

Cross-border Electronic Commerce's Development Trend and Challenges in International Trade

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Abstract: This paper studies and analyzes the development trend and challenges of cross-border electronic commerce (CBEC) in international trade. Firstly, the paper introduces the definition and background of CBEC, and summarizes the rapid development of CBEC in the world. Secondly, the paper analyzes the development trend of CBEC, including the growth of consumer demand in emerging markets, the promotion of technological innovation, international cooperation and the formulation of standards. Then, the paper discusses the challenges faced by CBEC, including cross-border payment and settlement issues, cross-border tax and regulatory problems, cross-border logistics and supply chain difficulties, cross-border intellectual property protection issues, cross-border data security and privacy protection challenges. Finally, this paper draws a conclusion that CBEC industry has great development potential, but it also faces many challenges and problems. Only by fully recognizing the development trend and problems faced by the industry and taking effective measures to solve them can the sustainable development of the industry in CBEC be realized.

1. Introduction

With the rapid development of global economy and the continuous innovation of Internet technology, cross-border electronic commerce (CBEC) has become an important part of international trade. CBEC, that is, international trade activities conducted through the Internet, has changed the traditional trade mode and provided new opportunities for enterprises to expand the market, reduce transaction costs and improve efficiency. Behind this new trade form, there are both vigorous development trends and many challenges.

The development of CBEC presents a rapid trend [1]. With the rapid improvement of internet technology, CBEC has shown explosive growth, and its development process can be roughly divided into three stages. Nowadays, the number of comprehensive experimental zones in CBEC is increasing, the coverage is gradually expanding, and the import and export scale of CBEC is also growing. This development trend shows that CBEC is gradually becoming an important part of international trade, which has a far-reaching impact on the global trade pattern. The development of CBEC is not always smooth [2-3]. In international trade, CBEC faces many challenges. On the one hand, trade policy restrictions restrict the development of CBEC enterprises. Different countries have different regulations and policies on imported goods, and some countries even impose import quotas or impose high tariffs on certain goods, which increases the operating costs of CBEC enterprises and limits their development space [4]. On the other hand, the imperfection of laws and regulations has also brought difficulties to the operation and compliance of CBEC enterprises. Due to the particularity of CBEC, different countries have different regulatory standards, and the formulation of relevant laws and regulations is relatively lagging behind, which makes CBEC enterprises face greater legal risks in the operation process [5].

In order to better promote the development of CBEC, it is necessary to deeply study its development trend and challenges, and formulate corresponding policies and measures to deal with them. Based on the development history and present situation of CBEC, this paper analyzes its development trend and challenges in international trade, and puts forward corresponding countermeasures and suggestions, so as to provide useful reference for promoting the healthy

development of CBEC.

2. The development trend of CBEC

With the popularization of the Internet and the acceleration of the global digitalization process, the distance between consumers and enterprises gradually disappears, and the market boundary becomes blurred. CBEC makes it easier to access the global market and provides a broader development space for enterprises. With the rapid development of mobile Internet and intelligent technology, especially the popularity of smart phones, consumers can shop on mobile devices anytime and anywhere [6-7]. This convenient shopping experience has promoted the vigorous development of CBEC.

Table 1 shows the comparison between CBEC and the traditional trade mode in many aspects, from which we can see that CBEC has great advantages in some aspects, but it also faces some specific challenges.

