



Research on the Development of Modern New Logistics

Xue Min

Department of Management, Guangdong University of Science & Technology, Dongguan 523083, Guangdong, China

Abstract—With the continuous replacement of modern technology and the rapid expansion of the influence of e-commerce, some new logistics modes have emerged in the logistics system, besides the third-party logistics and self-operated logistics. They are logistics modes constructed by modern information technology and referring to advanced logistics operation concepts. Their contribution to the benefit and green development of logistics industry is becoming more and more obvious. This paper will give a brief introduction to the fourth party logistics and reverse logistics.

Keywords—new logistics; the fourth party logistics; reverse logistics; supply chain

I. INTRODUCTION

The development of e-commerce can not be separated from modern logistics, which is the consensus of today's people. It is also the conclusion drawn by many e-commerce companies after years of exploration. Previously, people did not know enough about the importance of logistics in e-commerce and the change of logistics in e-commerce environment. They believed that for most goods and services, logistics was still possible. Through traditional distribution channels. However, with the further popularization and application of e-commerce, the lag of logistics capacity restricts its development more and more obvious, and the importance of logistics on e-commerce activities has attracted more and more attention. Business transactions through the Internet only realize information flow and business flow, and the ultimate success of e-commerce depends on logistics.

At present, domestic and foreign enterprises that implement e-commerce, although their online sales are growing rapidly, they can not really make much profit. The reason is that its logistics cost is high and its efficiency is low. The function of logistics system adapting to modern e-commerce should be to deliver products to customers at the lowest cost. It directly affects the competitiveness of enterprises engaged in e-commerce in price, delivery date, service and quality. Many excellent enterprises engaged in e-commerce in the world have the advantage in the competition of network economy because they have the logistics system to meet the needs of e-commerce. Because of its advanced logistics system, Dell, for example, can respond quickly to customers' needs. Its liquidity cost for delivery, inventory and other aspects only accounts for 1.5% of the total revenue, and makes its online sales grow at an annual rate of 35%.

II. FOURTH PARTY LOGISTICS

2.1. The origin of the fourth party logistics

Fourth party logistics is relative to the third party logistics, and its origin and the third party logistics has a close relationship. The concept of fourth party logistics is established aiming at some birthright shortcomings of the third party logistics.

The disadvantages of the third party logistics are as follows. The core competency of the third party logistics lies in the actual operation rather than the logistics decision plan. Therefore, it lacks the ability to integrate and optimize the entire supply chain. The third party logistics by their own capacity constraints, whose logistics information technology can not meet the logistics needs of the whole social system, which could not make full use of social resources.

Restricted by the above problems, not only can we not build an efficient supply chain, but also greatly increase the operating costs of enterprises receiving logistics services. The fourth party logistics is born under such a background, and focuses on solving the above two problems. The following formula can be used to express the relationship between third party logistics and fourth party logistics, that is, fourth party logistics is consisted of third party logistics business, logistics consultancy services and information and communication technology.

2.2. The concept and advantages of the fourth party logistics

Fourth Party Logistics (4PL) was first proposed and registered by Accenture Consulting Company in 1998. It defines the fourth party logistics as a supply chain integrator and coordinator, deploying and managing the resources, capabilities and technologies of the organization itself and other complementary service providers to provide an integrated supply chain solution.

In the selection and management of logistics service providers, enterprises often have to spend a lot of energy to deal with. At the same time, due to the lack of experience and ability in supply chain construction and management, the supply chain constructed by simple logistics outsourcing often has inconsistent functions, and the supply chain itself lacks renewal capacity. In order to solve this problem, the fourth party logistics plays an advantage of integration and improvement, which is mainly embodied in the following three aspects.

Through its own technology and experience, the fourth party logistics provides a set of perfect supply chain solutions after a detailed analysis of the logistics situation of enterprises. Service providers themselves do not necessarily need to own logistics facilities and equipment, but can fully mobilize social logistics resources to undertake the actual operation of the supply chain using information networks. When the supply chain starts to operate, service providers will coordinate effectively among various functional enterprises in the supply chain to ensure smooth and unimpeded operation of the supply chain. At the same time, they will monitor the operation of the whole supply chain with the help of information systems and find problems and solve them in time.

The service providers conduct periodic inspections and assessments of the supply chain. When the problems of process and strategy are found and the overall efficiency of supply chain decreases, it will transform the supply chain to a certain extent, so that the supply chain can adapt to the development strategy of enterprises and the change of market demand.

For the sake of business information security, there is only service contract relationship between enterprises and third party logistics service providers, but there is no alliance relationship of mutual trust and cooperation, let alone information resource sharing. Information resource sharing is an important means to effectively improve the operation efficiency of supply chain. As an information intermediary, the fourth party logistics service provider optimizes the information resources and provides the most effective information to all parties in the supply chain. This way not only guarantees enterprise's information security, but also realizes the information resources sharing in the supply chain. The supply chain constructed by the fourth party logistics is not to maximize the profits of functional enterprises, but to enable all parties in the supply chain to cooperate in a long-term and stable way, and to obtain reasonable profits.

