

Cross-Border E-Commerce and Commercial Circulation Upgrading in China

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Abstract: *This study empirically investigates the impact of cross-border e-commerce (CBEC) development on China's commercial circulation industry within the context of the new dual-circulation development paradigm. Utilizing provincial panel data from 2014 to 2021, we find that CBEC development significantly facilitates the transformation and upgrading of the circulation sector. Heterogeneity analysis reveals that this positive effect is pronounced in the eastern and central regions, but remains statistically insignificant in the western region. The findings offer empirical evidence and targeted policy recommendations for leveraging CBEC to optimize circulation efficiency across regions.*

Keywords: Cross-border e-commerce, Commercial circulation industry, Dual-circulation strategy, Transformation and upgrading, Regional heterogeneity, Panel data.

1. INTRODUCTION

As a new form of foreign trade, cross-border e-commerce plays an important role in increasing consumer choices, meeting various consumer needs, and promoting global trade liberalization. Currently, China is actively promoting the layout of the "dual circulation" development pattern. A high-quality dual circulation pattern requires the efficient connection of multiple links such as production, circulation, distribution, and consumption. As a bridge connecting supply and demand, buyers and sellers, the commercial circulation industry is the link and channel connecting production materials and consumer goods. At present, there are various obstacles and market segmentation phenomena in China's commercial circulation industry, which seriously restrict the high-quality development of China's commercial circulation industry. The prerequisite for the "dual circulation" development pattern is to establish an efficient commercial circulation system across the country. Therefore, actively promoting the establishment of a modern commercial circulation system and further improving the efficiency and scale of commercial circulation is an important guarantee for China to build a new development pattern in the new era.

With the development of information and communication technologies such as the Internet, cloud computing, and big data, cross-border e-commerce with digital technology as the core has developed rapidly globally. Buyers and sellers around the world are connected through cross-border e-commerce platforms. Especially during the global spread of the COVID-19 pandemic, cross-border e-commerce has become an important means to maintain the stability of China's foreign trade scale and economic growth outside the traditional foreign trade industry. According to the "2022 Annual Report on China's E-commerce Market Data" released by the E-commerce Research Center of NetEase, the market scale of China's cross-border e-commerce reached 15.7 trillion yuan in 2022, showing a year-on-year growth of 10.56% compared with 14.2 trillion yuan in 2021. The market scales (growth rates) from 2018 to 2021 were 9 trillion yuan (11.66%), 10.5 trillion yuan (16.66%), 12.5 trillion yuan (19.04%), and 14.2 trillion yuan (13.60%) respectively. Cross-border e-commerce maintained steady growth in 2022. The development of cross-border e-commerce has led to changes in the entire industrial chain and had a profound impact on traditional foreign trade and industries. Currently, the trade potential of China's cross-border e-commerce is gradually being released, and the scale is expanding year by year. The commercial circulation system associated with the cross-border e-commerce industry also needs to make corresponding adjustments to adapt. To a certain extent, this has forced the high-quality development of China's commercial circulation industry. Then, how to stimulate the development potential of China's cross-border e-commerce and enable the digital transformation and upgrading of the commercial circulation industry? Does the rapid development of cross-border e-commerce have different impacts on the high-quality development of the commercial circulation industry in different regions? What is its mechanism of action? Of course, the above issues require further empirical research. Based on the findings, scientific and objective policy recommendations are put forward to boost the high-quality development of cross-border e-commerce in different regions and empower the transformation and upgrading of the commercial circulation industry.

