

Research on Logistics Cost System of Agricultural Product Supply Chain Under E-Commerce Environment

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Abstract: China's agricultural development is relatively backward, resulting in a serious lag in the development of agricultural product logistics, which not only greatly weakens the market competitiveness of China's agricultural products, but also has become the bottleneck of China's entire distribution system. Based on the current characteristics of agricultural product logistics in my country, this paper analyzes the impact of e-commerce on agricultural product logistics and puts forward the key points of the construction of agricultural product logistics system under e-commerce. This paper first describes the meaning of agricultural product supply chain logistics, and the seasonality of agricultural product supply chain logistics strong, large transportation volume and the composition of the supply chain logistics, transaction, and other cost systems, and then analyze based on the characteristics of the agricultural product supply chain and the composition of the cost system, and finally sort out some methods to adjust the logistics cost of the supply chain .

Keywords: Modernization Development, Rural Community Governance, New Urbanization

1. INTRODUCTION

China's agricultural development is relatively backward, resulting in a serious lag in the development of agricultural product logistics, which not only greatly weakens the market competitiveness of China's agricultural products, but also has become the bottleneck of China's entire circulation system. According to statistics, the loss rate of agricultural and sideline products such as fruits and vegetables in China is about 26-30% in logistics links such as picking, transportation, and storage, and more than 1/4 of agricultural products are consumed in logistics links. rate is kept below 6%. Therefore, by studying the logistics of agricultural products and gradually establishing a modern agricultural product circulation system, it will effectively solve the contradictions between the regional blockade and the smooth flow of goods in the circulation of agricultural products, the contradiction between the structure of agricultural products and market demand and improve the circulation speed and efficiency of agricultural products in China. Thus, greatly improving the international competitiveness of China's agricultural products.

To some extent, the raw materials of agricultural products are affected by local weather, humidity, water resources, seasons, and other factors. Different agricultural raw materials are abundant in suitable climates and regions, so that the planting places of various agricultural products are not concentrated but distributed in different regions. At the same time, for most people, agricultural products are not dispensable products, but items that people need every day. Therefore, there will be no long-term unsalable phenomenon in the agricultural product market, and the price of agricultural products will not be very high. It affects people's purchases to a great extent. Due to these reasons, the characteristics of agricultural product supply chain logistics can be concluded: first, since the crops are mostly mature in spring and summer, the yield of crops is particularly abundant in these two seasons, and at the same time , so that a large amount of transportation is required at this time. However, in other seasons, there is no need for excessive transportation. The corresponding demand for warehouse transportation will change with the change of the

season. Therefore, the logistics of the agricultural product supply chain is affected by the season to a certain extent .

In addition, it is precisely because the seasons affect crop yields that the output of agricultural products is too large, which in turn breaks the balance of agricultural product supply chain logistics at this stage. Liu Mengyan et al. (2012) analyzed the implementation steps of agricultural product logistics cost accounting from the perspective of enterprises, based on the value chain theory, and with the help of time-driven activity-based costing. Zhao Zhitian and He Yongda et al. (2014) conducted theoretical analysis on the construction of agricultural product logistics theory under the e-commerce environment, and empirically analyzed the level of agricultural product e-commerce logistics.

The above research only focusses on the logistics cost of specific enterprises, and do not apply the activity-based costing method to the logistics cost system of the agricultural product supply chain under e-commerce, and do not effectively sort out the logistics costs among the members of the supply chain. The development of third-party logistics at the end of the cold chain lags. At the end of the cold chain, third-party logistics companies are required for terminal transportation. In my country, third-party cold chain logistics companies are generally small in scale, with imperfect information systems and limited network coverage, making it impossible to carry out high-quality cold chain logistics transportation. At present, when the demand in my country's cold chain logistics market continues to increase, due to the slow development, third-party business only accounts for about 20%. Agricultural infrastructure is backward.