Table 1 Comparison between CBEC and Traditional Trade Patterns

project	CBEC	Traditional trade mode
mode of trade	Cross-border sales and purchases on online trading platforms	Commodity exchange through traditional import and export trade channels
Trade scale	Global transactions can involve a large number of consumers and suppliers.	Mainly international trade, usually involving a small number of large transactions and large enterprises.
transaction cost	Relatively low, there is no need for additional fees such as middlemen, logistics and warehousing in traditional trade.	Higher, including logistics, warehousing, customs duties, taxes and other expenses.
Transaction speed	Real-time transactions can be realized, and consumers can buy and sell at any time and anywhere.	The transaction cycle is long, involving multiple links and procedures, and usually takes several days to several weeks.
Market access threshold	Relatively low, individuals and small businesses can also enter the international market through e-commerce platforms.	Higher, need to meet various import and export licenses, trade contracts, financial qualifications and other requirements.
Market expansion and brand building	Through the e-commerce platform, you can quickly enter the global market and carry out brand building and promotion.	It needs to invest a lot of resources and time in international market expansion and brand building, and the market seepage velocity is slow.
Adaptability and flexibility	It has strong adaptability and flexibility, and can be quickly adjusted according to market demand and trends.	Low, need to plan and arrange in advance, it is difficult to cope with market changes and competitive pressure.
Risk and safety	There are certain risks, such as network security risks and transaction disputes, but they can be avoided through technical means and policy protection.	The risk is low, but there are traditional trade risks such as market risk and policy risk.

Many countries and regions are gradually adjusting and optimizing cross-border trade policies, reducing trade barriers, simplifying customs procedures and speeding up customs clearance to promote the development of CBEC [8]. For example, some countries promote industry development by signing free trade agreements or introducing special CBEC policies. The development of CBEC

has spawned a global supply chain and logistics network, which makes it possible for goods to reach consumers quickly from the place of production. Logistics companies and e-commerce platforms constantly optimize logistics distribution systems, improve logistics efficiency, reduce logistics costs, and speed up the circulation of goods.

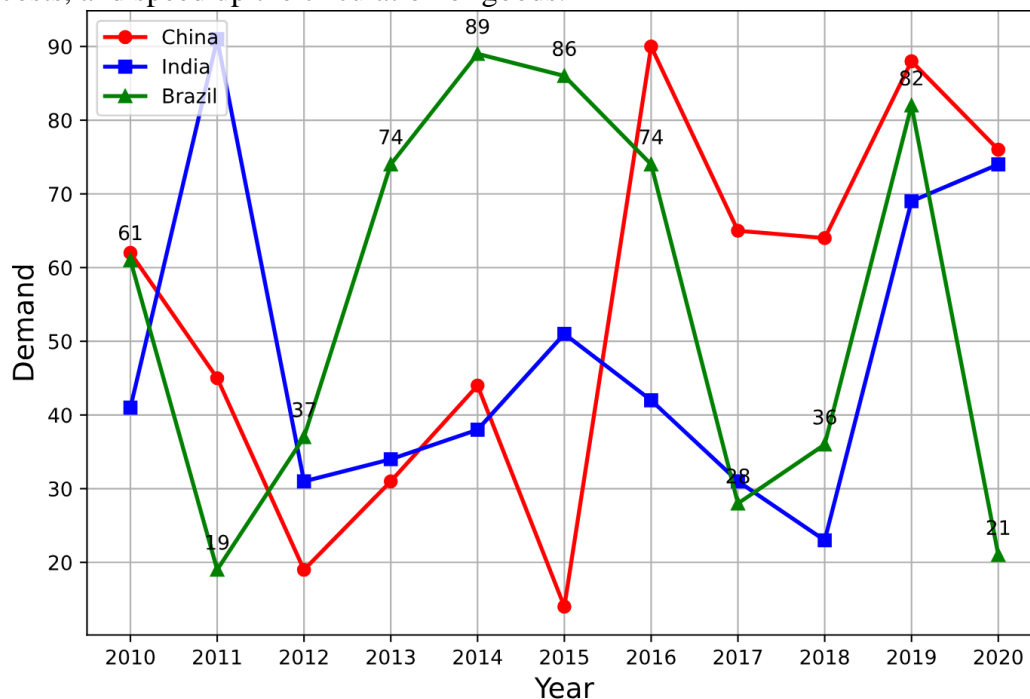


Figure 1 Cross-border shopping demand in emerging markets

Consumers in many emerging markets such as China, India, Brazil and other countries have a growing demand for cross-border shopping (Figure 1). The rise of these emerging markets has provided huge development opportunities for global CBEC, attracting more CBEC platforms and international brands to enter these markets.

