

Research on high quality development path of modern logistics industry

Wang Cuimin

Hebei Chemical & Pharmaceutical College, Shijiazhuang, 050026, China

Keywords: Modern logistics, High quality development, Development path

Abstract: The theory of modern logistics mainly focuses on logistics cost, logistics strategy and other areas of logistics management. The basic characteristics of modern logistics management are to raise customer satisfaction, to achieve the overall optimization of the enterprise, and to develop business around the information center. In the context of high-quality economic development, the logistics industry and economic development are mutually to promote and develop. Aiming at the problems such as the high proportion of social logistics cost in GDP, the backward construction of transportation infrastructure and equipment, the low level of information and intelligence, and the lack of integration with related industries, it is necessary to continuously promote the cost reduction and efficiency enhancement of the logistics links, continuously improve and upgrade the basic transportation facilities and equipment, enhance the level of logistics informationization and intelligentization, and speed up the deep integration of the logistics industry with other industries, promote the level of logistics professional training.

1. The related theories and basic characteristics of modern logistics

Modern logistics industry is a cross-industry, cross-regional complex new-type industry, involving transportation, warehousing, wholesale, retail and other industries. Modern logistics industry is the country's pillar, basic industry. Modern logistics includes transportation, warehousing, distribution, packaging, handling, circulation and processing, logistics information, etc. In the process of transporting raw materials, semi-finished products, finished products and related information flows from the starting point to the end point. The above seven links are organically combined to form a complete supply chain, so as to provide personalized, integrated, professional and integrated services for the relevant users.

1.1. Related theories of modern logistics management

The theories of modern logistics management mainly include logistics black continent theory, logistics iceberg theory, profit center theory, cost center theory, service center theory, benefit contrarian theory, logistics strategy theory, commodity separation theory and so on.

1.1.1. Theories related to logistics costs

(1) The theory of Logistics Black continent. "Logistics black continent theory" is the correct

evaluation of logistics. In the 1960s, the leading American management Peter Drucker, published in Fortune magazine-“The black continent of Economics”. In this magazine, he argued that “Circulation is the black continent of Economics”, and from a management point of view-the circulation of this area is a gray or black area. Circulation is the whole activity of the system, and includes logistics, business flow, information flow, capital flow and other activities. Among them, logistics is an important part of the circulation field, and also the most active and most potential part of the circulation field. Therefore, the “Circulation” mentioned by Peter Drucker is mainly aimed at “Logistics”. “Circulation” refers to the field that has not been known, understood and opened up.^[1]

(2) The theory of Logistics Iceberg. “Logistics iceberg” is mainly aimed at logistics costs. In the 1960s, a Japanese Waseda University professor, Nizawa Xiu, found that people knew less about logistics costs. In the current accounting, people can not fully grasp the actual situation of logistics costs, other than that people can not fully highlight the importance of logistics. The huge cost of the logistics process is like the unknown, and invisible black area which is the most of the iceberg under the water. Its amount is huge, so that it is not fully mastered. This situation is compared to the “Logistics iceberg.”

1.1.2. Theories related to logistics strategic management

(1) The theory of Logistics strategy. With the deepening understanding of logistics management in the academic and industrial circles, people have a clearer and correct evaluation and understanding of the importance of logistics management to the strategic development of enterprises. People think that logistics will affect the overall survival and development of enterprises. Logistics is more strategic, so people should plan logistics management from the strategic point.

(2) The theory of Profit Center. The theory of “The third source of profit” was put forward by Professor Nizawa in Japan in the 1970s. In the course of global economic development, the source of profits for enterprises is provided by resources and human resources in turn. With the potential of these two profit sources being tapped smaller, people will gradually transfer the development of corporate profits to the field of logistics. Therefore, according to the emergence time of profit sources, logistics is known as the “Third profit source.”^[3]

(3) The theory of Cost Center. In the enterprise strategy, the logistics activity produces the big influence to the enterprise marketing activity cost. Therefore, for reducing the cost effectively, people must carry on a rationalized management controlled by the logistics. So logistics is an effective method to reduce the cost of enterprise.

(4) The theory of Service Center. Some scholars in America and Europe think that the main function and effect of logistics activities is to improve the level of service for users, and then to improve the competitiveness of enterprises. Most people use “Military logistics” to describe logistics to emphasize the functions of support and service.