2. THE PROPOSED METHODOLOGY

2.1 The Connotation of Agricultural Product Supply Chain Logistics

In recent years, the infrastructure construction of our country's national economy has developed by leaps and bounds, but for the infrastructure construction of agricultural product logistics, it still seems quite backward. It is mainly manifested in the level of roads, means of transportation, communication, and commodity storage and storage. Due to improper storage,

the degree of waste of agricultural products in the hands of farmers is far greater than the degree of waste in the entire transportation and circulation process after they are sold to the hands of consumers. The original intention of establishing an e-commerce platform for agricultural products is to make the transaction process of agricultural products more direct, fast, and convenient. However, not all regions in our country are suitable for establishing an e-commerce platform for agricultural products, and many regions cannot implement this plan. In addition, some suitable There are also some disadvantages in the area where the e-commerce platform is established. In the e-commerce platform, there are not many services related to agricultural products, which makes the scope of agricultural products in the e-commerce platform very small. At the same time, many platforms have limited understanding of agricultural product information. Insufficient, convenient, and fast trading of agricultural products cannot be realized through the e-commerce platform of agricultural products. The standard for allocating the cost of each business activity to the center of agricultural products, labor services or consumers is called activity driver, which is a bridge to communicate resource consumption and output.

Analyze the actual operation, split, and reorganize each operation activity, avoid redundant operation, improve process, and reduce cost. Transportation costs refer to all costs incurred for the transportation of fresh agricultural products, mainly including freight TF, and loading and unloading MAC, that is, $TC=TF+MAC$, specifically calculated according to different transportation methods and corresponding business accounting methods. Improve cold chain logistics policies and regulations and enhance the combination of cold chain logistics and e-commerce. In the current environment, formulate policies and regulations in line with the current situation of my country's cold chain logistics, further implement industry standards and related industry norms, strengthen the standardized rules and supervision of cold chain logistics in the operation process, integrate them into the e-commerce environment as soon as possible, and further Improve the coverage of cold chain logistics and strengthen the transaction status of cold chain logistics in the e-commerce environment, thereby promoting the development of cold chain logistics. Formulate a modern agricultural product logistics development plan suitable for the national conditions. Pay close attention to research and formulate a modern agricultural product logistics development plan suitable for my country's national conditions, constantly improve the corresponding market access laws and regulations, and further clarify the development direction, goals, principles, content, status, and role of my country's agricultural product logistics. It is necessary to establish a one-stop management system and service organization with the agricultural administrative department as the mainstay and all relevant functional departments participating in coordination, eliminate multi-management, simplify the project approval procedures of logistics enterprises, improve circulation efficiency and administrative management efficiency, and create a good environment for enterprise development.

Give the agricultural product logistics industry more favorable land, loans, taxation, and related support policies than other tertiary industries. Improve the equipment problems and transportation road problems that occur during the transportation of agricultural products, so that the loss during the transportation of agricultural products can be reduced, thereby reducing the loss cost. Use multiple transportation methods to transport agricultural products and formulate a

complete and efficient plan. In addition, to reduce the loss cost during the storage period, advanced preservation equipment and technology should be introduced in time. Regarding the allocation ratio of explicit and implicit costs, use fuzzy comprehensive evaluation, and based on discussions with relevant experts, combine the analytic hierarchy process to calculate the weight of each business in the explicit and implicit costs of each stage of the agricultural product supply chain.

2.2 Logistics Cost Analysis of Agricultural Products Supply Chain Based on Activity-Based Costing

Under e-commerce, in the supply chain of agricultural products, the transportation costs accounted for 0.30 of the explicit costs in the supply stage of the producers, with the largest weight, followed by inventory management and warehousing costs. According to the fuzzy comprehensive evaluation method, explicit and Hidden costs are equally important, and transportation costs and agricultural material expediting costs account for the largest proportion of logistics costs in the supply stage of manufacturers under e-commerce. Construct the distribution channel of cold chain logistics of agricultural products. Pay attention to the improvement of cold chain logistics related technologies and service standards, improve the equipment, facilities and tools of agricultural product cold chain logistics, speed up the transportation construction of cold chain logistics, adjust the network of cold chain logistics, promote the close connection of various transportation modes, and accelerate Develop multimodal transport of cold chain logistics to realize seamless connection between roads, railways, ports and airports.