3. CBEC faces challenges

3.1. Cross-border payment and settlement issues

In CBEC, currency transactions involving different countries and regions require currency conversion. Due to factors such as exchange rate fluctuations and fees charged by financial institutions, cross-border payment and settlement often bring higher currency conversion costs and increase transaction costs. There may be differences in payment systems and technical standards adopted by different countries and regions, resulting in insufficient interoperability of cross-border payment [9]. For example, the payment system in some countries may not support bank cards or payment applications in other countries, which brings payment difficulties to consumers and enterprises. Cross-border payment involves cross-border capital flow, and payment security and trust have become the focus of consumers and enterprises. Worried about the theft of payment information or disputes in the payment process may affect consumers' trust in CBEC and inhibit the development of CBEC.

The clearing cycle of cross-border payment is often long, especially for cross-border payment between different countries and regions, which needs to be cleared by multiple intermediaries and banks, resulting in the delay of payment arrival and affecting the efficiency and experience of transactions. There are differences in financial regulatory policies and payment compliance requirements in different countries and regions, and cross-border payment service providers need to abide by the laws and regulations of multiple jurisdictions, which increases operating costs and risks. At the same time, the uncertainty of cross-border payment compliance requirements also brings challenges to enterprises.

3.2. Cross-border tax and regulatory problems

There are differences in tax policies and regulations in different countries and regions, and the tax issues involved in CBEC platforms and cross-border transactions are very complicated. For example, sales involving digital goods and services often face the application of tax rules such as cross-border value-added tax and consumption tax, and the tax rates, collection targets and declaration procedures may be different, which increases the tax compliance burden of enterprises. CBEC involves laws and regulations of many countries and regions, and the regulatory system is relatively scattered and the regulatory responsibilities are unclear, resulting in gaps and gray areas in the supervision of CBEC activities. Different countries may have different regulatory methods, standards and strengths for CBEC, which brings uncertainty and risks to the operation of enterprises. CBEC involves tax collection and management in many countries and regions, and requires the exchange and sharing of cross-border tax information. However, the information exchange mechanism between tax agencies in different countries and regions may be imperfect, and there are obstacles in the acquisition and sharing of tax information, which leads to deficiencies and loopholes in tax supervision.

3.3. Difficulty of cross-border logistics and supply chain

Cross-border logistics involves the transportation of goods across national borders, which needs to go through border clearance and customs inspection. Customs regulations, inspection standards and procedures may be different in different countries and regions, and cross-border goods need complicated customs declaration, declaration and approval procedures, which increases logistics time and cost. Cross-border logistics needs to go through transportation links in many countries and regions, including land transportation, sea transportation, air transportation and other modes of transportation. Due to the high cost of international transportation, and the possible tariffs, import taxes, value-added tax and other taxes, the total cost of cross-border logistics is often high, which affects the operational efficiency and competitiveness of enterprises. Cross-border logistics involves many links and participants, and the logistics information transmission chain is long, which may lead to opaque information and difficult monitoring. It is difficult for enterprises to know the transportation status, location and progress of goods in real time, and it is difficult to effectively monitor the logistics process, which makes it difficult to control logistics risks.

The stability of cross-border logistics services is affected by various factors, including weather, traffic and policies. For example, the adjustment of customs policy, flight cancellation, freight strike and other emergencies may lead to the interruption or delay of logistics services, which will affect the timely delivery of goods and customer satisfaction. Cross-border supply chain involves many links and participants, including suppliers, manufacturers, logistics companies, customs and other roles. Managing cross-border supply chain needs to coordinate resources of all parties, optimize supply chain processes and reduce supply chain risks. However, due to the large number of participants and complex links, cross-border supply chain management is more difficult.

3.4. Cross-border intellectual property protection

The rise and development of CBEC platforms make it easier to spread infringing and pirated goods. In some countries and regions, there are a large number of cases of counterfeiting and selling fakes, and goods on CBEC platforms often have intellectual property rights infringement problems, which have brought serious economic losses and reputation damage to brand enterprises. Cross-border intellectual property infringement cases involve laws and regulations of many countries and regions, and the cost of safeguarding rights is high, and the procedures are cumbersome, which increases the difficulty of safeguarding rights. Brand enterprises need to defend their rights in different countries and regions, and it takes a lot of time, energy and money to deal with cross-border rights protection cases, and the effect of rights protection is difficult to guarantee [10].