1.1.3. Other theories related to logistics

(1) The theory of opposite efficiency. Opposite efficiency is also called “Antinomy” or “Benefit paradox”. It refers to the contradictory phenomenon between the various functional elements of logistics, which one of the various functional elements of logistics is increasing and another would be decreasing. If one of the functional elements is optimized or benefited, the other or the others functional elements would be lost, and vice versa. In addition, opposite efficiency also reflects in logistics costs and services. The phenomenon of opposite efficiency often leads to the decrease of the overall efficiency of logistics system, and eventually damages the benefits of the various functional elements of logistics system.

(2) The theory of separation between business and logistics. This theory refers to the distribution

management of business and logistics. In the course of actual operation, a commercial enterprise may only have the ownership of the commodity, and the inventory is kept by the factory or the third party logistics. Therefore, commercial enterprises do not need a real warehouse and no longer hold actual inventory. Business and logistics can achieve a real separation in space and time, thus the commercial enterprises would reduce the cost of logistics management effectively.^[4]

1.2. The basic characteristics of modern logistics management

Through information technology and information network platform, modern logistics management is to coordinate, optimize and manage the functional elements and resources of logistics. These means could minimize the logistics costs and achieve the improvement of logistics efficiency, so customers would be satisfied.

1.2.1. Achieving customer satisfaction is the first goal of modern logistics management

The essence of modern logistics management is customer service. The source power of innovating and devolving logistics management is high-quality, convenient and efficient customer service. The service object of modern logistics is the customer outside the organization of the enterprises. The first goal and value orientation of logistics activities is service and satisfaction of customers. Therefore, the core concept of business management is changed. So the corresponding main business is also focused on the customer service.

1.2.2. Achieving the overall optimization of enterprises is the goal of modern logistics management

Modern logistics management has risen to the height of supply chain management. It is a system integration of collaborative logistics. Considering the angle of supply chain strategic management, modern logistics management is an unified management including suppliers, wholesalers, retailers and other affiliated enterprises. Modern logistics management could strengthen the circulation process involving enterprise management. Other than that Modern logistics management would achieve the value of product supply chain and the overall optimization of enterprise management.

1.2.3. Modern logistics management is carried out around the information center

Advanced Information Network, information technology, information platform provide a convenient development conditions for modern logistics management. Information has become the core element of modern logistics management. Depending on the developed information network and overall accurate market information, modern logistics management can effectively, accurately and timely capture market demand. Otherwise, the modern logistics management feedback each kind of demand to each link in the supply chain. This kind of feedback is helpful for enterprises to make correct management decisions and ensure the smooth development of reproduction business.

2. The relationship between high-quality economic development and modern logistics industry

2.1. Concept of high-quality economic development

At present, global multi-polarization, economic globalization and information technology revolution is bringing many challenges to economic development. Along with the problems of low efficient energy use, irrational industrial structure and increasingly serious resource and environmental problems, the factors restricting economic development have gradually increased and

the rate of economic growth has gradually decreased. In order to adapt to the new situation of economic development, it is necessary to change the traditional mode of industrialization. The combination of economic development with resource conservation and environmental protection would achieve the unity of economic quality, economic scale, economic efficiency, development speed and development safety.

2.2. The relationship between modern logistics industry and high-quality economic development

Economic development is a prerequisite for the development of logistics industry. The high quality development of economy will set higher standards and requirements for modern logistics industry, so, the logistics industry will continue to expand the scale and improve the system to meet the high-quality economic development requirements. Therefore, economic development would promote the rapid development of the logistics industry. At the same time, the development of the logistics industry would also promote high-quality economic development. Economic Development and logistics industry development will promote and develop each other.

2.2.1. High-quality development and growth of regional economy promoted by Modern logistics industry

(1) Tertiary sector of the economy development would promote high-quality economic development. Modern Logistics is tertiary sector of the economy. Modern Logistics is closely related to transportation, warehousing, wholesale and retail, information technology, etc. The development of modern logistics industry could promote the development of related industries, and then drive the overall development of the tertiary sector of the economy industry. Otherwise, Modern logistics industry can optimize and improve the environment for economic development and promote high-quality economic development.

(2) Improving the quality of logistics operation can promote high-quality economic development. Modern logistics industry is different from traditional logistics industry. The difference is that the modern logistics industry pays more attention to the application of information technology and the quality of customer service. Modern logistics industry can improve the infrastructure equipment, transform and upgrade of hardware and software conditions, so as to build an efficient logistics management system and promote high-quality economic development.

