of cross border E-commerce in China, the choice of cross border logistics mode of exporting SMEs is the biggest problem.

Clarifying the influencing factors in the selection of indicators has directional significance for the construction of the whole criteria system. It is necessary to ensure that the selected indicators can directly reflect the characteristics of the research object. Because cross-border E-commerce logistics has the characteristics of long industrial chain, wide transportation range, complex transaction process and wide variety of products, there are many influencing factors. This study mainly analyzes the factors in the selection of indicators from the following aspects: the scale and operation ability of cross-border logistics enterprises, the service level of overseas customers, product characteristics, logistics costs, service quality, laws and policies.

Scale and operation ability of cross border exporting SMEs

At present, there are 4 types of cross border exporting SMEs in China: Traditional international logistics giants, domestic traditional logistics enterprises transforming cross-border logistics, self-built logistics of large E-commerce platforms, and self-built logistics of export cross-border trade enterprises. The scale and operation ability of different types of cross-border logistics enterprises are different. In terms of comprehensive strength, the three traditional international logistics giants DHL, FedEx, ups and China Post occupy most of the cross-border export markets, and each has its own advantageous routes and regions. Other types of logistics enterprises also have certain survival advantages. For example, the self-built logistics platform can provide a one-stop logistics service system for E-commerce enterprises, so as to give full play to the advantages of their own products and maximize profits. The scale and operation ability of cross-border logistics enterprises are two closely related indicators. The improvement of enterprise operation ability can drive the expansion of enterprise scale, such as the expansion of DHL, FedEx and UPS in China. The expansion of enterprise scale will further improve the operation ability of its enterprises. The enterprise's own scale and operation ability can be subdivided into several secondary indicators, such as the scale of overseas users, the total number of employees and the proportion of highly educated talents, fixed assets, profitability, customer service ability, sales share and so on.

Overseas customer service level

The service level of overseas customers includes many aspects such as the response time, logistics timeliness, packet loss rate and accuracy rate of overseas customers. The indicators affect and promote each other. For example, the accuracy of cross-border logistics delivery will directly reduce the logistics timeliness, and the reduction of logistics timeliness will play a positive role in the logistics response time of overseas customers. So as to provide the timeliness of logistics delivery, so as to improve the logistics service level of customers. Different from traditional trade, cross-border E-commerce has the advantages of convenient purchase and online transaction. However, when serving overseas customers, it also has some disadvantages, such as uneven product quality, high logistics cost, long return period and so on. Although WeChat payment and Alipay payment have been widely used in China, it is still very inconvenient to serve overseas customers, so cross border transactions also need to consider the needs of overseas customers. Improving logistics service quality and reducing logistics costs are a pair of contradictions, and how to determine the balance between the two and maximize the benefits of cross-border logistics industry chain is the key point. The service level of overseas customers is the core of cross-border E-commerce logistics tail distribution and an important consideration for enterprises when choosing logistics mode.

Product characteristics

Compared with traditional foreign trade, cross-border E-commerce export products have the characteristics of low value, small volume, high frequency and small batch. Their commodity categories, value and volume are different. Therefore, it is necessary to choose the logistics mode according to the characteristics of different products. For example, international postal parcels require relatively high product size. The sum of length, width and height of rectangular small items should be less than 90 cm, and the longest side should not exceed 60 cm. The minimum size also requires that at least 1 side should be more than 14 cm long, and the area of one side should not be less than $10 \times 10 \text{ cm}^2$. Only products that meet this size specification can choose international postal parcels. Different DHL Express products can deposit different goods. For example, DHL Global Express service clearly stipulates that bank bills, settlement bills, bills of lading, etc. cannot be sent, while DHL Global parcel service clearly stipulates that samples or finished products of food or pharmaceutical products cannot be transported. Therefore, various characteristics such as product size, shape, type and value are important considerations in the selection of product logistics mode. It is necessary to select the appropriate or most appropriate logistics mode according to the product characteristics.

Legal policy

In China, the development of cross-border E-commerce logistics is still in the exploratory stage. On August 31, 2018, the E-commerce law was deliberated and adopted at the fifth meeting of the Standing Committee of the 13th National People's Congress. It is the first comprehensive law in the field of E-commerce in China. Even so, there is still a lack of legislation in China's cross-border E-commerce, not only in the level of laws and administrative regulations, but also in the administrative regulations of the General Administration of customs and other administrative departments. Cross border E-commerce logistics is a logistics activity between different countries or regions, so it will involve the laws and regulations of multiple countries, which requires that when selecting the logistics mode, we should not only consider the laws and regulations of the exporting country, but also have a relevant understanding of the laws and regulations of the importing country. At the policy level, in order to facilitate the customs clearance of cross-border trade E-commerce retail import and export enterprises, the General Administration of Customs has added the code of customs supervision mode since February 10, 2014, which has improved the customs clearance efficiency of enterprises and reduced the customs clearance cost to a certain extent. In April 2018, the management responsibility and team of entry-exit inspection and quarantine were officially assigned to the General Administration of customs. After the institutional reform, the standards of "one declaration", "one inspection", "one release" and "three ones" have been realized in customs clearance. The merger of customs and commodity inspection has greatly improved the facilitation of cross-border E-commerce in customs clearance and inspection. Different logistics models have different dependence on policies. Therefore, when selecting cross-border E-commerce logistics models, we should combine the benefit objects of the policies and fully analyze the policies.

