

Association for Information Systems

AIS Electronic Library (AISeL)

WHICEB 2020 Proceedings

Wuhan International Conference on e-Business

Summer 7-5-2020

Review of Cross-border Electronic Retail Logistics Research in the Last Five Years

Yangyang Chen

Institute of economics and management, Xidian University, Xi 'an, 710126, China, 2216753116@qq.com

Yongxiang Dou

Institute of economics and management, Xidian University, Xi 'an, 710126, China, yxdou@xidian.edu.cn

Qing Kai

Institute of economics and management, Xidian University, Xi 'an, 710126, China, 1300438012@qq.com

Follow this and additional works at: <https://aisel.aisnet.org/whiceb2020>

Recommended Citation

Chen, Yangyang; Dou, Yongxiang; and Kai, Qing, "Review of Cross-border Electronic Retail Logistics Research in the Last Five Years" (2020). *WHICEB 2020 Proceedings*. 43.

<https://aisel.aisnet.org/whiceb2020/43>

This material is brought to you by the Wuhan International Conference on e-Business at AIS Electronic Library (AISeL). It has been accepted for inclusion in WHICEB 2020 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Review of Cross-border Electronic Retail Logistics Research in the Last Five Years

Yangyang Chen¹, Yongxiang Dou², Qing Kai^{3}*

¹Institute of economics and management, Xidian University, Xi 'an, 710126, China

² Institute of economics and management, Xidian University, Xi 'an, 710126, China

³ Institute of economics and management, Xidian University, Xi 'an, 710126, China

Abstract: Nearly five years, retail in cross-border e-commerce (CBER) has gradually attracted more attention with the expansion of domestic e-commerce in several retail major economies. Scholars both here and abroad have become increasingly interested in CBER. As the important supporting services, logistics services of CBER have also be deeply concerned. However, compared with the rich practice, the theoretical outputs of logistics services in CBER are still less. Previous studies have focused on the relationship between cross-border e-commerce and logistics services , and international distribution network. So far, there is little research on content-based logistics services concerning CBER. Based on the literature review, this paper has determined a series of possible research directions, including strategic significance of cooperation in forming CBER distribution structure and how to implement customer-driven logistics service improvement. Finally, some future research directions are proposed.

Keywords: Internationalization, cross-border retail e-commerce, logistics services, development trends

1. INTRODUCTION

It has been 34 years since the word "economic globalization" was put forward in 1985. With the emergence of the revolution in information technology in the 21st century, economic globalization has further developed. Since 2008, the trend of globalization at the consumer end has become much more obvious, although the growth of global trade slowing down. Especially under the impetus of online e-commerce, cross-border e-commerce has brought new vitality to the international consumer market. CBER is permeating people's lives with greater breadth and depth, and has become an important fulcrum to create growth during the new period all over the world, a series of policies to support cross-border electronic commerce being issued. According to relevant OECD reports, the vast majority of member countries have formulated their own national digital economic strategies or related policies.

This topic has attracted more and more attention from scholars because it requires specific knowledge and ability to meet all the challenges behind the development of cross-border electronic commerce which include language and cultural differences, regulatory issues, compatibility and interoperability between online payment systems. However, one of the most complicated problems is logistics. The intangible nature of online transactions should not allow underestimation of problems in the actual distribution of products. For many years, scholars have been discussing the importance of logistics in e-commerce, where logistics is often regarded as the source of competitive advantage. Especially with the international market competition becoming extremely fierce, the requirements for logistics services in e-commerce are becoming much higher. However, the relationship between logistics and e-commerce is mainly analyzed from the perspective of different countries. So far, there has been little research on content-based e-commerce logistics. On the other hand, logistics in

* Corresponding author. Email: 2216753116@qq.com (*Yangyang Chen*), yxdou@xidian.edu.cn (*Yongxiang Dou*), 1300438012@qq.com (*Qing Kai*).

CBER is different from logistics in e-commerce. At the same time, the logistics in developing countries is at a stage of rapid development recently, and the summary of new practices and research on logistics in CBER is also urgently needed academically.

In order to determine the key issues and research processes, a literature review was conducted. This review allows authors to identify and classify existing content-based logistics literature contributions in CBER. The thesis is divided into four main parts. Section 2 describes the methods used in this study. Section 3 introduces the results of literature review, discusses the main problems arising from the analysis. Section 4 determines the focus of future research. Section 5 draws a conclusion.