2. LITERATURE REVIEW

In the era of the continuous development of economic globalization, digital technology has been widely applied to various industries in commercial circulation and even across national borders. As a new form of cross-border trade, the development speed of cross-border e-commerce is extremely rapid. The state and all walks of life have also introduced relevant policies to support and guide the development of cross-border e-commerce. The academic community has also conducted corresponding research on cross-border e-commerce. After sorting and summarizing, the author found that the current research of scholars on cross-border e-commerce mainly focuses on the following three aspects: First, the research on the characteristics of cross-border e-commerce platforms. Ma Yupeng (2022) believes that cross-border e-commerce has become a new way to carry out business activities internationally due to its global and intangible characteristics. Buyers and sellers from different countries conduct trade in goods and services through cross-border e-commerce platforms, and the entire transaction process is completed through virtual digital means, and all parties conduct business activities in accordance with the platform's rules; Wang Feng (2023) believes that cross-border e-commerce combines cross-border trade and e-commerce on the basis of traditional trade, and the main body of business activities is not limited to within one country but extends to the world, continuously improving the efficiency of user transactions; Second, analyze the operation forms of cross-border e-commerce. Zhai Shike (2023) believes that cross-border e-commerce can be divided into comprehensive cross-border e-commerce and vertical cross-border e-commerce according to the nature of its business, and the two present different characteristics. For comprehensive cross-border e-commerce, its business shows diversified characteristics, and it also has relatively strong business traffic and a large user group, while vertical e-commerce is more specialized and focuses on in-depth research and sales in a certain field; Xu Mengke (2023) found through investigation and analysis that cross-border e-commerce can be divided into three platform types: B2B, B2C, and C2C according to different industrial models and transaction objects, including well-known e-commerce platforms such as Alibaba International Station, Global Sources, and Amazon; Finally, scholars have also analyzed the influencing factors and existing problems in the current development of cross-border e-commerce in China. Song Yang et al. (2022) sorted out the current factors affecting the development of cross-border e-commerce and found that four factors, namely talent, logistics, branding, and national policies, have a great impact on the development of cross-border e-commerce in China. If the cultivation of cross-border e-commerce talents is not timely, it will not meet the actual needs of the development of cross-border e-commerce. If the logistics system cannot be efficiently constructed, it will also affect the good operation of cross-border e-commerce; Fu Honghua (2022) found that due to the variety of current cross-border e-commerce platforms and the lack of unity in the transaction rules and platform specifications among various platforms, there are chaos and losses in transaction efficiency caused by information asymmetry in many cross-border transaction cases. Therefore, it is recommended that all departments establish industry norms for the operation of cross-border e-commerce platforms based on demand and severely regulate the irregular behaviors existing in cross-border transactions; Wu Zheng (2023) believes that the current main development bottleneck of cross-border e-commerce lies in cross-border e-commerce logistics. On the one hand, there are problems such as imperfect cross-border logistics infrastructure construction, low trade customs clearance efficiency, high cross-border logistics costs, and the lack of corresponding cross-border talents, and hopes that relevant departments can invest corresponding human, material, and financial resources to build an integrated information platform, strengthen customs clearance services, and build a cross-border service integration platform to empower the development of cross-border e-commerce.

As an important link in the development of the national economy, the commercial circulation industry plays a crucial role in boosting the high-quality development of China's economy. In the era of digital globalization, the commercial circulation industry is also constantly changing and transforming, and scholars have also explored the development of China's commercial circulation industry. At present, the domestic research on the development of the commercial circulation industry can be mainly divided into two aspects, namely, the development efficiency of the commercial circulation industry and the factors affecting the development of the commercial circulation industry. On the one hand, it is the research on the efficiency of the commercial circulation industry. Liu Miaomiao (2022) empirically studied the efficiency of China's commercial circulation industry by means of data envelopment analysis and total factor productivity index method, and found that generally speaking, the development efficiency of China's commercial circulation industry is relatively low. After comparing the development efficiency of the commercial circulation industry in the east and west, it is found that there are significant differences between regions, hoping that the country can continuously improve science and technology to drive the development of China's commercial circulation industry; Sheng Bojun (2022) measured the development efficiency of China's commercial circulation industry through a factor analysis model and found that the efficiency of China's commercial circulation industry needs to be further improved at present. Each enterprise