Practical implications

Cross border E-commerce exporting SMEs should fully understand the links of the company's industrial chain and correctly choose the logistics mode suitable for the industrial chain. Because cross border E-commerce exporting SMEs are often engaged in the export business of a variety of consumer goods, the industrial chain links of each consumer goods, the needs of international consumer customers, the region of the target country and its development level will be different, so choosing the industrial chain is the choice of logistics mode.

Cross border E-commerce SMEs should fully understand the product industry type of the company and correctly choose the logistics mode suitable for the product industry type. The chart below is an analysis of the types of cross border E-commerce industry mode for SMEs recommended by this study.

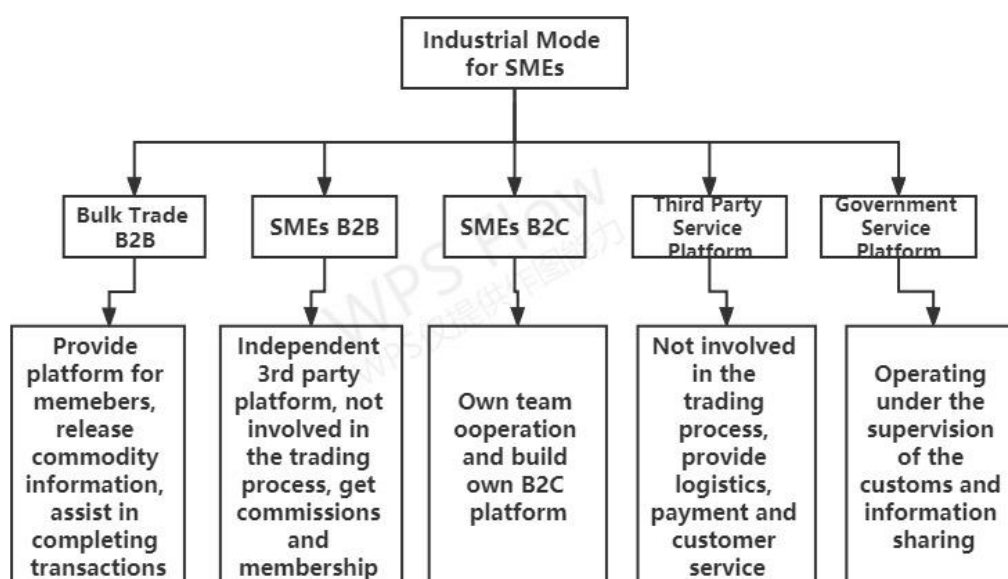


Figure 1 Analysis of small and medium-sized cross-border e-commerce industry chain.

Cross border E-commerce SMEs can refer to the industrial chain map below recommended by this study to analyze the industrial chain of their corresponding products.

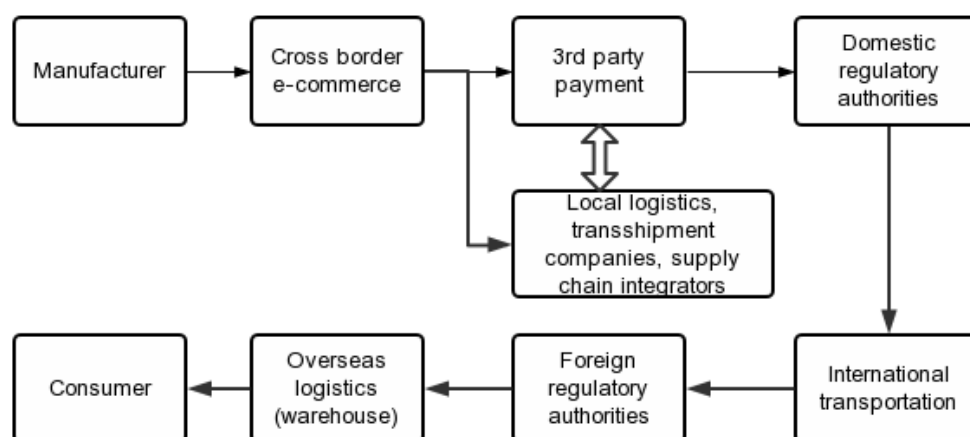


Figure 2 Type analysis of small and medium-sized cross-border e-commerce industry model.