III. REVERSE LOGISTICS

With the continuous expansion of production scale and the increasing demand for individualized product services, the reverse flow of goods from the market to the circulation process

management of enterprises has become a common problem for many enterprises. In order to reduce the economic losses of enterprises and the harm to the environment, reverse logistics began to enter the world's vision.

3.1 concept of reverse logistics

Reverse logistics is a process of planning, managing and controlling the efficient and low-cost flow of raw materials, manufactured goods, final goods and related information from the place of consumption to the place of origin. It mainly includes two categories: returned reverse logistics and recycled reverse logistics. Return reverse logistics is mainly responsible for the recovery of products, parts or materials due to inappropriate use environment, accidental product damage, outdated products and customer dissatisfaction with products. The recovery of reverse logistics is mainly responsible for the recovery of waste articles generated in the process of forward logistics.

The essence of reverse logistics is to let defective products, waste products, packages and other materials transfer backwardly between supply chains, that is, reverse logistics make more effective use of natural resources, reduce pollution and damage to the ecological environment through the recycling and reuse of materials from the end of product consumption to the starting point of product production. It will eventually achieve the harmonious and sustainable development of human and natural environment.

3.2 The practical significance of developing reverse logistics

Reverse logistics improve customer service satisfaction and enhance enterprise competitiveness. In the era of e-commerce, e-commerce, as a virtual network transaction mode, customers can not see the entity of products when making purchase decisions. They can only make purchase decisions through product information released by the merchants. Then there must be a gap between the expected quality and the actual quality of products, which will inevitably lead to higher returns and exchanges rate. The e-commerce enterprises can attract consumers and sustain their development only if they have a good return mechanism and return methods. Successful operation of reverse logistics can ensure timely return of products that do not meet customer requirements, timely recall of goods with quality problems, increase the final consumer's confidence in enterprises and return rate, thereby expanding the market share of enterprises. This is not only beneficial to consumers, but also beneficial to enterprises. For customers in the supply chain, loose and effective upstream return mechanism can reduce their own business risks and promote cooperation among enterprise members.

Reverse logistics save resources, reduce costs and increase profits. Reducing material consumption and improving material utilization rate are important ways for enterprises to reduce costs, and also important means for enterprises to increase efficiency and competitiveness. However, the traditional material management is limited to the material inside the enterprise, and does not attach importance to the effective recovery and utilization of waste products and materials outside the enterprise, resulting in a large number of reusable resources idle and wasted. In the reverse logistics system, the recycling price of waste products is low and the supply is sufficient. The recycling and processing of these products can greatly reduce the material cost of enterprises. Especially with the development of our country's economy, the contradiction between supply and demand of resources will become more prominent under the increasingly serious situation of resource shortage, and the superiority of reverse logistics will become more and more prominent.

Reverse logistics enhance corporate image through environmental behavior. With the increasing awareness of environmental protection of residents, customers' expectations of the environment are getting higher and higher, not only considering the current living conditions, but also beginning to pay close attention to the development environment of future generations. Whether or not to fulfill the strategy of sustainable development is an important act of whether a company has a sense of social responsibility. In addition, more and more stringent environmental protection regulations and pollution charging systems are for enterprises.

Business behavior provides new constraints, and the environmental performance of enterprises has become an important indicator to evaluate the overall performance of enterprises. Through the implementation of reverse logistics strategy, it can reduce the final waste emissions, reduce pollution to the environment, reduce resource consumption, take more social responsibility for improving the human environment, establish the image of enterprises, and enhance the good impression of enterprises in the hearts of consumers.

IV. CONCLUSION

Thus, the advanced logistics system can effectively complete the entity process of e-commerce, and achieve more profits for enterprises. At the same time, we can also see that e-commerce technology has greatly improved the operational efficiency of the logistics system. The wide application of E-commerce technology has solved many technical bottlenecks in the development of logistics system, thus changing the structure of logistics industry, and some new logistics modes, such as the fourth party logistics, reverse logistics and green logistics, which are more in line with the needs of modern social development, have emerged, while the traditional international logistics has developed. It has also made considerable progress on the basis of the original. Modern logistics and e-business are in a mutually complementary and mutually reinforcing relationship. The development of e-commerce technology will certainly lead to more new logistics models, and the continuous expansion of logistics network will enable e-commerce to achieve real global coverage.

REFERENCES

- [1] JP Wang. Research on the Development Strategy of Chinese Modern Medical Logistics under the New Medical Reform. *Logistics Engineering & Management*, 2012, 250 (1), pp.1-5.
- [2] HY Liu, XL Zhang, DG Yang, F Deng. Analyze and Research of the Modern Logistics Industry Development in ALSK Region. *Arid Land Geography*, 2005 , 28 (3) :404-408.
- [3] CY Chen, LI Jun. Research of Human Resource Development of Modern Logistics. *Resource Development & Market*, 2010, 154 (1-3), pp.63.
- [4] DZ Wang, XF Geng, HE Shi-Wei. Research on the Theory and Several Issues of German Modern Logistics Development. *Logistics Technology*, 2006, 16(8), pp.34-35.
- [5] S Xu. Tactics on the Development of Modern Agricultural Logistics in Central China. *Advanced Materials Research*, 2011 , 219-220 :366-369.