

Research on the Development Mode of Green Logistics in China

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Abstract

With the enhancement of consumer awareness of environmental protection, people are paying more and more attention to the environmental reputation of enterprises and the environmental protection of products or services. Logistics industry as a new growth point of national economy, in order to sustainable development, green logistics is the general trend. This paper first describes the research background of the development of green logistics, then analyzes the environment of the development of green logistics in China by using PEST analysis method, and finally puts forward the development model of green logistics in China.

Keywords

Green logistics; PEST analysis; Development model.

1. Introduction

Since the 20th century, the world economic development, leading to excessive energy consumption, ecological environment destruction, social and economic development is facing great challenge. For the sustainable development of economy, it is imperative for logistics industry to carry out green logistics management.

2. Research Background

In recent years, China's logistics industry is developing at a speed of 10%, becoming an important part of the national economy.

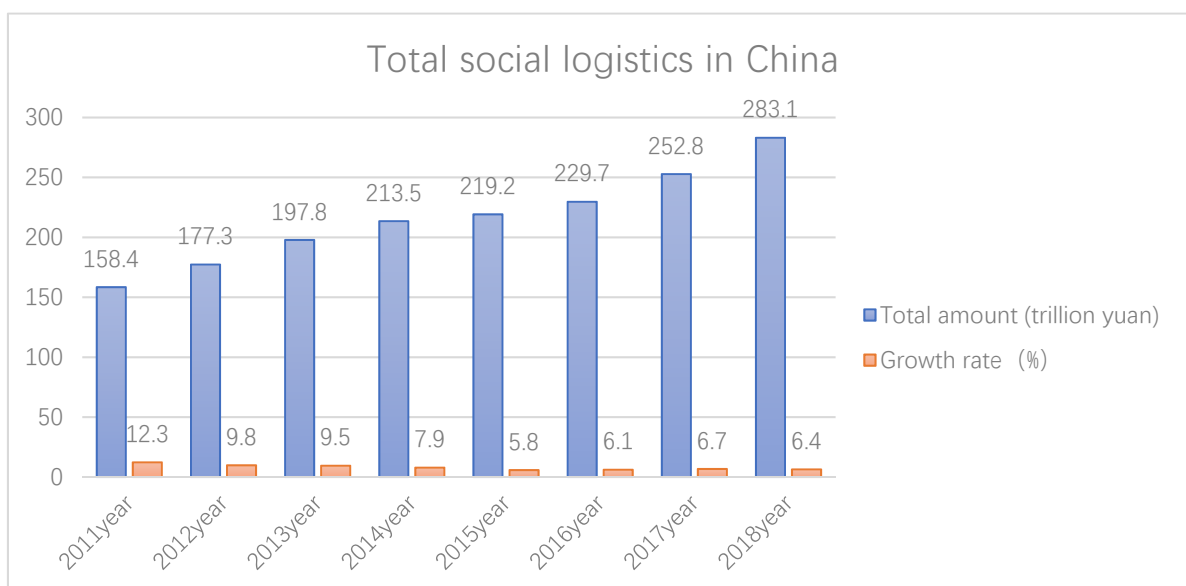


Figure 1. Total social logistics in China and Growth rate

When the fruits of development are in front of us, we must not ignore the damage to the ecological environment. The harm of logistics industry to ecological environment is reflected in transportation, packaging, storage and circulation processing. The destruction of environment by logistics has become a difficult problem in China's environmental governance

With the rise of the green wave in the 1990s, the Sustainable Development Goals led people to carry out a far-reaching green revolution. The impact of the green Revolution quickly spread from tangible to intangible goods. When the development of logistics industry is restricted by environmental factors, it is in line with the development requirements of The Times to carry out green transformation. In fact, for the sustainable development of logistics industry, the concept of green logistics has been produced in the early stage of green concept diffusion. It is generally believed that green logistics is the infiltration of green movement which aims at sustainable development into logistics field. Green logistics emphasizes the coordination and balance between the economic interests of enterprises and the interests of ecological environment. Green logistics is a kind of production mode of resource saving and comprehensive utilization.