References

- Amer, J., Lenhardt, J., & Haartman, R. V. (2017), Improving logistics performance in cross-border 3PL relationships. *International Journal of Logistics Research and Applications*, 20(5), 491-513.
- Asosheh, A., Shahidi-Nejad, H., & Khodkari, H. (2012). A model of a localized cross border E-commerce. *iBusiness*, 4, 136-145.
- Chen, W. (2018). *Research on optimization of cross-border E-commerce package processing mode of F company's Asia Pacific transit center*. Guangzhou, China: South China Institute of technology.
- Feng, L. (2019). Research on influencing factors of logistics mode selection of small and medium-sized cross-border E-commerce enterprises. *Chinese and Foreign Entrepreneurs*, 2019(3), 75.
- Ghorbani, A., & Bonab, M. B. (2013). Globalization and the role of E-commerce in its expansion. *Journal of Basic and Applied Scientific Research*, 3(1), 78-82.
- Golicic, S. L., & Davis, D. F. (2012). Implementing mixed methods research in supply chain management. *International Journal of Physical Distribution & Logistics Management*, 42(8-9), 726-741.
- Gomez-Herrera, E., Martens, B., & Turlea, G. (2014). The drivers and impediments for cross border E-commerce in the EU. *Information Economics and Policy*, 28, 83-96.
- Leung, S. C. H., Yue, W., & Lai, K. K. (2002). A robust optimization model for a cross-border logistics problem with fleet composition in an uncertain environment. *Mathematical and Computer Modeling*, 36(11-13), 1221-1234.
- Li, C. (2018). Selection of enterprise logistics distribution mode under E-commerce environment. *Logistics technology*, 7, 111-117.
- Li, Y. (2018). Research on the development mode of cross-border e-commerce logistics in China. *Business modernization*, 12, 74-75.
- Li, J. (2009). Dilemma analysis of cross border E-commerce development in China and research on E-commerce logistics coordination model. *E-commerce*, 4, 31-34.
- Liu, R. (2019). Choice of B2B e-commerce terminal logistics mode for auto parts - taking Guangzhou Baiyun auto parts city as an example. *Journal of Zhaoqing University*, 7, 64-68.
- Mahamaro, H. A. (2017). *Improving cross-border E-commerce competitiveness through overseas warehousing*. Chongqing, China: Chongqing University.
- Mu, Y. (2015). Analysis and selection of cross border E-commerce logistics solutions in China. *Logistics technology*, 10, 83-84.

- Narantsatsral, S., & Hu, Z. (2019). One belt, one road, Mongolia cross border logistics system and its development strategy. *Business Economics*, 8, 51-53.
- Qian, H., & He, J. (2019). Research on cross border E-commerce logistics in China - review and prospect. *Technology and Innovation Management*, 9, 535-541.
- Ribadu, M. B., & Rahman, W. N. W. A. (2019). An integrated approach towards Sharia compliance E-commerce trust. *Applied Computing and Informatics*, 15(1), 1-6.
- Wang, J. (2020). *The path to accelerate the development of cross-border E-commerce logistics*. Guangzhou, China: South China University of technology.
- Wang, G., & He, W. (2018). Research on the development strategy of cross-border E-commerce under the background of free trade zone - taking Zhejiang free trade zone as an example. *Price monthly*, 2, 57-60.
- Wang, J. (2019). Research on the application of block chain technology in the optimization of cross border E-commerce payment mode. *Economic Research Guide*, 10, 121-122.
- Wei, M. (2018). *Research on export mode selection of small cross-border logistics based on FAHP*. Tianjin, China: Tianjin University of technology.
- Wong, D. W. C., Choy, K. L., Chow, H. K. H., & Lin, C. (2014). Assessing a cross-border logistics policy using a performance measurement system framework: The case of Hong Kong and the Pearl River Delta region. *International Journal of Systems Science*, 45(6), 1306-1320.
- Xiao, Z., & Liu, Y. (2019). The impact of cross border E-commerce on the export scale of China's manufacturing industry - an empirical study from China's experience. *Business Economics Research*, 11, 151-153.
- Yang, F., & Guo, Y. (2018). Problems and countermeasures faced by China's small and medium-sized export enterprises in the transformation of cross-border E-commerce - a case study of Ningbo City, Zhejiang Province. *Business Economics Research*, 1, 135-137.
- Zhang, P. (2018). Analysis and selection of fresh e-commerce logistics mode. *Logistics engineering and management*, 40(12), 1-4.