Measurement and Analysis of the Impact of Logistics Technology Innovation on Logistics Industry

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Abstract: After 40 years of reform and opening-up, the industrial structure has begun to take shape, and its development trend has developed in a professional direction. The level of science and technology has developed rapidly. The application technology of Internet and multimedia information has become more mature. The e-commerce platform is a good development situation. In this context, the growth rate of China's logistics industry is extremely fast, and it has changed from the initial development stage to the integration stage. However, there are still some restrictive factors in the development of the logistics industry, which has affected its steady development. This paper analyzes the restrictive factors of logistics industry technology innovation, and discusses the measurement analysis of the impact of logistics technology innovation on logistics industry, in order to propose countermeasures to promote logistics innovation technology.

1. Introduction

Reform and opening up have gone through many years, and the level of economic development in China has continued to increase, and the speed of development of the logistics industry has also accelerated. According to relevant surveys, the total cost of the domestic logistics industry has reached 12.1 trillion yuan from 2016 to 2017. However, compared with developed countries, China's logistics costs accounted for 14.6% of GDP, while foreign developed countries only 7%, which fully shows that although the overall size of the domestic logistics industry is huge, the utilization rate is not high. At the same time, the market share of domestic enterprises is quite different. According to the survey results, 70% of small and medium-sized logistics companies account for only 43% of the market. [1]The threshold of the logistics industry is not high, resulting in the “homogeneity” of industry services and products, and the formation of a low-price market competition environment. The long-term development of the logistics industry is extremely unfavorable. In addition, the government's supervision of the logistics industry is relatively lacking, the lack of corresponding laws and regulations to standardize the operation of the logistics industry, and some local protectionism is very obvious, to a certain extent hinder the logistics industry to achieve cross-regional development. The information platform construction of some logistics enterprises is still not mature, and the enterprise's risk control management is incomplete, which also affects the development of the logistics industry to a large extent. In summary, only through logistics technology innovation, logistics enterprises can have stronger competitiveness in the industry, and at the same time enable logistics enterprises to achieve better enterprise benefits and promote the overall sustainable development of domestic logistics enterprises.

2. The restrictive factors of logistics technology innovation

Logistics technology innovation covers many aspects, such as optimizing manufacturing technology, the use of automation technology, the application of Internet information technology and resources, and traditional logistics technology. As an important factor affecting the development of the logistics industry, innovative technology is particularly critical, which is conducive to the transformation of logistics enterprises from traditional to modern logistics models. At present, there are many related researches by scholars at home and abroad. Birkenstock.ct al has conducted in-depth research on the relevant factors of logistics service quality and found that information

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technology has greatly helped the quality of logistics services. Reckon and Ficko studied the logistics status of the local retail industry, and its low logistics level has a lot to do with the neglect of innovative technology and the application of Internet technology. [2]Wei Jigang takes the development law of logistics technology innovation as the research direction and looks forward to the future of logistics innovation. [3]Logistics enterprises carry out technological innovations in logistics platforms, systems, operations, management, and equipment, which improve their operational efficiency and effectively enhance their competitiveness in the logistics industry. The restrictive factors of logistics technology innovation mainly include the internal and external aspects of logistics enterprises:

(1) Internal reasons of logistics enterprises

First of all, domestic small and medium-sized logistics companies account for a smaller proportion of the industry's market share than large-scale logistics companies, and are related to the company's own capital investment. The development of the logistics industry needs to pay attention to the innovation and research and development of logistics technology. The logistics equipment of the enterprise must be continuously optimized. At the same time, it needs to be backed by strong logistics professional management talents and technical talents. All of these must rely on the strong capital base of the enterprise. . Secondly, logistics technology innovation requires relevant professionals to play a guiding role, expand the scope of its use, and fully apply the innovative technology to the work. Therefore, complex high-quality applied talents are indispensable. Then, the technical level of logistics enterprises presents a jagged status quo, especially in small and medium-sized logistics enterprises. Its technical equipment and corresponding technical level are relatively weak, which restricts the further technological innovation of enterprises. Finally, large-scale enterprises have certain advantages in capital, professional technology and personnel training, and can effectively implement technological innovation, while small and medium-sized enterprises are in an obvious disadvantaged position in this respect.