(3) Creating an optimal investment environment can promote high-quality economic development. The development of modern logistics can promote the regional infrastructure, optimize and create a better investment environment, improve the competitiveness of the region, so that the region will attract more investment, and thus have a sound development.^[5]

2.2.2. The development of modern logistics industry promoted by High-quality economic development

(1) High-quality economic development puts forward higher requirements for the logistics industry, and also promotes the development of the logistics industry. With the deepening of Social Division of labor, the importance of logistics industry is becoming more and more prominent. In a sense, the development level of logistics industry reflects the economic development level of this region. The high-quality development of economy has put forward higher request to the development of logistics industry, and promoted the development of logistics industry.

(2) High-quality economic development promotes the adjustment of regional economic structure and accelerates the reform and development of logistics industry. The adjustment of economic structure has a new impact on the transformation, innovation and transformation of logistics

industry. As the proportion of tertiary sector of the economy in the national economy is increasing, the main business of the logistics industry is also constantly adjusting. This adjustment promotes the development of technological change, business change, organizational change and management innovation.

3. The main problems in the efficiency promotion of modern logistics industry

3.1. High GDP proportion in the total cost of social logistics accounts

According to public statistics, the total revenue of the 2021 logistics industry is 11.9 trillion yuan, the total social logistics amount is 335.2 trillion yuan, the total social logistics expenditure is 16.7 trillion yuan, and the ratio of the total social logistics expenditure to GDP is 14.6%. In 2022, the total revenue of the logistics industry is 12.7 trillion yuan, the total social logistics amount is 347.6 trillion yuan, the total social logistics expenditure is 17.8 trillion yuan, and the ratio of total social logistics expenditure to GDP is 14.7 percent. The ratio of total cost of social logistics to GDP in developed countries is generally 8% -9%. Thus, the proportion of total cost of social logistics to GDP in our country is high.

3.2. Further strengthen needed by Logistics infrastructure and equipment construction

The development of modern warehousing, multi-modal transport and other logistics business needs the strong support of complete transport infrastructure equipment, but also depends on the logistics park with reasonable layout and perfect functions. This phenomenon if the inter-regional infrastructure equipment supporting, compatibility, standardization degree is not high, will hinder the development of logistics business. Therefore, it is necessary to further strengthen the construction of logistics infrastructure equipment.

3.3. The low degree of informationization, intelligentization and digitalization of logistics industry

The development of modern logistics relies on information system, information technology and information platform. Modern Logistics manages the development of business by logistics-related big data analysis. With the advent of digital economy, the construction of logistics informationization needs to speed up the pace. At the same time, the standards and norms of industry information, intelligent is becoming more and more important. In the top-level design, the logistics informationization must do well the informationization development strategic plan. The research and development application of “Digital intelligent” on handling robot can effectively promote quality improvement and efficiency enhancement.

3.4. The not deep integration of logistics and related industries

The logistics industry connects the supply and demand sides, and has a strong relationship with the three industries. Because there are not many service integration organizations in the logistics industry, it is difficult to form the Dynamic equilibrium between demand and supply. Therefore, there are some problems in the integration of logistics and related industries, such as low quality of logistics supply, high price of logistics, low overall cost performance, low enterprise satisfaction.

3.5. Lack of Logistics-related professionals

With the development of digital economy, the existing professionals can not meet the requirements

of the development of digital intelligent logistics, so the rapid development of logistics industry results in the shortage of professionals. The logistics industry is short of high-end professionals who understand both technology and business. There is a certain disconnection between the cultivation of colleges and the demand of market.

4. Research on high quality development path of modern logistics industry

4.1. Reduce costs and increase efficiency in Logistics

Reducing cost and increasing efficiency is the key to the strategic development of enterprises. In order to achieve overall optimization, enterprises need to use system management thought, focus on overall situation, base on strategic positioning, integrate various resources, focus on internal management and improve efficiency, carry on scientific and fine management to each link of logistics. For example, aim at the storage management, enterprises need to use the “First-in-first-out” approach to reduce storage risks. Increasing storage density and storage capacity utilization rate can effectively reduce the input of storage equipment, thus reducing the cost. Storage location system can improve the efficiency of storage operation. Fast in and fast out, speed up turnover can improve the output rate of unit warehouse capacity. Diversified operations and active assets can improve the utilization of assets and equipment. In the process of reducing logistics cost and increasing efficiency, it is very important to balance and coordinate the relationship between logistics cost and logistics service. The combination of service quality and cost control will finally promote the rationalization of logistics management.

