# Research on the Long-term Mechanism of Cross-border E-commerce Development between China and Poland

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**Abstract:** As a strategic emerging industry, cross-border e-commerce promotes the development of "One Belt, One Road" cross-border e-commerce, which will help China to gain a voice on the international economic stage, reshape the world's position, and at the same time help advancing our country's industrial transformation, eliminating overcapacity and improving the international competitiveness of enterprises. China-Poland's cross-border e-commerce has developed rapidly, but there is still a certain gap with the development of trade in goods. It faces low efficiency of information resource sharing, cross-border e-commerce "software" still needs to be upgraded and cross-border e-commerce laws and regulations are insufficient. We need to establish and improve the cross-border logistics network system, improve the level of "Internet + software" construction, and at the same time improve the laws and regulations of cross-border e-commerce to promote the rapid development of China-Poland cross-border e-commerce.

# 1. Introduction

In recent years, with the continuous advancement of the "Internet +" trend and the introduction of the "One Belt, One Road" initiative, cross-border e-commerce has increasingly become the focus of development in various countries. It can reduce transaction costs, reduce transaction links and increase the traditional advantages of employment, and meanwhile has the emerging advantages of enhancing corporate reputation, promoting corporate transformation and upgrading, and stimulating corporate innovation spirit. Some experts pointed out that cross-border e-commerce is a strategic emerging industry that China is most likely to catch up with European and American countries.

# 2. Cross-border E-Commerce Definition and Literature Review

# 2.1 The Meaning of Cross-border E-Commerce

Cross-border e-commerce is a new concept derived from e-commerce. It refers to an international trade activity in which trade entities belonging to different customs borders complete transactions, make payments, and complete goods distribution through e-commerce network platforms. This shows that, Cross-border e-commerce is not only a business model but also a customs clearance model.

# 2.2 The Model of Cross-border E-commerce

Our country's cross-border e-commerce is mainly divided into two trade modes, B2B (business to business) and B2C (business to consumer). Among them, the B2B model means that enterprises use e-commerce to release information and advertisements, and their trade and customs clearance are mainly done offline, which is still a traditional method of trade and has been included in the national general trade statistics. The B2C model refers to companies directly facing foreign consumers, mainly selling personal consumer goods.

# 2.3 Literature Review of Cross-border E-commerce

# 2.3.1 Domestic Research on Cross-border E-commerce

Li Jing (2011) believes that China's weak informatization foundation will affect the further development of cross-border e-commerce.[1] Based on the compilation of the statistical yearbook, Yang Jijiang (2013) pointed out that the government has provided a good legal and policy-oriented environment for the development of cross-border e-commerce[2]; Zhao Zhitian, Yang Jianzheng (2014) believes that any emerging things will have a lack of resources in the early stages of development, and require government policy support.[3]

#### 2.3.2 Foreign Research on Cross-border E-commerce

Epstein (2005) summarized the main influencing factors of cross-border e-commerce on the basis of previous studies [4]; Sherah Kurnia et al. (2009) took Malaysian SMEs as the research object, and believed that industry foundation, national policy environment and organizational readiness were the most critical factors affecting cross-border e-commerce.[5]

In summary, domestic and foreign scholars' researches on cross-border e-commerce mainly focus on influencing factors, such as e-commerce platforms, and cross-border e-commerce influencing factors in different countries.[6] However, no scholars have studied the long-term mechanism of development of cross-border e-commerce in China and Poland. Therefore, this article mainly draws on the background of the accelerated implementation of the "Belt and Road" initiative to conduct research on cross-border e-commerce in China and Poland.

### 3. Development Status of Sino-polish Cross-border E-commerce

### 3.1 Status Quo of China-Poland Trade

### 3.1.1 Total Trade Volume between China and Poland

China is the largest economy in Asia, while Poland is one of the largest economies in Eastern Europe. It is located in the center of Europe and has an excellent geographical location. It also has cheap labor, a high-quality population, strong innovation capabilities and vast domestic market. In the context of the slow recovery of the world economy and the "Belt and Road" initiative , the trade cooperation between China and Poland is particularly important.[7]

With the rapid development of China's economy, China's total exports to Poland have also shown a rising trend, while total imports have also increased slightly (see Figure 1). However, as China is the world's second largest economy and the "world factory", its total exports to Poland are much greater than its total imports. China has a huge trade surplus in foreign trade with Poland, especially since Poland joined the European Union in 2003. After that, the growth rate of China's export trade with Poland increased significantly (see Figure 2).