Secondly, we need to help farmers use modern refrigerated warehouses such as micro-refrigerated storage, or fruit and vegetable constant temperature gas storage, to form a complete cold chain logistics industry for the first mile of freshness preservation, to control the quality of agricultural products from the source, and to further solve the problems of poor quality and high loss of agricultural products. Increase investment in the construction of modern agricultural product logistics infrastructure. To promote the construction of a modern agricultural product logistics system, government-guided investment is the key. Both the central and local governments should focus on listing special funds to strengthen investment in agricultural product logistics infrastructure, scientific and technological research and development, and professional personnel training.

Through preferential taxation, fiscal and other economic levers, soon, priority will be given to infrastructure projects such as agricultural product logistics bases, fresh-keeping and cold storage, and information platforms, and efforts will be made to improve transportation conditions such as roads, railways, aviation, and navigation that are closely related to the circulation of agricultural products. Increase investment in logistics research and improve the professional level of my country's agricultural product logistics technology. In the logistics of the agricultural product supply chain, establish a hardworking, responsible, and positive image, and at the same time, carry out stable cooperation with various partners in the agricultural product supply chain. Long-term cooperation between various partners requires mutual trust, but not Exclude the situation that the reputation of the collaborators is too low. Therefore, to effectively solve such problems, the punishment to be accepted when this problem occurs should be clearly stipulated, and clear and strict regulations should be

established. In addition, the news of all collaborators should be synchronized, to avoid the loss due to information delay. Increase investment in science and technology, improve quality, and extend life cycle. Because fresh agricultural products are perishable, perishable, and vulnerable, cold storage and cold chain logistics equipment and technologies are constructed to keep agricultural products at low temperature, reduce losses during storage, improve the quality of fresh agricultural products, and prolong the life of agricultural products cycle, and then prolong the online sales cycle of agricultural products, so that the cost of inventory backlog and price reduction can be reduced, and the management efficiency of inventory can be improved.

Adopt a variety of promotional methods to promote sales. In the online sales stage, fresh agricultural product e-commerce companies adopt discounts, rebates, and other promotional activities to expand the sales volume of fresh agricultural products, reduce the inventory of fresh agricultural products, and increase the revenue of the fresh agricultural product supply chain. Improve the informatization level of the cold chain logistics industry. In the current e-commerce environment, all cold chain logistics companies must attach great importance to information construction, strive to integrate into the current environment, strengthen information communication, broaden information sources, and strive to upgrade the traditional mode of cold chain logistics services to e-commerce mode, actively adopt the current advanced logistics information technology, such as bar code, radio frequency identification, geographic information system and global positioning system, and continuously improve the level of informatization, so as to gain a foothold in the current environment and develop in the long run.

3. CONCLUSION

The development of modern agricultural product logistics industry is a breakthrough in deepening the reform of the circulation system, and an important part of effectively solving the "three rural" issues and building a new socialist countryside. The strategic conception of the construction of my country's agricultural product logistics system is to base itself on the domestic market, expand the international market, support agricultural product resources, brand cultivation and primary and deep processing, break the limitations of traditional industries, departments and regions, optimize and integrate logistics resources, and establish information the shared platform optimizes the key operation areas such as transportation and inventory backlog price reduction processing, which is of great significance to the research on the logistics cost system of the agricultural product supply chain under the e-commerce environment. However, under the e-commerce environment, the logistics cost system of the agricultural product supply chain needs to be further refined, and the breadth and depth of optimization solutions in key areas need to be further explored.

4. REFERENCES

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