(2) External reasons of logistics enterprises

First, logistics companies must implement technological innovation and must rely on the state to provide a good environment for the logistics industry, such as the introduction of a national policy that is conducive to logistics technology innovation, including market financing environment, logistics tax incentives, and government subsidies. Content to provide power for logistics technology innovation. Second, finance. By guiding logistics enterprises to pay attention to the financial management system of enterprises, and strengthen the construction and development of their credit guarantee system. Focus on small and medium-sized logistics enterprises to implement financial subsidies and other policies, while further optimizing tax policies and guiding their orderly transformation of industrial structure. Third, the rapid development of foreign logistics enterprises has brought great influence to the domestic logistics technology innovation. The market share of the logistics industry has been occupied by foreign excellent logistics enterprises to a certain extent, and its logistics technology level is relatively developed. Good competitiveness and development must undergo innovation and change. Fourth, the market structure is also one of the important external reasons for logistics enterprises to carry out logistics innovation. Only when the market structure is optimized, logistics enterprises can have more strength and promote logistics technology innovation.

3. Measurement analysis of the impact of logistics technology innovation on logistics industry

In 1967, scholar AndelT pointed out that logistics equipment innovation is beneficial to reduce logistics costs. In recent years, there have been many studies on the impact of logistics technology innovation on the logistics industry. Xu Wei pointed out that innovation in technology and the use of energy-saving methods to achieve green logistics. Hu Yuxia made a research on the clustering of logistics industry and analyzed the important role of technological innovation in industrial clustering. Idagor analyzed innovative information and communication technologies to make the quality of transportation and logistics services more efficient. Wang Wei pointed out through research that logistics technology innovation has a very positive significance for the company's

operating model. [4] Overall, the impact of logistics technology innovation on the logistics industry, its impact on the logistics industry is reflected in:

(1) An important means for the logistics industry to be more competitive and developmental

Logistics technology innovation is a logistics enterprise that combines innovative production methods and corresponding management models through new knowledge, technology and technology, which in turn makes the market value of the enterprise more optimized and makes the logistics enterprise more competitive and developing. Many corporate executives at home and abroad are very much in favor of technological innovation. Bain has initiated innovation and cost cutting is more important for the company to maintain long-term success. The survey found that business elites around the world generally agree that innovation is the long-term success of the company. Protection. Moreover, with the rapid development of electronic technology and information technology at this stage, enterprises not only need to sort out the awareness of technological innovation, but also need to implement the input of technological innovation, and the practical advantages of technological innovation are transformed into business operations. The development of the logistics industry is also closely related to technological innovation and must be implemented.

(2) Powering the development of the logistics industry

Logistics technology innovation optimizes traditional logistics technology and forms logistics of various modern skills such as logistics professional skills, operation methods, logistics design, planning, evaluation, and logistics management. In modern logistics, logistics technology innovation is also reflected in many aspects. Internet technology and electronic technology have been widely quoted in the logistics industry, and a scientific system management system and information system have been built for logistics enterprises to make logistics work more efficient and specification. Logistics technology innovation also changes the production system, management and management methods, the enterprise's resource allocation is more rational, and the corresponding organizational structure of the enterprise has also changed. The third-party logistics enterprise is developed from this, and it is the general trend of the development of the logistics industry.