in the commercial circulation industrial chain needs to strengthen linkages, build a platform for communicating information among enterprises, and strive to eliminate information asymmetry in commercial development, so as to improve the overall development efficiency. On the other hand, it is the theoretical and empirical analysis of the influencing factors of the development of the commercial circulation industry. Cao Dongce (2022) believes that market segmentation can promote the overall development level of the commercial circulation industry by setting market entry barriers, increasing local industry policy support, and enhancing technical support. At the same time, the development of e-commerce can also improve the development level of the commercial circulation industry by accelerating technological progress, promoting innovation in circulation models, expanding the scale and space of the consumer market; Wang Ningning (2022) empirically analyzed and found that the level of urbanization, the level of opening up, the level of scientific and technological development, and even the development level of the Internet and e-commerce can all affect the development of China's commercial circulation industry to a certain extent. Li Li et al. (2023) constructed a spatial Durbin model to empirically test the impact of outward foreign direct investment and economic policy changes on the development of China's commercial circulation industry, and found that China's outward foreign direct investment can have a significant promoting effect on the development of China's commercial circulation industry both in terms of development scale and quality, while the uncertainty of economic policies has a negative impact on the development of the commercial circulation industry. Therefore, in this context, it is considered that the country should increase the level of foreign investment to minimize the negative impact of the uncertainty of economic policies on the development of China's commercial circulation industry.

To sum up, scholars have conducted multi-faceted and diverse studies on the development of cross-border e-commerce and the commercial circulation industry respectively. However, whether in terms of theory or empirical research, there is still a lack of research that incorporates these two aspects into a unified analytical framework. As a product of the rapid development of the digital economy, cross-border e-commerce may have an inevitable connection with promoting the development of the commercial circulation industry. Therefore, this paper attempts to analyze how cross-border e-commerce affects the development of China's commercial circulation industry from both theoretical and empirical dimensions, contribute a new research perspective to the existing research system, and provide theoretical basis and practical reference for promoting the high-quality development of China's commercial circulation industry.

3. THEORETICAL ANALYSIS

Information technology is the foundation of the development of cross-border e-commerce. The impact of cross-border e-commerce on the development of the commercial circulation industry mainly comes from three aspects: forming a new trade model, reducing the transportation cost of goods, and improving the level of supporting facilities. Taking the opportunity of joining the WTO, China has actively connected with international standards by continuously improving institutional construction, optimizing the business operation mode of enterprises, and creating a good business environment. In the process of promoting the high-quality development of China's economy, it has continuously optimized the development environment of cross-border e-commerce, actively optimized the industrial structure, and continuously improved the level of logistics distribution services, thus promoting the integration of the commercial circulation industry with the international community.

3.1 Formation of a New Trade Model

The traditional trade method involves an export commodity passing through domestic producers, exporters, going through customs procedures, and finally being transported to foreign importers, who then resell it to local market wholesalers and retailers. From production to the ultimate consumer, it has a long sales chain. The rise of cross-border e-commerce has not only changed the traditional foreign trade form, making foreign trade develop towards the direction of "small and beautiful", but also forced changes in China's commercial circulation industry. Its changes mainly include: First, it streamlines the trade circulation links. Cross-border e-commerce can directly connect domestic producers and overseas end consumers, providing them with products and services, shortening the sales chain, which poses challenges to the current efficiency of China's commercial circulation. Second, due to the reduction of intermediate circulation links, exporters can have a higher profit margin, which attracts more export enterprises to join the cross-border e-commerce industry, and correspondingly expands the scale of China's commercial circulation industry.

3.2 Reduction of Commodity Transportation Costs

Due to factors such as distance and relevant policies of the destination country, various forms of costs often occur in traditional foreign trade. Taking the node where the transaction occurs as the boundary, transaction costs can be divided into pre-event costs, intermediate costs, and post-event costs. Pre-event costs refer to the search, promotion, and other costs incurred by both the exporter and the importer before the start of the transaction. The establishment of the "cross-border e-commerce" platform enables buyers and sellers to search for target commodities through the platform, thus reducing the upfront search costs of end consumers. Intermediate costs refer to the costs incurred during the transaction process, mainly referring to the coordination costs brought about by information asymmetry between the buyer and the seller. The establishment of the cross-border e-commerce platform facilitates the communication between the buyer and the seller, allowing consumers to fully understand commodity information and reducing the coordination costs brought about by information asymmetry. Post-event costs are incurred in the transportation, customs clearance, and other links. Compared with the traditional trade model, cross-border e-commerce reduces the multi-level relationships in trade and reduces a relatively large amount of post-event costs. At the same time, the development of cross-border e-commerce has also streamlined the processes of various links such as transportation and customs clearance, resulting in a reduction in post-event costs.