2. METHOD

This review covers scientific contributions in the past five years. This timetable looks natural, as CBER has gradually shown its advantages in economic development since 2014. This paper makes contributions to logistics in CBER in the form of literature analysis, because the system method is most suitable for verifying its content or repeated analysis, which should follow a series of precise steps, from selecting defined review topics and searching related literature to selection, analysis and critical description.

2.1 Literature search

2.1.1 Definition of cross-border electronic retail logistics

British finidi Research Ltd. pointed out that cross-border electronic commerce involves purchasing goods online in a country or region and shipping them overseas ^[1]. In China, "Cross-border E-commerce Retail Imports" refers to the consumption behavior of domestic consumers in China who purchase goods from overseas through third-party platform operators of cross-border e-commerce by special supervision mode ^[2]. In this article, we define logistics in CBER is a variety of logistics activities that span different countries or regions and mainly serve CBER, being accompanied by domestic consumers in a country purchasing goods from abroad through the operators of cross-border e-commerce third-party platforms. It has the characteristics of special customs supervision, strong timeliness, wider service space and longer supply chain.

2.1.2 Search process

First of all, identify research areas, which are mainly as follows: Cross-border e-commerce, International Express Services, Cross-Border Logistics Services. Then make sure the keywords, which are: cross-border e-commerce, cross border, logistics service. And search time is from 2014 to 2019. The search platforms are "WOS", "CNKI" and the search tool platform "EndNote". Finally, the search results are obtained which is a total of 81 search terms. After reading the summary and conclusion, we select and retain 65 key documents describing both the cross-border e-commerce field and the logistics development.

2.2 Literature analysis

2.2.1 Main features of the article

In terms of publishing time, this sequence helps to highlight how new people's interest in this topic is. About 77% of the papers were published from 2016. The increase in academic interest can be mainly explained as a reflection of the growth of B2C e-commerce in developing countries like China.

In terms of author's location, there are more authors in mainland China, followed by Taiwan, Europe, America and Australia, and finally by Japan, Korea and India. This result is related to the development stage of cross-border e-commerce retail logistics in various countries. China has just promulgated laws for cross-border e-commerce to support the industry in recent years, so the research is on the rise. Most of its research focuses on the macro-research of cross-border logistics, such as: the belt and road initiative with strong policies. Other countries, such as Europe and India, are affected by the strategic investment of neighboring countries, and their international logistics research is also gradually increasing. Similarly, there are more researches on

macro-political situation. .

Table 1 Main References

Year	Author	Document type	Location	Article
2013	EUROPEAN COMMISSION	conference	EUROPEAN	A roadmap for completing the single market for parcel delivery Build trust in delivery services and encourage online sales
2016	Maria G	journal	Italy	Cross Border B2C E-Commerce to Greater China and the role of logistics: a literature review
2016	Kim T Y	journal	EU	The value of express delivery services for cross-border e-commerce in European Union markets
2017	Guo Y	journal	China	To sell or not to sell: Exploring sellers' trust and risk of chargeback fraud in cross-border electronic commerce
2017	Paul Tae-Woo Lee	journal	China	Research trends and agenda on the Belt and Road(B&R) initiative with a focus on maritime transport
2017	Hsiao Y H	journal	Taiwan	Logistics service design for cross-border E-commerce using Kansei engineering with text-mining-based online content analysis
2018	Wu P J	journal	Taiwan	Unstructured big data analytics for retrieving e-commerce logistics Knowledge
2018	Liu X T	journal	China	Analysis of logistics service supply chain for the One Belt and One Road initiative of China
2018	Ángel V	journal	Spain	Drivers and barriers to cross-border e-commerce: evidence from Spanish individual behavior
2018	Ying Wang	journal	China	Supply Chain-Based Business Model Innovation: The Case of a Cross-Border E-Commerce Company