Modern green logistics management is a decision made under the influence of China's sustainable development strategy. The current human living environment is deteriorating day by day. People's awareness of environmental protection is gradually awakening. Only by recognizing the importance of environmental protection can we better promote the development of modern green logistics management. Therefore, China must vigorously develop green logistics if it wants to actively participate in international logistics competition and take advantage in the competition. Green logistics has become an important part of sustainable economic work in China.

3. Research Status of Green Logistics

Although the research on the development of green logistics in China is still in the preliminary stage, there have been some representative viewpoints in the four directions of green production, green packaging, green circulation and green logistics management.

In terms of green production, Zhiguo Fan and Qi Hu pointed out that only by improving the operation of green logistics, establishing green supply chain, enhancing green consciousness and vigorously cultivating green logistics talents can enterprises develop green logistics well. After studying the ecological environment and economic characteristics of Inner Mongolia, Fengyu Han put forward countermeasures and suggestions on the development of green logistics for Inner Mongolia's logistics industry, thus contributing to the sustainable development of Inner Mongolia regional economy.

In the aspect of green packaging, Lei Zhao, Chong Cui, Maoyan Li, pointed out that "in order to make aviation materials better adapt to the development of resources and environment and improve the needs of combat effectiveness, it is necessary to improve its packaging based on the concept of green, low-carbon and recycling". Wenjie Xu and Haisen Zhang believe that recycling delivery boxes can reduce the consumption of traditional cartons, reduce the destruction of forests, improve the utilization rate of resources, improve the quality of ecological environment and promote the sustainable development of the industry. In terms of green circulation, Rui Li, Xiaohui Li and Xin Chen believe that "in order to ensure the safe and efficient operation of logistics distribution system and reduce environmental pollution, a site-path optimization model of logistics distribution network is proposed after analyzing factors such as transportation fuel consumption, CO₂ emission, distribution center and transportation line interruption. It minimizes logistics distribution costs, transportation fuel consumption and CO₂ emission costs.

In terms of green logistics management, Jianfang Zhu and Guang Li pointed out that "we can reduce costs and increase efficiency and promote the sustainable development of the logistics industry by constantly improving the green logistics system". Jierui Luo thinks that green logistics is an inevitable need of the development of circular economy from the development mode of green logistics in circular economy and its relationship with green logistics.

4. PEST Analysis of Green Logistics Development in China

4.1. Political and Legal Environment Analysis

Recently, the government has been improving its environmental governance system, and the concept of green is deeply rooted in the hearts of the people. To improve the green logistics guarantee policy, the Ministry of Justice of the National Development and Reform Commission (NDRC) has issued a <Opinions on accelerating the establishment of green production and consumption laws, regulations and policies>.The opinions provides guidance for enterprises to develop green logistics.

To implement the requirements of the CPC Central Committee and The State Council on promoting high-quality development and the spirit of the Central Economic Work Conference. In 2019, the National Development and Reform Commission jointly issued <Opinions on Promoting high-quality Development of Logistics and Forming a Strong Domestic Market> with 24 departments and units, including the CYBERSPACE Administration of the CPC Central Committee, the Ministry of Industry and Information Technology, the Ministry of Public Security, the Ministry of Finance and the Ministry of Natural Resources. The opinions stressed the need to accelerate the development of green logistics and drive upstream and downstream enterprises to develop green supply chains.

4.2. Economic Environment Analysis

In the context of social and economic prosperity, China's logistics industry is thriving. Adopting green management can optimize its management effect and improve the energy conservation and emission reduction of the industry.The way of green management can save costs and improve the economic interests of enterprises while preventing large-scale environmental pollution. With the development of economic globalization, logistics industry is facing international competition. In order to avoid being eliminated by The Times, enterprises should pay attention to the change of development concept and management mode. Green logistics can not only promote the improvement of the management level of logistics enterprises, but also point out the direction of the future development blueprint of enterprises.Green logistics in promoting enterprises to actively face new challenges, enhance their own competitiveness is also remarkable achievements.