4.2. Improve and upgrade basic transport facilities and equipment continuously

Transportation industry is the basic industry to support the development of national economy, and it is of great strategic significance to the overall economic development of the country. Transportation is the basic subject of the logistics industry development, which takes on many key links of logistic. Comprehensive three-dimensional of the transport system provides a guarantee for the flow of goods. In order to optimize and improve the environment of logistics business, it is very important to build a comprehensive, three-dimensional, grid, full-coverage of the transport corridor. Otherwise, to speed up the construction of high-speed railway mainlines, large airport clusters and port clusters is also important. It is also enforced to improve the overall effectiveness of logistics network, to enhance the connectivity of transportation facilities and equipment among regions, provinces and regions, to construct new development pattern, to promote the high-quality development of logistics industry.

4.3. Improve the level of logistics information intelligence Continuously

The biggest difference between modern logistics and traditional logistics is that modern logistics can transmit information by means of information technology, such as coded information collection, electronic information processing, standardization and real-time information transfer, digital information storage. Modern logistics uses information technology to support logistics operations and management.

The development of digital economy needs the support of technology, elements and facilities, that is, it needs the support of digital technology, digital information and knowledge, modern information network facilities. Under the background of digital economy development, in order to reduce cost and increase efficiency, logistics enterprises should formulate information development strategy, use new technologies such as big data, cloud computing and artificial intelligence to upgrade the level of logistics infrastructure, control logistics information, improve logistics operation automation and

logistics decision-making level, provide logistics enterprises with modern, information, efficient solutions.

4.4. Promote the integration of logistics and other industries Continuously

The development of industry, especially the development of manufacturing industry, affects the development level and scale of logistics industry. Industrial development is an important demand source of logistics business. The deep integration of logistics industry and other industries is beneficial to the development of manufacturing industry. And the logistics industry is also conducive to manufacturing costs and improve competitiveness. The following describes the integration between the logistics industry and other industries. First, the government carries on the corresponding planning in the top-level design, promulgates the corresponding support policy, further strengthens the market norm. Through these, the fusion of the two has rules to follow. Secondly, in order to further optimize the integration of the market environment, the government should strengthen the relevance of industries, enhance the linkage mechanism. Thirdly, it is necessary to build the information sharing platform and communication coordination mechanism among industries, unify the information standards, link up supply and demand effectively, and improve the logistics efficiency. Fourthly, the integration of industrial development should be combined with emerging technologies, and use the smart logistics to promote the real economy. Finally, the realization of mutual benefit needs to strengthen regional cooperation, accelerate the integration of resources, innovative service models.[6]

4.5. Continuously improve the training level of logistics professionals

The development of modern logistics industry puts forward higher requirements for logistics professionals. Each university needs to anchor the standard of market demand, integrate industry and education, work out the talent joint training plan and carry out the enterprise staff skill training. Through the study of theory knowledge and professional skill training, universities can train high-quality and compound technical talents, and supply high-matching logistics talents for enterprises.

Acknowledgement

This paper is the 2022 Hebei Chemical Medicine Vocational and technical college key research project results. Title of the project: Study on the path of logistics efficiency improvement under the coordinated high-quality development of Beijing-tianjin-hebei. Project number: YS2022001.

References

- [1] Wang Zhitai. *Peter Drucker and the black continent*. *China Storage & Transportation*, 2016-8-1.
- [2] Wang Zhitai. *Also on black continent and logistics icebergs*. *China Chu-yun*, 2012-05-01.
- [3] Wang Zhitai. *A random talk on logistics "The third profit source"*. *China Chu-yun*, 2018-06-01
- [4] Ma Hongxia, Liu Lijun, Li Huitai. *On the eight core ideas of modern logistics. market modernization*, 2007-05-01.
- [5] Chen Zhe. *research on the relationship between modern logistics industry and high-quality development of regional economy -- taking Gansu province as an example*. *Lanzhou Jiaotong University*, 2022-04-01.
- [6] Xin Ming. *review, reflection and prospect on the integrated development of logistics industry and manufacturing industry. national circulation economy*, 2022-09-28.