3. REVIEW OF LITERATURE

3.1 Research on the relationship between cross-border e-commerce and retail logistics services

The development of cross-border retail logistics cannot be separated from the continuous expansion of cross-border e-commerce. From the perspective of logistics service as an important factor affecting the development of CBER, the Accenture European Retail Roundtable in cross-border electronic commerce (Europe) proposed that delivery and product return are currently the most concerned issues for e-shoppers and e-retailers in EU ^[3]. However, Estrella finds that package payment costs and foreign attributes of commodities have no significant impact on the development of CBER in the EU, but the language, foreign nationality and payment from the macro perspective of national industrial ^[4]. A similar conclusion was reached by Ángel Valarezoa , he proposes developing online skills training and enhancing the integrity of online shopping, such as rational use of post-purchase reviews of goods from a micro perspective through Spain's 2016 domestic census data ^[5]. Zhang X X measures the seller competition strategy on the sales volume of CBER from the aspects of cost leadership, reputation priority and logistics service, found that the above three factors have positive impact ^[6].

3.2 Development mode, cost and risk analysis of cross-border electronic retail logistics

The research on the development mode of logistics in cross-border electronic commerce generally selects the appropriate logistics mode through comprehensive cost, risk, customer demand and other factors, which is a key decision for the implementation of cross-border logistics. Maria quantified the logistics costs of three logistics solutions from the perspective of a European clothing industry enterprise. The model returns the distributed solution related to the lowest logistics cost by inputting some specific data (such as the weight and volume of clothes) ^[7]. Lu studied the price competition strategy of two adjacent cross-border e-commerce

comprehensive experimental areas in China. Empirical research showed that enterprises in regions with competitive significance should charge different fees according to the competitive areas^[8]. Another cost risk study for CBER is based on independent cost or risk analysis under a specific scenario. Li studied the cost assessment of the downstream supply chain. The study shows that facility improvement and related ICT have proved to be the most valuable. The author emphasizes that this is the basis for the wide application of supply chain in CBER and will improve transparency, thus creating a more complex supply chain^[9]. Zhang analyze the risks of logistics operation under CBER based on the five steps of SCCOM. The empirical research on Taobao between Taiwan and the mainland shows that cross-border logistics is most affected by "information system instability" and "abnormal customs clearance at sea"^[10]. Guo Y and others studied the whole process of sellers' trust in buyers in CBER transactions. This study provides useful insights for third-party online trading platforms and online trade policy makers^[11].

3.3 Cross-border electronic retail logistics service quality discussion

From a macro perspective that affects the quality of logistics services, Weina studied the application of high-tech technologies and payment methods have a significant impact on logistics in CBER, while laws and regulations and customs clearance services have no significant impact on cross-border e-commerce logistics in the manufacturing industry^[12]. From the perspective of improving the quality of logistics services, there are currently many logistics demand studies for B-end consumers from the perspective of third-party logistics service providers. Ding found that different business models had very different requirements for logistics services, which were embodied in logistics timeliness, transportation safety, freight affordability and other additional services. Specifically, the economic evaluation of service was relatively low in the aircraft transportation business in China^[13]. LI proposed an information aggregation platform for businesses to reasonably select logistics service providers is necessary, and suggested that cross-border e-commerce platforms can provide more logistics services^[14]. Fu proposed the logistics capability evaluation index of the third-party logistics service provider in CBER including quality assurance, rapid response, cost control, value-added service and information management^[15]. There is also a research on logistics demand directly facing C-end consumers. Kim found that the sales data of consumer on online stores verified that express delivery has a positive impact on financial performance in cross-border e-commerce market in the EU where the demand for express delivery service increases with higher income of users, higher lead-time income of express delivery and lower logistics cost^[16]. EU has proposed implementation strategies to encourage the establishment of a single package delivery market to promotion online sales from the transparency of information exchange in the supply chain, the quality and affordability of the delivery plan, and the mechanism of customer complaints^[17]. Hsiao found the services that "the logistics service is available 24 hours a day", "the logistics freight is not paid by the buyer alone", etc. had greater impact on customer satisfaction^[18].