3.3 Improving the Level of Supporting Facilities

The development of cross-border e-commerce will also correspondingly drive the development of related supporting facilities for the commercial and trade circulation industry, and the connection between cross-border e-commerce, commercial and trade circulation enterprises, and financial institutions has become closer. As a credit guarantee platform, the cross-border e-commerce platform provides a cooperation platform for commercial and trade circulation enterprises, the fund demanders, and financial institutions, the fund providers. Relying on cross-border e-commerce, the trend of the commercial and trade circulation industry accelerating the layout of the financial industry has become increasingly obvious. Cross-border e-commerce has also made financing channels more diverse and has had a greater impact on traditional financial institutions. In addition, in terms of talent cultivation, the problem of the shortage of "cross-border e-commerce" professionals can be solved through methods such as establishing cross-border e-commerce colleges and "school-enterprise cooperation". The accumulation of human capital in cross-border e-commerce can enable foreign trade enterprises to better utilize cross-border e-commerce platforms for transactions, thus promoting the development of foreign trade enterprises.

4. EMPIRICAL RESEARCH

4.1 Data Description and Variable Selection

This paper uses provincial panel data from 2014 to 2021 to empirically verify the impact of the development of cross-border e-commerce on China's commercial circulation industry. Given limited human, material, and financial resources, the sample data for the empirical analysis in this paper does not include Hong Kong, Macao, Taiwan regions and Tibet Autonomous Region. The data used in the empirical analysis are all calculated and sorted by the author. The original data comes from 《China Statistical Yearbook》, 《China Science and Technology Statistical Yearbook》, 《China Trade and Foreign Economic Statistics Yearbook》, 《China Population Statistical Yearbook》 and the statistical bulletins of each province. For some missing data, the interpolation method is used to fill them. The core explanatory variable in this paper is "cross-border e-commerce", and the core explained variable is "the development of commercial circulation industry". For the measurement of "cross-border e-commerce", this paper follows the method of Wang Tian (2023) and establishes an evaluation index system for cross-border e-commerce. Mainly, the development level of cross-border e-commerce is divided into two aspects. One is the development of cross-border business, and the other is cross-border basic services. Then, the entropy weight method is used to assign weights to each index for calculation. The measurement of the core explained variable is represented by the total output value of the national commercial circulation industry. There are a total of 5 control variables in the empirical analysis of this paper, namely the level of urbanization development, digital inclusive finance development, education level, regional economic development level, and railway density. The detailed variable descriptions are shown in Table 1.

Table 1: Variable Selection and Explanation

	Name	First-level Indicator	Second-level Indicator
Explained Variable	Development of the Commercial Circulation Industry	Total Output Value of the National Commercial Circulation Industry	
Explanatory	Development of Cross-border E-	Development of Cross-	Number of Cross-border E-commerce

Variable	commerce	border Business	Enterprises	
			Cross-border E-commerce Employees	Cross-border E-commerce Retail Sales
Control Variable	Level of Urbanization Development	/	Number of Internet Broadband Access Ports	
			Number of Domain Names	
			Number of China-Europe Freight Train Services	
			Number of Free Trade Zones	
			Number of Comprehensive Bonded Areas	
			/	
			/	
Control Variable	Development of Digital Inclusive Finance	/	/	
			/	
			/	
			/	
			/	
Control Variable	Educational Level	/	/	
			/	
Control Variable	Regional Economic Development Level	/	/	
			/	
Control Variable	Railway Density	/	/	
			/	

4.2 Model Specification

The econometric model for the empirical analysis in this paper is established as follows:

$$CI_{it} = c + \alpha CBEC_{it} + \beta X_{it} + \mu_{it}$$

Among them, CI_{it} represents the development of the commercial circulation industry, $CBEC_{it}$ represents the development of cross-border e-commerce, i and t represent the province and year respectively; X_{it} incorporates the control variables used in the empirical analysis of this paper, including the education level, regional economic development level, urbanization development level, railway density, and digital inclusive finance development of each province. After a series of econometric model screening, this paper finally selects the fixed-effect model, controls the time-fixed effect and individual-fixed effect respectively, and uses cluster-robust standard errors to make the empirical results of this paper more reliable.