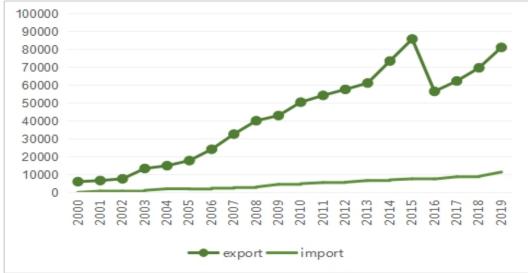
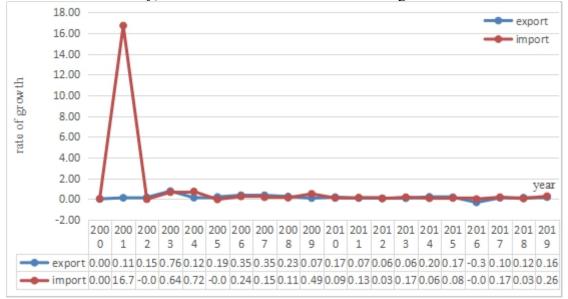
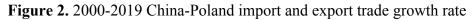


Figure 1. Total import and export volume between China and Poland from 2000 to 2019 Source: Polish Statistics Office

In terms of total imports, Poland is China's largest trading partner in Central and Eastern Europe, and Poland's total imports from China are much higher than its total exports. In this context, the mutual benefit relationship between the two parties has become closer. As shown in Table 1, in 2007, China became Poland's third largest source of imports for the first time. However, since 2017, China's status in the source country of Polish imports has begun to decline. Until 2019, China is not among the top three sources of Polish imports, and the top three sources of Polish imports have remained the same as Germany, the United States and the United Kingdom.





Source: compiled based on data from the Polish Statistics Office

Table 1. Status of China in the source countries of Polish imports from 2007 to 2019

Source: Statistical Office of Poland
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year	position	proportion(%)
2007	3	7.1
2008	3	8.1
2009	2	9.3
2010	3	9.4
2011	3	8.7
2012	3	8.9
2013	3	9.3
2014	2	10.4
2015	2	11.6
2016	2	12
2017	-	-
2018	-	-
2019	-	-
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and

According to a survey by KPMG accounting firm, in 2016, the export volume of Polish agricultural and food products hit a record high, reaching 24.1 billion euros. Among them, exported agricultural products accounted for 40% of total output in 2016 and 13% of total exports. Since 2010, the export surplus of Polish agricultural products has increased by nearly three times, and sales have increased by nearly 80%. More than 80% of Poland's agricultural and food products are exported to EU countries, while other non-EU largest importers are: the United States, Russia, Belarus, Saudi Arabia and Ukraine. According to the relevant data of the Polish Statistics Office,

Poland's trading partners are mainly developed countries.

Poland is the first European country to establish diplomatic relations with China. In recent years, as the common interests of both parties and the demand for win-win cooperation have increased, especially under the promotion of policies such as "16+1 cooperation", "One Belt One Road" and China-Europe Express, the economic and trade cooperation between the two sides has continued to deepen.

### 3.2 Current Status of China-poland Cross-border E-commerce

Poland has a growing economy and many Internet-savvy consumers, which provides a good choice for sellers who want to enter the EU e-commerce market. Poland is the sixth most populous country in Europe, with a population of approximately 38 million. It is estimated that the country's per capita GDP is approximately US\$13,454, and this figure will increase to approximately US\$16,734 by 2022. Currently, Poland has about 20 million e-commerce users, which is expected to increase to 21 million by 2022. People of all ages in Poland use the Internet very frequently. Among people aged 16 to 24, 90% use the Internet every day. This proportion is 92% and 81% among people aged 25 to 34 and 35 to 44, and 45 to 54 years old, the age group is 79%. Among people over 55, 65% use the Internet every day. By 2022, the Internet penetration rate in Poland is expected to increase from the current 66.9% to approximately 69.2%. Most online buyers still choose to use laptops or desktop computers for shopping, and this currently accounts for 95%. The purchases through smartphones and other mobile devices are relatively small.

Currently, Poland is China's largest trading partner in Central and Eastern Europe, and China is Poland's largest trading partner in Asia. The Polish e-commerce market has considerable potential and is one of the fastest-growing e-commerce markets in Europe. The Internet penetration rate in Poland is as high as 65%. More than 38% of Internet users make online purchases at least several times a month, and the number is as high as 12.6 million. The keywords most frequently searched by Poles when shopping online are cosmetics, household products, gardening products, children's products, and clothing, and these products are China's dominant products. According to the forecast of the market research organization PMR, between 2016 and 2019, the average annual growth rate of the Polish e-commerce market can reach 15%, and the Sino-Polish cross-border e-commerce has a good development prospect.