3.4. Cross-border electronic retail logistics supply chain innovation research

The research of supply chain in CBER is extensive, including the innovation of business model, cost allocation research, supply chain network layout research, etc. Qu took "internet plus" as the entry point, and puts forward the connotation of logistics development in the context of e-commerce. The connotation elaboration focuses on the integration of logistics value, value chain reconstruction and non-intermediary function, and explains the importance of logistics value chain analysis^[19]. Liu found the profit of integrators decreased with the increase of cost sharing ratio, regardless of whether integrators or providers dominated the logistics service supply chain. In addition, compared with the value in decentralized channels, when integrators and suppliers cooperated in price negotiation, the profit of logistics service supply chain will be higher in the coordination of the supply chain under the Belt and Road Initiative^[20]. Maria found that Taiwan and Hong Kong, had strategic positions in the development of distribution networks in CBER in China, and emphasized the

establishment of cross-border logistics distribution networks and the decision-making of enterprise outsourcing as two research hotspots^[21]. Shi put forward the factors affecting the responsiveness of third-party logistics suppliers in CBER from the perspective of global value chain, which were the level of specialization in the logistics field, the degree of target consistency of partners and cultural differences^[22]. Wang found that the mode of “overseas warehouse plus supply chain finance” has set up an innovative business model for its supply chain in a logistics enterprise in CBER from China^[23].

3.5. Cross-border electronic retail logistics development trend tracking

Wu crawled 2370 data from professional logistics websites in several countries from 2010 to 2016, and pointed out the 10 mainstream hot topics, such as "E-commerce logistics payment in Southeast Asia", "E-commerce order management", etc^[24]. Qu proposed that there is another meaning of "cross-border" mode in the path of logistics, which are: function cross-border mode, industry integration mode, industry linkage mode and industry cross-border mode^[19]. Maria concluded in the role of China's B2C cross-border e-commerce logistics that the design of cross-border logistics distribution networks should be focused on. Meanwhile, the time of delivery is the key service attribute, and it directly limits the applicable logistics solutions^[21]. Paul studied the impact of the belt and road initiative's policies. The article analyzed the impact of policies on the industries of corresponding regions in China from the key factors involved in economic and transportation corridors, urban agglomerations, etc. It also emphasized that the implementation of the project has had a great impact, and would be no longer just a policy call, and corresponding foreign studies will continue to emerge^[25].

4. HINTS FOR FUTURE RESEARCH

4.1 Supporting CBER's value-added logistics service for customers

In CBER, the logistics needs of customers are very basic, such as the need for affordable delivery costs and convenient return logistics services. However, the matching degree of logistics demand in CBER is much more focused on delivering goods as quickly as possible, lacking of flexibility, unable to meet the customer's return needs. This is a common phenomenon in the initial stage of market development which exists in the European Union, China, etc. Although bonded logistics and overseas warehouses can meet the customer's return and exchange requirements to a certain extent, there are still some problems such as insufficient variety of goods, high warehouse management cost, circulation of goods, etc. Another existent solution is to provide logistics insurance, such as return insurance and premium insurance, etc. This is a very conventional value-added service in the domestic e-commerce logistics field, while absent in CBER. Therefore, in-depth research can be conducted that logistics services should cooperate deeply with cross-border e-commerce platforms or sellers on the basis of comprehensive consideration of cost and demand to provide sustainable cross-border logistics service optimization. Because of the cultural differences in different countries, it is more practical to combine in-depth studies of different industries in different regions.

4.2 Research on supply chain organization cooperation supporting CBER

The research of supply chain has local characteristics. China's logistics research tends to the facility planning and service network selection. Under the background of longer service chain and more complicated political culture of logistics in CBER, the overall output based on supply chain research is more important, which is more studied by developed countries. At present, some cross-border e-commerce platforms in developing countries, like China, whose classic practices are worth learning from by international peers, have gone out to sea one after another, making use of their platform flow advantages to find logistics service providers overseas as partners. Big enterprises build their own storage outlets or take shares in foreign logistics service providers to strengthen their control over logistics. Small and micro e-commerce sellers signed contracts with supply chain service providers to access to services. At present, there are few researches on the cost-benefit

distribution of supply chain in CBER, especially the recently popular "Belt and Road" strategy. Future research can combine specific industries to systematically study how to promote efficient supply chain cooperation from the perspectives of cost, risk and benefit. Another trend of supply chain development is to consider establishing a comprehensive platform for cross-border logistics information. Research in China focuses on the construction of bonded comprehensive zones, but the construction has the strong characteristics of regional and administrative nature. Future research can discuss how to build an efficient logistics alliance and the mechanism of information technology in it, where transparency and interoperability of the system are crucial.