4.3 Descriptive Statistics

Before conducting the empirical analysis, a preliminary descriptive analysis of the variables used in this paper is carried out, and the results of the analysis are shown in Table 2.

Table 2: Descriptive Statistics of Variables

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
Development of the Commercial Circulation Industry (CI)	240	1.303	0.927	0.14	3.95
Development of Cross-border E-commerce (CBEC)	240	2.097	0.749	0.18	3.912
Regional Economic Development Level	240	9.979	0.851	7.742	11.731
Level of Urbanization Development	240	61.534	11.141	40.24	89.3
Development of Digital Inclusive Finance	240	280.998	68.117	145.93	458.97
Educational Level	240	7.901	0.268	7.107	8.6
Railway Density	240	0.029	0.02	0.003	0.10

4.4 Baseline Regression Analysis

Table 3 presents the regression results of the impact of the development of cross-border e-commerce on the development of the commercial circulation industry. Column (1) shows the impact of the development of cross-border e-commerce on the development of the commercial circulation industry before adding control variables. From the results, it can be seen that the development of cross-border e-commerce can have a positive and significant impact on the development of China's commercial circulation industry. That is to say, with the development of cross-border e-commerce, China's commercial circulation industry can also develop well. Column (2) shows the results after adding control variables. It can be seen that cross-border e-commerce can still positively improve the development level of China's commercial circulation industry. Among them, the two control variables of urbanization level and railway density both have a positive promoting effect on the development of China's commercial circulation industry. On the one hand, the higher the urbanization level, the more developed the commercial circulation industry is, and the stronger the ability to accept new things. The continuous and stable development of the commercial circulation industry requires strong economic strength as a support. At the same time, in areas with a relatively high level of urbanization development, there are often more complete supply chain systems, which provide good logistics conditions for the development of cross-border e-commerce, thus playing a role in promoting the development of the entire commercial circulation industry. In addition, the higher the railway density, the faster the turnover speed of goods in circulation. Therefore, these variables have promoted the development of the commercial circulation industry to a certain extent.

4.5 Heterogeneity Analysis

This paper mainly analyzes the impact of cross-border e-commerce development on the commercial circulation industry from different regions, which are divided into the eastern region, the central region and the western region. Regression analysis is carried out for different regions respectively. The empirical results are shown in Table 4. The development of cross-border e-commerce in the eastern region has a positive and significant promoting effect on the development level of China's commercial circulation industry. The railway density and the level of urbanization development can also positively and actively promote the development of the commercial circulation industry. Compared with the eastern region, cross-border e-commerce in the central region has a slightly significant promoting effect on the development of the commercial circulation industry, while the development of cross-border e-commerce in the western region has not had a significant impact on the development of the commercial circulation industry. The possible reason is that the western region is restricted by various economic, geographical, policy and other factors, and the development level of cross-border e-commerce itself is still relatively low. Therefore, the development of cross-border e-commerce in this region has not had an impact on the development of the commercial circulation industry.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the provincial panel data from 2014 to 2021, this paper empirically analyzed the impact of the development of cross-border e-commerce on China's commercial circulation industry using a fixed-effects model. Finally, it was found that: First, the development of cross-border e-commerce has promoted the transformation and upgrading of China's commercial circulation industry; Second, the heterogeneity analysis shows that the cross-border development in the eastern and central regions has a significant positive impact on the development of the commercial circulation industry, while the development of cross-border e-commerce in the western region has not had a significant impact on the development of the commercial circulation industry.

