

Study on the Influence of Cross-border E-commerce on China's High-tech Product Export Trade

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Abstract: In recent years, the global trade pattern has undergone profound changes, and cross-border e-commerce has flourished as a new trade mode. As the world's largest trading country in goods and the most dynamic digital economy, China has a strong momentum of cross-border e-commerce development and has become an important engine to promote high-quality foreign trade development, but at the same time, it also faces challenges such as intensifying international competition and increasing trade barriers. By summarizing the factors affecting the export trade of high-tech products, the difference between cross-border e-commerce and traditional trade, and the influence mechanism of cross-border e-commerce on the export trade of high-tech products, this paper finds that cross-border e-commerce plays an important role in the export field of China's high-tech products. It promotes the export of China's high-tech products, effectively promotes the product innovation of enterprises, enables products to enter the international market more smoothly, and promotes the process of Chinese economic globalization.

Keywords: Cross-border e-commerce, High-tech products, Export trade, Traditional trade, Influence mechanism

1. Introduction

In the current global economic downturn, cross-border e-commerce has shown a vigorous development trend and is expected to become an important driving force for the transformation and upgrading of China's international trade.

Cross-border e-commerce is a business model that relies on the Internet platform to achieve cross-border or cross-regional goods and services transactions. In this field, there are two main models: business-to-consumer(B2C) and business-to-business(B2B). In recent years, consumer-to-consumer(C2C) has also gradually emerged. From the perspective of development status, the industry has shown a good growth trend in many countries in the world, attracting domestic and foreign academic circles to carry out in-depth and systematic research on it.

At present, many scholars have pointed out the impact and reform of cross-border e-commerce on traditional trade methods. According to Abudurehman, cross-border e-commerce plays a crucial role in advancing economic globalisation[1]. Prieger J E also came to a similar conclusion. He believed that cross-border e-commerce could enable developing countries to enjoy Internet dividends and promote trade development [2].

However, these existing studies are not sufficient for in-depth studies on the export of high-tech products. Therefore, in this context, this paper will try to explore the mechanism of the impact of

cross-border e-commerce on the mechanism of export products, and reveal how cross-border e-commerce platforms change the export mode of traditional high-tech products. It aims to provide high-tech enterprises with an effective path to expand the international market through cross-border e-commerce, so as to enhance the international competitiveness of China's high-tech industry and promote the optimization and upgrading of foreign trade structure.

2. Literature review

2.1. Factors affecting the export trade of high-tech products

Based on the perspective of technological innovation path, technological innovation is divided into three ways: independent research and development, foreign introduction and domestic purchase. The research results show that independent research and development has a significant role in promoting the overall development of high-tech product export trade [3]. The effects of intellectual property protection, economic policy uncertainty and trade policy uncertainty of importing countries on China's high-tech exports are found to be different. In particular, stronger IP protection in importing countries would increase the type and price differentials of exports, but reduce the quantity differentials. Economic policy uncertainty can dampen the type and quantity of export differentials, while increasing price differentials. The uncertainty of trade policy has a negative impact on both the type and quantity differences of exports [4]. Seon analysis of South Korea's communication technology products found that technical trade barriers set by importing countries would inhibit the export of South Korea's high-tech industries, resulting in a decline in the export volume of its communication technology products in overseas markets. For developing countries, export capacity is closely related to its Internet penetration rate. The higher the Internet coverage rate, the stronger the export competitive advantage, and the quantity and quality of export commodities will also be improved; otherwise, it will be limited[5]. George also believes that Internet technology is conducive to expanding export margin, and the export growth of enterprises is mainly due to the strengthening of comparative advantages, so that their share in main export markets and the export proportion of core products have been significantly improved[6].

2.2. Cross-border e-commerce related research

From the perspective of development mode, cross-border e-commerce can be divided into platform logistics mode and cloud platform finance mode[7]. According to the different uses of platforms, cross-border e-commerce can also be subdivided into four types: domestic platforms, foreign platforms, foreign online stores and self-built platforms[8]. Wei Liping found that in the context of economic globalization, cross-border e-commerce platforms, with the help of digital technology, help export enterprises to build brand effect and further enhance their competitiveness in the international market[3].

Some scholars believe that cross-border e-commerce can reduce transaction costs from multiple dimensions and promote the better development of international trade. Lendle selected language, distance, border, laws and regulations, governance environment and transportation cost as the main variables, and the results showed that these factors had a smaller impact on the development of cross-border e-commerce than traditional foreign trade, but had a larger impact on language environment and transportation cost[9]. Gomez-Herrera E studied the impact of the geographical distance between two countries involved in trade on their cross-border e-commerce transactions. Compared with traditional trade, the cost of cross-border e-commerce is lower [10].

