

CROSS BORDER E-COMMERCE DEVELOPMENT ON GREEN SUPPLY CHAINS

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Cross-border e-commerce (CBE) is a type of international e-commerce analogous to cross-border e-tailing. Supported by advanced technology, growing demand and favorable policies, more and more people are shopping online, especially in China. CBE is booming globally, but it also faces challenges. Cultural and consumer behavior, laws and regulations, product and marketing issues, payment terms and logistical constraints have been identified as major obstacles to its success.

As a result, logistics-related issues are a major concern for the industry as CBE requires long-distance shipping, long transit times, high transportation costs and poor return services are increasingly prominent. Traditional logistics systems are inadequate to meet the new challenges. To reduce environmental costs and enhance sustainability, implementing a green logistics system is necessary. However, many companies do not know how to effectively develop green supply chains and lack competitive logistics strategies in cross-border relationships.

The purpose of this study is to explore the theory of green supply chain application in cross-border e-commerce and to explore the practical aspects of its application in cross-border e-commerce in China.

Keywords: Green economy; supply chain management; e-commerce.

Cross-border e-commerce refers to a new form of international trade that belongs to trade entities in different countries or regions and uses Internet technology to complete the sale, purchase, payment and settlement of commodities on intermediate e-commerce trading platforms, and distribute them through cross-border logistics, making transactions successful [1]. It not only breaks down spatial barriers between countries and promotes international trade to gradually become borderless. At the same time, it is also promoting major changes in the global economic and trade pattern.

Cross-border e-commerce has six features: Global Forum, intangible, anonymity, instantaneous, paperless, and rapidly evolving [2]. The emergence of cross-border e-commerce has promoted the development of international trade, but it also has a certain impact on the environment. Reviewing the development history of the global cross-border e-commerce industry, it can be found that cross-border e-commerce has developed from traditional foreign trade to foreign trade e-commerce, and is further developing into cross-border e-commerce. The development of cross-border e-commerce so far has only been 20 or 30 years. With the rapid improvement of Internet technology, cross-border e-commerce has shown explosive growth.

In the past two decades, China's cross-border e-commerce has gone from scratch, from weak to strong, and has gone through four stages from budding to growth, from expansion to maturity [3]. At present, China's cross-border e-commerce industry is accelerating the process of foreign trade innovation and development and has become a new engine for China's foreign trade development (table 1).

Table 1

The Analysis of the development process of CBE in China

Stages in Germination (1999-2003)	Growth Period (2004-2012)	Exploration Period (2013-2018)	Maturation Period (2019-Present)
Only on traditional foreign trade	The whole process of cross-border e-commerce can be realized electronically	Cross-border independent brands, self-built independent stations and other differentiation models appear and lead the giants	Fine operation, localized operation and other began to receive attention and practical application
Adopt online supply and demand information matching, offline to complete transaction mode	Online trading platforms with perfect functions of online display, transaction, customer service and payment appear	CBE channels and categories have achieved rapid expansion, and the transaction scale has continued to grow rapidly	Online combination, distribution, live broadcast marketing and other innovative models continue to penetrate
		CBE services were rapidly improved	Industry barriers have been initially formed

The McKinsey Global Institute (MGI) explains in *Big Data: The Next Frontier of Innovation, Competition, and Productivity* the influence of the mastery of big data on the development of global e-commerce. Driven by the innovation of big data, it can increase labor productivity, stimulate the formation of new business models, and ultimately achieve new economic growth points [4].

China's manufacturing industry has high advantages in cost and scale. With the promotion of the "Belt and Road" initiative and the capital market, in recent years, cross-border e-commerce has advocated for brands to go overseas, and export cross-border e-commerce occupies a dominant position in the cross-border e-commerce transaction structure [5].

Green supply chain is developed on the basis of traditional supply chain. Both emphasize systematization and hope to realize the benefits of the whole supply chain through mutual coordination and cooperation between various nodes, enterprises and departments. However, compared with traditional sup-

ply chains, the green supply chain, while pursuing economic benefits, puts more emphasis on environmental factors, seeks the balance of benefits between economy, society and environment, and emphasizes the environmental compatibility of activities such as planning, procurement, production, circulation and consumption [6].

In the e-commerce environment, through the application of green supply chain management, it is not only conducive to optimizing resource allocation, but also plays an important role in the development of enterprises. It is mainly manifested in the following points.

It is conducive to the integration and optimization of resources, and is conducive to enterprises to obtain competitive advantages. In the e-commerce environment, the implementation of the concept of green supply chain management is conducive to increasing the contact between suppliers, manufacturers, retailers and customers, and facilitating managers to optimize and integrate manpower, material resources, financial resources, technology, and information within the enterprise, and enhance the contact between banks, certification centers, and distribution centers, thereby promoting the smooth progress of the enterprise's work, promoting resource integration and optimization, reducing enterprise production costs, and reducing damage to the surrounding environment. It is also conducive to promoting the innovation and development of enterprises. Green supply chain management is an innovation in the concept of supply chain management. It emphasizes green design, green production, green sales, and focuses on the recycling and utilization of products. Especially in the e-commerce environment, the advantages of this concept are even more obvious. It can reduce the cost of production, sales and other aspects of the enterprise, reduce the damage to the surrounding environment, and it is also a change and innovation in traditional management methods. In the fierce market competition, enterprises have implemented the concept of green supply chain management, which is conducive to better regulating and restraining management activities, reducing the cost and resource consumption of enterprises in all aspects of production, sales, etc., and promoting technological renewal.

The development of e-commerce has created favorable conditions for green supply chain management. However, due to the relatively short time of the concept of green supply chain management, and the imperfect relevant systems, there are still some imperfect relevant laws and regulations and consumers' lack of environmental awareness.

In order to make up for the shortcomings of green supply chain management, better protect the surrounding environment, promote the development of e-commerce, and effectively meet people's needs, the following improvement and improvement measures can be taken. Promote the standardization

and institutionalization of green supply chain management by improving relevant laws and regulations, effective standardization and restraint management activities. Strengthen the guidance of consumers, to help them establish environmental awareness and green consumption concept. Local governments and enterprises should use the Internet, TV, magazines and other media to publicize the importance of environmental protection, guide consumers to establish the concept of green consumption, let them change their ideas, and consciously establish the concept of environmental protection and green consumption [7].

At the same time, we should pay attention to management innovation, improve the management system, improve the overall management level of enterprises, and effectively standardize and guide the work of green supply chain management. Create a green supply chain in line with consumer needs, pay attention to innovative product design, implement the ecological design concept, and select ecological and energy-saving materials. We should maximize the utilization rate of resources, avoid material waste, reduce the cost of enterprises, establish the enterprise brand image, and create conditions for the development of enterprises and the improvement of market competitiveness.

The combination of green supply chain and cross-border e-commerce not only enhances the multifaceted competition and development of enterprises in the market, but also promotes the sustainable development of enterprises to achieve efficient resource utilization and minimize environmental impact.

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