5.2 Policy Recommendations

1) Strengthen the policy guidance for cross-border e-commerce and increase the intensity of relevant policy support. First, the government should improve relevant policies, strengthen the support for the cross-border e-commerce industry, and provide a good policy orientation for the development of the commercial and trade circulation industry. All regions and departments should attach importance to the statistical work of cross-border e-commerce, perform their respective duties, and constructing and implementing a complete cross-border e-commerce statistical work is of great significance for monitoring and tracking the positive development of this industry, so as to facilitate timely adjustment of relevant strategies and provide data support for studying the development of the cross-border e-commerce industry. Second, improve the policies for cross-border e-commerce comprehensive pilot zones, encourage each region to give full play to its own advantages, and build comprehensive pilot zones with three characteristics: comprehensive, distinctive, and professional. In the construction of comprehensive pilot zones, increase policy support, improve customs clearance efficiency, enhance customs clearance convenience, and create projects with regional characteristics to improve the investment environment of cross-border e-commerce enterprises. At present, China has established 165 cross-border e-commerce comprehensive pilot zones, and initially formed a spatial pattern of full coverage of comprehensive pilot zones on the surface. In future development, it is necessary to increase support, tax incentives for comprehensive pilot zones, and policy innovation for comprehensive pilot zones. Third, continuously optimize the cross-border e-commerce customs clearance method, improve the customs clearance efficiency of cross-border e-commerce, and enhance service quality. Continuously advocate paperless customs clearance, continuously promote alignment with international standards, improve the comprehensive service ability of the "single window", and make "one-time declaration" possible.

2) Optimize the business operation mode of commercial and trade circulation enterprises and enhance their transformation and upgrading capabilities. First, improve the management mode of commercial and trade circulation enterprises, innovate in digital application and business operation mode, increase the development momentum of commercial and trade circulation enterprises, optimize the operation mode of commercial and trade circulation enterprises, and pay attention to improving the internal management and informatization of commercial and trade circulation enterprises, so as to promote the transformation and upgrading of commercial and trade circulation enterprises. Second, enhance the operation and management ability of commercial and trade circulation

enterprises and improve their business conditions. In the process of the transformation and upgrading of China's commercial and trade circulation industry, the enterprise operation and management mode should be further improved to promote the transformation of the circulation industry to modernization. Third, use digital technology to improve the operation mode of China's commercial and trade circulation enterprises. For China's foreign trade enterprises, to improve their international competitiveness, they must start from improving their own operation level. In addition, use modern information technology to organically integrate the traditional commercial and trade circulation industry and modern information technology, enhance the management and operation efficiency of the commercial and trade circulation industry, and at the same time enhance the capabilities of commercial and trade circulation enterprises in technological innovation, marketing, after-sales service, etc.

Table 3: Regression Results of the Impact of Cross-border E-commerce Development on the Development of the Commercial and Trade Circulation Industry

	(1)	(2)
	Development of the commercial circulation industry	Development of the commercial circulation industry
Development of cross-border e-commerce	0.609** (0.016)	0.408** (0.018)
Level of regional economic development		0.035 (0.173)
Level of urbanization development		0.054*** (0.013)
Development of digital inclusive finance		0.002 (0.002)
Educational level		-0.097 (0.266)
Railway density		12.824* (6.601)
Constant term	0.026 (0.757)	4.056* (2.087)
Individual fixed effects	YES	YES
Time fixed effects	YES	YES
Observations	240	240
Goodness of fit	0.986	0.990

Note: The values in parentheses are clustered standard errors. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively. The same applies hereinafter.

Table 4: Heterogeneity Analysis of the Development of Cross-border E-commerce on the Development of the Commercial and Trade Circulation Industry

	(1)	(2)	(3)
	East	Central	West
Cross-border e-commerce development	0.22** (0.259)	0.751* (0.328)	0.074 (0.109)
Regional economic development level	0.068 (0.275)	0.077 (0.301)	0.307*** (0.093)
Urbanization development level	0.035** (0.253)	0.045* (0.032)	0.006 (0.019)
Digital inclusive finance development	0.01 (0.003)	0.004 (0.003)	0.003 (0.002)
Educational level	1.279 (1.025)	0.544 (0.343)	0.032 (0.087)
Railway density	4.236** (2.744)	2.902* (2.665)	7.082 (7.12)
Constant term	14.865* (8.043)	-.775 (2.388)	-2.057 (1.666)
Observations	80	48	88
Goodness of fit	0.974	0.98	0.978