# 4. The Development Dilemma of Sino-Polish Cross-border E-commerce

#### 4.1 Inefficient Sharing of Information Resources

Cross-border transportation involves both domestic and foreign links. With the development of cross-border e-commerce, our country's domestic logistics informatization level has been greatly improved, but the overseas logistics informatization level is seriously lagging behind, and the linkage between domestic and foreign logistics and distribution information is not timely and perfect.[8] Different from traditional logistics enterprises, both parties of cross-border e-commerce need to reach transactions through information means. Therefore, higher requirements are put forward on the level of logistics informatization. At the same time, information technology integration and optimal allocation of logistics service resources are also required.

# 4.2 Cross-border E-commerce "Software" Needs to be Upgraded

First, the lack of international cooperation in cross-border e-commerce. With the development of cross-border e-commerce, various multinational payment platforms have established their own payment networks in various countries. Second, the credit mechanism lacks uniformity. Differences in economy, politics, culture, customs and other aspects have greatly increased the credit risk undertaken by commercial banks. Some agreements cannot be implemented well, and dishonest and irregular behaviors often occur. Third, the risks faced by transnational cooperation have increased. Due to differences in political systems and economic policies, countries will face many uncertainties in foreign cooperation. The fourth is the lack of professional talents.

#### 4.3 Cross-border E-commerce Laws and Regulations are Not Perfect

First, laws and regulations have not yet been formed. At present, international conventions regulating cross-border e-commerce mainly include the "United Nations Model Law on Electronic Commerce" and the "United Nations Model Law on Electronic Signatures".[9] Second, it is more difficult to protect the rights and interests of transnational network economic entities in accordance with the law. Due to differences in relevant laws of various countries, such as dumping and monopoly in the course of trade, it is impossible to protect the rights and interests of enterprises; product quality defects and network security often cause consumers' legitimate rights and interests to be infringed, due to the complex and high cost of transnational litigation procedures.

#### 5. The Development Path of China-poland Cross-border E-commerce

#### 5.1 Establish and Improve A Cross-Border Logistics Network System

One is to introduce a supply chain management model. Supply chain management mainly involves several dimensions: capital flow, information flow and business flow.[10] The second is to strengthen logistics supervision. Overseas logistics management should strengthen information construction, improve the monitoring of logistics service process, ensure the quality and efficiency of warehousing services, and avoid problems such as "explosion of warehouses" caused by poor information communication. At the same time, it is necessary to make full use of the logistics service resources of the host country to develop overseas warehouse business and improve logistics efficiency. However, to strengthen the risk management of overseas warehouses, not all commodities are suitable for establishing overseas warehouses. Enterprises must make the right choice based on their actual conditions and comprehensively weigh returns and risks.

#### 5.2 Improve the Construction Level of "Internet + Software"

One is to improve the coordination mechanism for cross-border e-commerce. Cross-border ecommerce involves government, customs, taxation, inspection and quarantine and many departments. The second is to strengthen the construction of a comprehensive service platform for cross-border e-commerce. The third is to participate in the international cooperation of cross-border e-commerce. Actively participate in the negotiation and cooperation of international cross-border ecommerce rules. The fourth is to strengthen the training and introduction of cross-border ecommerce professionals. The government and various departments can combine the actual development of cross-border e-commerce, cultivate professional talents for cross-border ecommerce with focus and direction, and cultivate comprehensive talents who understand Polish and are familiar with various rules and regulations.

#### 5.3 Improve Laws and Regulations on Cross-border E-commerce

One is to strengthen legislation. Although the "E-Commerce Law" approved in 2018 has specific provisions for cross-border e-commerce, it still needs to be further refined, such as the rights and obligations of cross-border e-commerce transaction subjects, consumer rights protection, and coordination mechanism and network information security. Local governments can combine local reality and establish local laws and regulations within the scope of national legislation. The second is to improve the regulatory system. Introduce a regulatory system that matches the development of cross-border e-commerce, standardize cross-border e-commerce business, and achieve traceability, controllable process and accountability, and create a good legal environment for the development of cross-border e-commerce.

#### 6. Conclusion

As an emerging trade method, cross-border e-commerce can lead the "Belt and Road" to establish a new development model, and open up a trade model led by the Internet, changing the traditional economic development routine of relying solely on traditional trade. It not only has the traditional advantages of reducing transaction costs, reducing transaction links and increasing employment, but also has the emerging advantages of improving corporate reputation, promoting corporate transformation and upgrading, and stimulating corporate innovation spirit, injecting new vitality and impetus into the economic development of countries along the "Belt and Road". Promoting the development of "One Belt, One Road" cross-border e-commerce will help China to gain a voice on the international economic stage and reshape its position in the world.

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