3. The impact of cross-border e-commerce on the export trade of high-tech products

3.1. Cost advantages of cross-border e-commerce for high-tech exporters

For China's high-tech products export enterprises, in terms of marketing costs, enterprises rely on cross-border e-commerce platforms, can promote and publicize products at a lower cost globally, accurately target consumer groups, and improve the efficiency of marketing activities. Specifically, through the use of social media advertising, digital marketing tools and other means, enterprises can directly reach overseas consumers on cross-border e-commerce platforms, without relying on costly traditional marketing channels such as overseas exhibitions or advertising agencies. In terms of logistics costs, the cross-border e-commerce platform integrates logistics information, enabling enterprises to flexibly choose logistics models and service providers according to the actual situation of the order, optimize the allocation of logistics resources, and reduce the logistics cost per unit of product. In addition, the online transaction function of the cross-border e-commerce platform simplifies the manual operation process, reduces the application of paper documents, and thus reduces the processing fees and management costs in the transaction process. The comprehensive reduction of these costs gives enterprises more flexibility in product pricing, so that enterprises can maintain the profit level at the same time, moderately reduce product prices to enhance market competitiveness, stimulate overseas market demand and promote the sustained growth of exports.

3.2. Market information access and utilization via cross-border e-commerce platforms

With the help of the platform, enterprises can instantly access rich international market information. For example, the comments and feedback left by consumers on the product page enable enterprises to quickly gain insight into the advantages and disadvantages of the product, and adjust the product design and production process accordingly to optimize product performance and quality. At the same time, enterprises can also monitor competitors' product pricing, promotion dynamics and new product launches through the platform, so as to respond quickly and develop more competitive market strategies. In addition, the modules such as industry news and technical exchange forums on the cross-border e-commerce platform have opened up a window for enterprises to observe the latest developments in the development of global high-tech industries, helping enterprises to grasp the trend of technological innovation, allocate research and development resources, and develop high-tech products that are more suitable for market demand.

3.3. Exchange rate risks faced by cross-border e-commerce in high-tech exports

However, the impact of cross-border e-commerce on international trade is not all positive, and there are still some uncertainties. For example, exchange rate fluctuations are an important financial risk for cross-border e-commerce enterprises, especially for profit-sensitive high-tech products (such as consumer electronics, semiconductors, and smart devices). Take the Chinese and American markets as an example, exchange rate changes may lead to shrinking corporate profits, ineffective pricing strategies, exchange losses may erode profits, and even affect long-term market competitiveness. Given the current uncertainty in the Federal Reserve's monetary policy and geopolitical tensions, managing exchange rate risks has become a key factor for success in cross-border e-commerce.

3.4. Future trends and policy support for cross-border e-commerce in high-tech exports

In the future, with the deep application of digital technologies (such as AI and blockchain) and the improvement of global e-commerce infrastructure, the digital transaction mode reduces the

intermediate links, and through the real-time data feedback of cross-border e-commerce, enterprises can more accurately grasp the demand of overseas markets, promote product innovation and customized production, while big data analysis optimizes the supply chain and precision marketing, and improves export efficiency. At the same time, the Chinese government continues to introduce policies to optimize cross-border e-commerce (such as comprehensive pilot zones, customs clearance facilitation, etc.) to provide a more efficient logistics, payment and tax environment for high-tech exports.

4. Suggestions

Enterprises should be committed to improving the quality and efficiency of research and development investment, strengthening the management process of research and development projects, and ensuring that research and development funds are effectively transformed into substantive technological innovation and product iteration and upgrading. In addition, they should strengthen collaboration with universities and scientific research institutions to accelerate the transformation of basic research results into commercial applications so as to improve the economic return on R&D investment. According to the demand of high-tech industry, higher education institutions need to timely adjust the course structure, strengthen the cultivation of professional skills and innovative thinking, build and optimize the lifelong learning mechanism, encourage in-service personnel to participate in continuing education, and comprehensively improve the quality of human capital.

At the government level, we should provide strong support for the development of high-tech enterprises through the implementation of tax incentives, financial subsidies and trade facilitation measures. We will reduce unnecessary administrative intervention and give full play to the decisive role of the market in resource allocation. Formulate and implement industrial policies, guide capital, technology and talents to converge in high-tech industries, promote the optimization and upgrading of industrial structure, promote the high-end and intelligent direction of manufacturing industry, and enhance its international competitiveness. Reduce the excessive dependence on the tertiary industry resources, promote the synergy between the service industry and the manufacturing industry, encourage the deep integration of the two, and drive the transformation and upgrading of the manufacturing industry with the help of the high value-added characteristics of the service industry.

In order to build new advantages in international trade, enterprises should be supported to strengthen brand building, enhance the international brand recognition and influence of China's high-tech products, and encourage enterprises to explore diversified international markets, so as to reduce excessive dependence on a single market and effectively disperse trade risks.

5. Conclusion

This study shows that cross-border e-commerce has significantly promoted the development of China's high-tech product export trade through a multi-dimensional path. The study found that cross-border e-commerce has a positive effect on the key factors affecting the export of high-tech products mainly through the following mechanisms. In terms of independent research and development, the real-time market data and consumer feedback provided by cross-border e-commerce platforms provide precise directions for enterprise product innovation and effectively improve research and development efficiency. Secondly, in dealing with trade uncertainties, the diversified market layout and digital transaction mode of cross-border e-commerce have significantly reduced the risk caused by fluctuations in the single market. In terms of technical barriers to trade, cross-border e-commerce compliance services and certification support help high-tech products enter the international market more smoothly.

Looking to the future, with the in-depth development of the digital economy, cross-border e-commerce will continue to promote the structural upgrading and value enhancement of China's high-tech product exports. It is suggested that the government further improve the cross-border e-commerce policy system, and enterprises need to strengthen digital capacity building to jointly grasp the development opportunities of global digital trade.

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