4.3 Need to carry out more "inclusive" research, combined with other research and analysis of logistics

It is crucial to consider the relationship between logistics and other functions such as marketing and law by considering the views of foreign companies willing to accept the CBER plan. Among them, legal issues play a prominent role because coordination between different legal systems affects several procedures, including electronic customs procedures. This in turn will affect logistics performance. In addition, the foreign legal framework related to electronic commerce and cross-border electronic commerce is undergoing major changes in recent years. Understanding how legal and policy interventions affect logistics management in such an evolving environment is a key factor to be investigated. Although there are more extensive methods to analyze the relationship between logistics and legal issues in some articles related to foreign countries, there is little research on emerging markets. This gap should not be underestimated, because although foreign retailers may think that Asian countries have similar legal systems, this is not the case, and differences should be correctly pointed out in future studies.

5. CONCLUSION

This research uses systematic literature review method to sort out the research status of cross-border retail logistics worldwide in the past five years. It involves the core set of the international document platform "web of science", the popular document platform "CNKI" in China and the document search tool "Endnote", with a total of 161 search items. After sorting out documents, 65 key documents were finally determined. The contribution of this paper is mainly reflected in two aspects. First, the relevant domestic and foreign documents are classified and expounded five themes in the past five years. Secondly, according to the current research situation, it puts forward possible research directions in the future. There are also deficiencies in the article. Considering that the literature collection channels cover only a few active markets such as Asia, Europe and Oceania, there may be deficiencies in summarizing the global cross-border electronic retail market. In addition, cross-border electronic retail logistics is a relatively new topic in recent years. New research is still emerging one after another. It is necessary to update the latest research situation in time.

ACKNOWLEDGEMENT

At the end of this paper, I would like to express my most sincere thanks to the instructor Dou Yongxiang. Teacher Dou's persistent scientific research spirit, profound knowledge inspired me to perfect the article. And I would like to thank my colleague Kaiqing for his contribution in the process of sorting out the articles. Finally, thanks to the owners of the research ideas that have been reprinted and quoted in this article.

REFERENCES

- [1] Infiniti Research Limited. (2019). Courier, Express and Parcel Market by Customer Type and Geography - Forecast and Analysis. 2019-2023.
<https://www.reportlinker.com/p05824485/Courier-Express-and-Parcel-Market-by-Customer-Type-and-Geography-Forecast-and-Analysis.html>