(3) The inevitable direction of the development of domestic logistics industry

The development of the domestic logistics industry, compared with the logistics industry in developed countries, there is still a certain gap. The utilization rate of the domestic logistics industry is not high, the lack of large-scale logistics enterprises, the corresponding management system and technical level to be improved and improved, etc. fully demonstrate that domestic logistics enterprises urgently need technological innovation. [5] Under the background of global economic integration, the opportunities and challenges of the domestic logistics industry coexist. Only by insisting on “bringing in” and “going out” can the development of the domestic logistics industry become wider and wider. In this process, domestic logistics enterprises should fully integrate the actual situation of enterprises, on the one hand, attach importance to attracting foreign investment, and provide necessary financial guarantee for enterprises. On the other hand, it is necessary to strengthen the introduction of advanced foreign technology and talents, and formulate reforms and innovations suitable for enterprises. Policies and plans to implement logistics technology innovation.

4. Countermeasures to promote logistics innovation technology

(1) Strengthen investment introduction and improve logistics information platform

Logistics enterprises should actively introduce foreign capital to strengthen the construction of logistics, through cooperation with outside companies, and build a win-win logistics platform to ensure that logistics companies have strong economic strength for logistics technology innovation, and thus the logistics industry development is more stable. At the same time, logistics enterprises should reasonably establish transportation outlets in the city, and pay attention to the information sharing and continuous contact between the various outlets between cities, so that the role of outlets can be maximized. During this period, logistics companies also need to sort out various modes of

transportation, develop them into multiple lines of transportation, and rationalize and standardize resource allocation. Enterprises must fully integrate the advantages and features of Internet technology and apply them to all aspects of logistics.

(2) Strengthen the construction of professional talent team in the logistics industry

Talents are the backbone of enterprise development, and it is necessary to strengthen the construction of professional talents in the logistics industry. On the one hand, the relevant government can introduce corresponding preferential and incentive policies to attract more logistics professionals to join local logistics enterprises to improve the level of local logistics talents. On the other hand, in addition to determining that logistics talents have higher salary guarantees, logistics enterprises also need to pay attention to humanistic care and provide certain benefits. Enterprises attach importance to the cultivation and development of talents, formulate training programs according to the actual situation of employees, and guide relevant personnel to further master the corresponding technical skills in different positions. In addition, enterprises can also cooperate with universities to establish a corresponding school-enterprise cooperation platform to reserve more high-quality applied talents for logistics enterprises.

(3) Strengthen the financial management of logistics enterprises

In order to ensure that logistics companies can effectively carry out technological innovations to further promote the development of the logistics industry, the government must reserve sufficient funds for enterprises, for example, to set up a basic guarantee for logistics industry, venture capital investment guidance funds and so on. The government provides corresponding financial supplements and tax incentives for efficient logistics companies, and can also provide guarantees for the development of the logistics industry. In terms of enterprises, it is necessary to implement a more complete financial management system, carry out innovation and optimization in the preparation of financial budgets, and at the same time do a good job in financial risk control management of enterprises, and ultimately improve the industrial efficiency of logistics enterprises.

(4) Improve the market system of the logistics industry

To improve the market system of the logistics industry, logistics enterprises must establish a correct logistics concept, redefine the modern logistics industry, and replace the traditional lagging logistics model with innovative industrial chain and supply chain management. At present, some logistics companies have begun to pay attention to third-party logistics, which is undoubtedly a wise move. Third-party logistics can make the logistics enterprises' manpower, technology and equipment more optimally configured, and further promote the development of logistics. The government also needs to improve the relevant laws and regulations of the logistics industry, standardize the behavior of logistics enterprises in the business activities of logistics enterprises, and establish a fair, just and open market system.

5. Conclusion

As far as the current situation is concerned, although the domestic logistics industry has achieved certain development, it is still in the situation of “internal and external troubles”. It is necessary for logistics enterprises to carry out logistics technology innovation, which has a positive effect on the development of logistics enterprises. Enterprises carry out multi-dimensional logistics technology innovation, which makes the enterprise optimize in logistics skills, management mode, management methods and logistics services. The industrial structure and market system of logistics enterprises are perfect, which helps to improve the economic benefits of logistics enterprises. And market competitiveness, and thus promote the continuous development and continuous improvement of the logistics industry.

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