4.3. Social and Cultural Environment Analysis

As the concept of sustainable development is gaining popularity, consumers are becoming more and more aware of environmental protection. People are also paying more and more attention to the environmental reputation of companies and the greenness of their products or services. "Green logistics" conforms to the requirements of "green and environmental protection" advocated by the state, meets the call of national energy conservation and emission reduction, and is supported by relevant national preferential policies. The current environment has created good conditions for the smooth implementation of green logistics. Therefore, the development of green logistics is the general trend.

4.4. Technical Environment Analysis

In recent years, green logistics technology has developed rapidly, which is reflected in many links such as transportation and packaging. First, the proportion of clean energy in energy

consumption has increased, the energy structure has been optimized, and more companies have chosen new energy vehicles. Second, "Internet+" integrates logistics with Internet, making breakthroughs in GIS, GPS and other technologies and reducing resource waste. Finally, logistics companies have developed new green logistics facilities, such as Cainiao Network's smart packaging design, which provides smart packaging suggestions and packaging sequence. Technical conditions are important support for the development of green logistics.

5. Development Mode of Green Logistics in China

5.1. Social Cooperation and Green Logistics

Social cooperation green logistics refers to two or more economic organizations that can jointly implement relevant operations to achieve green logistics, and are committed to jointly realize environmental protection and efficient logistics management mode. The government formulates and issues relevant policies for the development of green logistics, enterprises implement green production and transportation as required, and the public responds to the call of "green packaging" by buying goods with renewable packaging, so as to solve the problems of resource waste, environmental pollution and low efficiency in logistics. The green logistics mode of social cooperation, centering on the needs of logistics services, coordinates logistics service resources and service capabilities. It is based on the common mechanism of social cooperation to unify logistics decision-making and ensure the mutual coordination and unified operation of common logistics activities.

5.2. Supply Chain Mode Green Logistics

Green logistics operation mode is based on the whole logistics activity chain of supply chain, including the whole process of procurement, production, sales and reverse logistics. Procurement process includes the selection of green suppliers and procurement process of green transport two aspects; Production process refers to standardized production according to green indicators, mainly including transportation, warehousing and other green processes; Sales link requires commodity distribution to realize commodity value, so distribution network must be rationally planned to promote the green process; The goal of reverse logistics is to properly deal with the returned items, and strive to "turn waste into treasure" through recycling and reuse, so as to obtain value and profit from them. In today's society, reverse logistics is increasingly becoming a powerful weapon of competition among enterprises.

5.3. Reverse Green Logistics

Reverse logistics simply refers to the logistics activities of the supplier from the direction of demand. It consists of green supply logistics, green production logistics, green sales logistics and other stages. Reverse logistics enterprise is not to look at it from the perspective of the carriage of goods by the customer and the relationship between enterprises, but starting from the economic interests of the customers and development goals, efforts on each customer and the enterprise resource for complementary advantages, combining business with the customer's operation objectives, using modern information technology and scientific management process, make the cash flow less, In order to achieve the purpose of reducing operating costs. Reverse logistics strengthens the coordination of logistics activities in the actual logistics operation process, makes use of customer resources and reverse logistics own ability, and provides value-added services for the whole logistics supply chain. It can not only bring customers higher profits, but also save resources, thus improving economic efficiency.

6. Conclusion

The negative factors induced by logistics activities to environmental pollution are rapidly increasing because of the rapid development of economy. It has a negative impact on the sustainable development of today's social economy. With the development of logistics industry, the negative impact of logistics industry on the environment has radiated to our life. It is the responsibility and obligation of all logistics enterprises to attach importance to environmental pollution and seek sustainable development of logistics industry.

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