- [2] The Ministry of Commerce, the Development and Reform Commission, ect. (2018) Notice on Improving the Supervision of Retail Imports in cross-border electronic commerce.
<http://www.scio.gov.cn/ztk/38650/39483/index.htm>.(in Chinese)
- [3] DG SANCO. (2011). Consumer market study on the functioning of e-commerce and Internet marketing and selling techniques in the retail of goods. Study on behalf of the European Commission (EC).
http://ec.europa.eu/consumers/consumer_research/market_studies/docs/study_ecommerce_goods_en.pdf
- [4] Estrella G H, Bertin M, Geomina T. (2014). The drivers and impediments for cross-border e-commerce in the EU. *Information Economics and Policy*, 28: 83-96
- [5] Ángel V, Teodosio P A. (2018). Drivers and barriers to cross-border e-commerce: evidence from Spanish individual behavior. *Telecommunications Policy*, 42: 464–473
- [6] ZHANG X X, CAO G H. (2018). Electronic Word of Mouth, Cross-Border Logistics Way and Imports Retail E-commerce. In: Rao P V, Wang Shufeng, Gupta Neeraj, eds. 2018 International Conference on E-commerce and Contemporary Economic Development (ECED 2018): Vol I. Hangzhou : DEStech Publications, 122-134
- [7] Maria G, Riccardo M, Alessandro P, Angela T. (2017). Logistics Solutions to Support Cross Border E-Commerce Towards China: The Case of the Apparel Industry. In: Rinaldi R, Bandinelli R , eds. IT4Fashion 2016: Business Models and ICT Technologies for the Fashion Supply Chain. Italy: Springer International Publishing, 163-177
- [8] Lu B, Wang H P. (2016). Research on the Competitive Strategy of Cross-Border E-Commerce Comprehensive Pilot Area Based on the Spatial Competition. *Scientific Programming*, <http://dx.doi.org/10.1155/2016/6216052>
- [9] Feng L P, Ma J, Wang Y, Yang Y. (2017). Supply chain downstream strategic cost evaluation using L-COPRAS method in cross-border E-commerce. *International Journal of Computational Intelligence Systems*, 10(1): 815 – 823
- [10] Zhang H Z, Hsieh C M, Luo Y L and Chiu M C. (2017). An Investigation of Cross-Border E-Commerce Logistics and Develop Strategies Through SCCOM Framework and Logistic Service Risk Analysis. *Transdisciplinary Engineering: a Paradigm Shift*, 5: 102-113
- [11] Guo Y, Bao Y C, Stuart B J, Nguyen K L. (2018). To sell or not to sell: Exploring sellers' trust and risk of chargeback fraud in cross-border electronic commerce. *Information Systems Journal*, 28: 359-383
- [12] Ai W N, Yang J Z, Wang L. (2016). Revelation of cross-border logistics performance for the manufacturing industry development. *International Journal of Mobile Communications*, 14(6): 593-609
- [13] Ding Q. (2017). The comprehensive service system of cross-border e-commerce logistics enterprises and empirical study. *Advances in Social Science, Education and Humanities Research*, 101: 1421-1426
- [14] LI Y. (2018). The Cross-border E-commerce Logistics for Chinese Small and Micro Businesses: Analysis and Suggestion. In: Rao P V, Wang Shufeng, Gupta Neeraj, eds. 2018 International Conference on E-commerce and Contemporary Economic Development (ECED 2018): Vol I. Hangzhou : DEStech Publications, 114-117
- [15] Fu R H. (2017). Research on Evaluation of B2C Cross-border E-commerce Logistics Service Capability. *Chinese Market*, 28: 24-27(in Chinese)
- [16] Kim T Y, Dekker R, Heij C. (2016). The value of express delivery services for cross-border e-commerce in European Union markets. *Transdisciplinary Engineering: A Paradigm Shift*, 5: 102-113
- [17] EUROPEAN COMMISSION. (2013). A roadmap for completing the single market for parcel delivery Build trust in delivery services and encourage online sales. https://ec.europa.eu/commission/presscorner/detail/en/MEMO_13_1151
- [18] Hsiao Y H, Chen M H , Liao W C. (2017). Logistics service design for cross-border E-commerce using Kansei engineering with text-mining-based online content analysis. *Telematics and Informatics*, 34: 284–302
- [19] Qu T T, Mao T, Zhou X J. (2017). Research about the Development Path of “Internet + Logistics” under E-commerce. WHICEB 2017 Proceedings. 38. <http://aisel.aisnet.org/whiceb2017/38>
- [20] Liu X T, Zhang K, Chen B K, Zhou J, Miao L X. (2018) Analysis of logistics service supply chain for the One Belt and One Road initiative of China. *Transportation Research Part E* 117, 23–39

- [21] Maria G, Riccardo M, Alessandro P, Angela T. (2016). Cross Border B2C E-Commerce to Greater China and the role of logistics: a literature review. *International Journal of Physical Distribution & Logistics Management*.
<https://doi.org/10.1108/IJPDLM-08-2016-0241>
- [22] Shi Y Y. (2016). An Exploratory Study of Responsiveness of Chinese Third-Party Logistics Providers in The Context of Cross-Border Electronic Commerce: A Global Value Chain Perspective. In: Du Wencai, Sun Yunchuan, eds. *First International Conference Economic and Business Management 2016*. Qingdao: Atlantis Press , 415-420.
- [23] Wang Y, Jia F, Schoenherr T, Gong Y. (2018). Supply Chain-Based Business Model Innovation: The Case of a Cross-Border E-Commerce Company. *Sustainability*, doi:10.3390/su10124362.
- [24] Wu P J, Lin K C. (2018). Unstructured big data analytics for retrieving e-commerce logistics Knowledge. *Telematics and Informatics*, 35: 237–244
- [25] Leea P T W, Hu Z H, Leec S J, Choid K S, Shin S H. (2017). Research trends and agenda on the Belt and Road (B&R) initiative with a focus on maritime transport. *Maritime Policy & Management*,
<https://doi.org/10.1080/03088839.2017.1400189>.