3) Improve the technological level and optimize the industrial structure. First, we should vigorously promote the "Internet + Commerce and Circulation Industry" project to accelerate the digital transformation and upgrading of the commerce and circulation industry. This project can not only promote the supply-side structural reform of China's commerce and circulation industry but also facilitate the application of new technologies, innovation in management models, and the emergence of new business forms within the commerce and circulation industry. Second, we should strengthen the connection with production and service institutions. By using modern information and communication technologies, we can promote the integration of cross-border e-commerce sales channels and the manufacturing industry, effectively enhance the market competitiveness of the manufacturing

industry, and strengthen its development momentum. Third, we should drive the digital transformation of the commerce and circulation industry, reduce transaction costs, optimize the commodity circulation mode, and improve the efficiency and quality of commodity circulation. Establishing a digital cross-border e-commerce logistics system can not only promote cooperation and communication between domestic and foreign commodities but also further promote the digital transformation of China's regional commerce and circulation industry and the coordinated development of circulation systems.

4) Accelerate industrial restructuring and promote economic development. Traditional commercial and circulation enterprises are facing great pressure to transform and upgrade, and most of them still remain at the low end of the value chain. In the cross-border e-commerce industry, although a large number of companies have emerged, the operating scale of these companies is relatively small, and they have not formed strong market competitiveness. Therefore, we need to strengthen the scientific and technological innovation of commerce and circulation enterprises, cultivate a group of modern circulation enterprises with international competitiveness, promote supply chain innovation, and achieve the integration of the commerce and circulation industry, digital finance, and digital technologies. Second, we should promote the internationalization of commercial circulation, support domestic enterprises in creating their own brands, optimize the international supply chain, vigorously develop cross-border e-commerce, and achieve the operation mode of "buy globally and sell globally" to improve the resource allocation ability of China's products globally.

REFERENCES

- [1] Ma Yupeng. Problems and Countermeasures of China's Cross-border E-commerce Platforms under the Construction of Digital Economy [J]. *Economic Research Guide*, 2022 (4)
- [2] Wang Feng. Research on the Optimization of the Business Model of Cross-border E-commerce Platforms [D]. Bengbu: Anhui University of Finance and Economics, 2023
- [3] Zhai Shike. Research on the Business Model of Vertical Cross-border E-commerce [D]. Changchun: Jilin University, 2023
- [4] Xu Mengke. In-depth Research on the Development of Cross-border E-commerce Platform Enterprises Empowered by Digital Business [D]. Changchun: Jilin University, 2023
- [5] Fu Honghua. Research on the Problems and Paths of the Development of China's Cross-border E-commerce Platforms [J]. *Marketing World*, 2022 (19)
- [6] Wu Zheng. Exploration of the Dilemma and Optimization Path of Sino-Russian Cross-border E-commerce Logistics Cooperation [J]. *Journal of Taiyuan Urban Vocational College*, 2023 (9)
- [7] Li Shuo, Song Yang. Research Review on the Influencing Factors of the Development of China's Cross-border E-commerce [J]. *Reform & Openning*, 2022 (16)
- [8] Wang Ningning. Research on the Influence Mechanism of the Development Level of Digital Technology on the Development of the Commercial Circulation Industry [D]. Shijiazhuang: Hebei University of Economics and Business, 2022
- [9] Liu Miaomiao. Research on the Efficiency of China's Commercial Circulation [D]. Harbin: Harbin University of Commerce, 2022
- [10] Cao Dongee. Research on Market Segmentation, E-commerce and the Development of the Commercial Circulation Industry [D]. Shijiazhuang: Hebei University of Economics and Business, 2022
- [11] Sheng Bojun. Research on the Optimization of China's Commercial Circulation from the Perspective of Efficiency [D]. Harbin: Harbin University of Commerce, 2020
- [12] Wang Shan. Thoughts on the Transformation and Upgrading of the Commercial Circulation Industry under the Background of the Development of Cross-border E-commerce [J]. *Industrial Innovation Research*, 2023 (15)
- [13] Zhang Xiaoyan, Li Li. The Impact of FDI and Economic Policy Changes on the High-quality Development of the Commercial Circulation Industry [J]. *Journal of Commercial Economics*, 2023 (18)
- [14] Wang Tian. The Impact of Digital Industrialization and Cross-border E-commerce Development on Regional Economic Resilience [J]. *Journal of Commercial Economics*, 2023 (16)