In some countries and regions, the laws and regulations on intellectual property rights are not perfect and the judicial protection is insufficient, which leads to the failure to effectively crack

down on intellectual property infringement. In some countries, the enforcement effect of intellectual property laws is poor, and the judicial institutions are ineffective in handling cross-border intellectual property cases, which provides a certain legal space for infringement. There is a lack of effective cooperation mechanism and information exchange channels between intellectual property regulatory agencies and law enforcement departments in different countries and regions, and it is difficult to coordinate and cooperate with cross-border intellectual property protection. It is difficult for enterprises to obtain timely information and support in the process of cross-border intellectual property protection, which increases the uncertainty and risk of intellectual property protection. There are differences in intellectual property protection standards and identification standards in different countries and regions. It is difficult for enterprises to unify intellectual property protection standards in the process of cross-border market development, and there are loopholes and defects in intellectual property protection. At the same time, intellectual property protection systems in different countries and regions also have mutual recognition problems, and enterprises face difficulties in the process of cross-border rights protection.

3.5. Cross-border data security and privacy protection challenges

CBEC platforms and cross-border enterprises may need to cross the network environment of many countries and regions when transmitting data, and there are risks of leakage, tampering and hijacking during data transmission. Especially in the fields of cloud computing and big data analysis, the cross-border transmission of data is more likely to expose the business secrets of enterprises and the personal privacy of users. Different countries and regions have formulated their own data protection laws and privacy protection regulations, but these laws and regulations are different and have different standards. When conducting cross-border data exchange and data storage, enterprises need to abide by the data protection laws of many countries and regions at the same time, and face legal compliance risks. Some countries and regions have stipulated the regionalization requirements for data storage and processing, requiring enterprises to store user data in local servers or subject to local approval. Cross-border enterprises and CBEC platforms are facing the challenge of data storage location selection, and need to consider the requirements of laws and regulations and the actual situation of data security. Some countries and regions review and supervise cross-border data exchange, requiring enterprises to declare, approve or put on record in advance when transmitting cross-border data. These review and supervision measures increase the management cost and risk of cross-border data exchange of enterprises, which may affect the cross-border business operation of enterprises.

4. Ways to solve the challenges facing CBEC

4.1. Formulation and perfection of policies and regulations

The government has formulated regulatory policies for CBEC industry, clarified the business norms, responsibilities and compliance requirements of CBEC enterprises, and strengthened the supervision of CBEC platforms and cross-border transactions. By formulating cross-border payment and settlement policies, the cost of cross-border payment will be reduced and the convenience and security of cross-border payment will be improved. The government can promote the compliant development of cross-border payment institutions, strengthen the supervision and review of cross-border payment systems, standardize the market order of cross-border payment industries, and promote the trading activities of CBEC. The government can reduce the cost of cross-border payment and improve the convenience and security of cross-border payment by formulating cross-border payment and settlement policies. The government can promote the compliant development of cross-border payment institutions, strengthen the supervision and review of cross-border payment systems, standardize the market order of cross-border payment industries, and promote the trading activities of CBEC.

4.2. International cooperation and standard setting

International organizations, industry associations and CBEC enterprises can jointly formulate standards for CBEC industry, including product quality standards, e-commerce platform service standards, and consumer rights protection standards. These standards can be used as the industry norms of CBEC industry, promote the healthy development of CBEC market and improve the overall level of CBEC industry. International financial organizations, payment industry associations and cross-border payment institutions can jointly formulate standards for cross-border payment and settlement, including payment security standards, payment channel standards and payment settlement standards. These standards can improve the convenience and security of cross-border payment, reduce the cost of cross-border payment and promote the development of cross-border trade. International data security organizations, privacy protection agencies and cross-border enterprises can jointly formulate standards for cross-border data security and privacy protection, including data encryption standards, data storage standards and personal privacy protection standards. These standards can guarantee the security and privacy of cross-border data and enhance the trust and stability of cross-border data exchange.

4.3. Technical innovation and security guarantee

By adopting advanced encryption technology, sensitive data in CBEC platforms and cross-border payment systems are encrypted to ensure the security and privacy of data. End-to-end encryption technology is adopted to ensure that data is not tampered with or stolen during transmission and storage. Establish a cross-border supply chain management platform by using blockchain technology to realize real-time tracking and traceability of supply chain information. Through the decentralized characteristics of blockchain technology, the transparency and credibility of supply chain information are ensured, fraud and fraud in supply chain are reduced, and the safety and reliability of supply chain are improved. The intelligent risk identification system is developed by using artificial intelligence technology to monitor and analyze CBEC transactions and cross-border payment behaviors in real time, and identify possible security risks and fraud. Through machine learning and data mining technology, the recognition accuracy of abnormal transactions and risky transactions is improved, and the security of cross-border transactions is guaranteed. Security audit technology is used to conduct security audit and vulnerability scanning on CBEC platforms and cross-border payment systems, so as to find out the security risks and vulnerabilities in the system, repair and strengthen the system in time, and improve the security and stability of the system. Adopt security audit technology to prevent network attacks and data leakage risks and ensure the normal operation of CBEC systems.

4.4. Enterprise internal management and risk control

Enterprises should establish a sound internal management system, including human resources management system, financial management system, risk management system, etc., clarify the responsibilities and authorities of various departments and posts, standardize the internal operation process of enterprises, and improve the efficiency and standardization of internal management. Enterprises should strengthen employee training and awareness education, improve employees' awareness and awareness of CBEC risks, strengthen employees' study and understanding of safety protection measures and risk management methods, and cultivate employees' awareness of risk prevention and coping ability. Enterprises should establish internal control mechanism, take effective measures to supervise and manage internal activities, including financial management, human resource management, information security management, etc., to find and correct internal problems in time and reduce internal risks. Enterprises should establish a sound risk management system, including risk identification, evaluation, control and response, establish risk management files, update the results of risk identification and evaluation in time, take effective measures to control and respond to risks, and ensure the stable operation of enterprises.

4.5. Public service and consumer education

CBEC platform can provide consumer education resources, including shopping guides, consumer rights protection knowledge, product quality certification standards and other information to help consumers better understand and understand the CBEC market, and improve consumers' awareness and identification ability of consumer rights protection. Government departments and CBEC industry associations can establish a CBEC consumer complaint platform, provide online complaint channels and complaint handling mechanisms, promptly accept consumer complaints and appeals, solve problems encountered by consumers in CBEC transactions, and protect consumers' legitimate rights and interests. CBEC platforms and consumer rights protection organizations can strengthen cooperation, carry out consumer education and training activities, jointly improve consumers' awareness of consumer rights protection and their ability to safeguard rights, and enhance consumers' trust and satisfaction with CBEC. Government departments and CBEC platforms can formulate guidelines for handling consumer complaints of CBEC, clarify the acceptance process and handling procedures of consumer complaints, guide consumers how to make complaints and appeals correctly and effectively, and protect consumers' legitimate rights and interests.

5. Conclusion

CBEC has great development potential and market prospect. With the acceleration of global digitalization and the increasing demand of consumers in emerging markets for cross-border shopping, CBEC industry will usher in more development opportunities. CBEC faces many challenges and problems. There are many problems to be solved in cross-border payment and settlement, cross-border taxation and supervision, cross-border logistics and supply chain, cross-border intellectual property protection, cross-border data security and privacy protection. CBEC enterprises need to strengthen cooperation with the government, industry associations, international organizations and other parties, jointly formulate and improve relevant policies, regulations, standards and norms, improve the overall level of the industry, and jointly cope with the challenges and risks in the development of CBEC. Only by fully recognizing the development characteristics and problems of CBEC industry and actively taking effective measures to solve them can we realize the sustainable development of CBEC industry and make greater contributions to global economic growth and trade cooperation.

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