Research on Agricultural Products Logistics Operation Mechanism Based on Computer E-commerce and Supply Chain Strategic Cooperation

Juan Cheng¹,*

¹Yingxin Hospitality Management College of CUIT, Chengdu, Sichuan, China, 611740

*Corresponding author e-mail: chengjuan@gingkoc.edu.cn

Abstract. This article focuses on studying the operation system of agricultural product logistics supply chain from the perspective of computer e-commerce. Starting from the theory of supply chain coordination and agricultural product supply chain, using computer big data to analyze the basic elements and basic characteristics of the existing agricultural product supply chain structure, and put forward the cooperation elements, logistics form, operation mechanism and profit issues of agricultural product supply chain. Through scientific research, we hope to have a positive impact on the future agricultural product logistics operation mechanism.

Keywords: Supply Chain Strategy Collaboration, Agricultural Product Logistics Research, Computer

1. Concepts of supply chain strategic synergy

1.1. The meaning of agricultural supply chain

Supply chain is a new term derived from the continuous development of the economy. It is a means of governance from the perspective of management. With the help of modern management theory, it has a good time constraint effect on the production industry [1]. This paper defines the meaning of agro-supply chain to a certain extent through integration: the core node is the key point of agro-supply chain, and the whole process is controlled and constrained by data, investment and other contents, according to farmers themselves, suppliers of raw materials, breeders, sellers, processors and others. Relevant staffs constitute an organizational structure covering many stages of the Internet of Things.

1.2. The meaning of synergy theory

Synergy is the cooperation and coordination of different parts of the organizational structure, and makes the whole level of the system reflect the original different characteristics. In the subsequent studies of "synergy" by various scholars, we can find that most researchers regard this definition as the theoretical basis and continue to develop [2]. Through reading and reflecting on a large number of materials, this paper argues that "synergy" is a cooperative process in which multiple organic individuals of different nature carry out information and data exchange and improve comprehensive
quality in order to achieve a certain goal.

2. Organizational mechanism of agricultural products logistics

2.1. Obstacles to operational development
For a long time, China has carried out the reform of the agricultural industry focusing on the household contract responsibility system. It has to be admitted that the household contract responsibility system can liberate the productivity of our country to a great extent and gradually divide agriculture into many industries of different scales. At present, most peasant households take the decentralized management of one household as the main form to participate in the initial stage of agricultural production and flow. This decentralized mode of operation is not conducive to the overall development of the agricultural industry. With the gradual improvement of the commodity level of agricultural products, the form of household-to-household decentralized operation will expose more shortcomings, resulting in the slow progress of the era of "big circulation" of agricultural products. Therefore, the decentralized forms of production and logistics of farmers have gradually become obstacles to the development of agricultural logistics operation.

2.2. Agricultural products logistics operation mode
Firstly, the leading mode of enterprises. Enterprise-led logistics mode of agricultural products supply chain is not traditional wholesalers, and it is directly excessive to distributors and retailers through supply chain integration. It mainly includes four main objects: farmers, processing enterprises, retailers and final consumers. Under this mode, the processing of agricultural products and other processing processes will be internalized gradually, which will increase the dependence on the logistics management mode. If we do not improve the reasonable logistics operation mechanism, it will reduce the overall circulation efficiency of rural production products.

Secondly, the leading mode of retail enterprises. Retail is an important aspect of the whole sale of agricultural products. In order to get more information and improve the understanding of the market, retailers must strengthen their cooperation with enterprises. Only in this way can we fundamentally achieve the goals set by both sides and realize the sharing of resources.

Thirdly, the leading mode of farmers' professional cooperatives. This form of dominant mode is a more common form of logistics operation structure. Cooperatives use various methods to distribute farm products produced by farmers through appropriate processing and packaging. To retailers, or through other means to produce products from farmers to supermarkets or indirectly distributed to the hands of the final consumers. Through the use of this way, we can develop the independent brand of peasant households, for regional characteristics.

Fourthly, the way of wholesale market. In the past, the main objects of agricultural products distribution are farmers, producers, processors, retailers and so on. They are all small-scale and inefficient distribution operations. Their overall cost is higher and their efficiency is lower. Accompanied by this problem, the quality of delivery can not be guaranteed. The wholesale market will set up a direct information and data collection organization to search for the overall demand of agricultural products and related information of agricultural products, and use information flow, logistics and other technical means to guide decision-making.

3. Profit-making mechanism of agricultural products logistics
The profit mechanism of agricultural products logistics is established for perfecting the problem of fair distribution of profits. The main reason for the existence of this mechanism is to distribute the profits on the basis of fairness, authenticity, rationality and legality. Next, the profit mechanism of agricultural products logistics should be discussed appropriately.

3.1. Value creation mechanism of agricultural products logistics
In order to enhance the value of agricultural products logistics, we must first provide efficient
distribution services to consumers. With the continuous improvement of people's living standards, consumers’ satisfaction for basic living needs has shifted from eating, clothing and warmth to the pursuit of high quality and efficiency of various services. Therefore, there are new requirements for the variety, freshness and distribution speed of agricultural products, such as people often go to the fresh counter of supermarkets to buy more fresh agricultural products. Consumers are paying more and more attention to the taste, quality and nutrition of agricultural products. Therefore, vegetables, fruits and fresh agricultural products should maintain their freshness as far as possible in the process of logistics distribution, and more attention should be paid to products which are vulnerable to deterioration caused by external factors. Therefore, we should improve the efficiency of agricultural products logistics service, plan and control the distribution process as a whole, and improve the service level.

3.2. Incentive and restriction system of agricultural products logistics
The incentive and restraint mechanism of agricultural products mainly revolves around the effect organization form formed by agricultural products. In the constrained incentive mechanism, the core enterprise acts as the initiator and principal of the supply chain. As the agent of the agricultural supply chain, other nodes basically constitute the logistics supply chain. Each individual in the supply chain has its own interest choice, so even in the same interest system, the interests of each component can not be unified, so we can find that the information in the supply chain is asymmetric. Therefore, the incentive and restraint system of agricultural products supply chain should carry out reasonable benefit transfer and profit transfer, thus avoiding the opportunistic behavior of different individuals at each node.

3.3. Agricultural products logistics operation support mechanism
The main support of the operation mechanism of agricultural logistics supply chain is talent dependence, cultural dependence and technical support. The following three aspects are described in detail:

First, talents. Talent dependence is the key to the operation of the supporting mechanism. For the crop logistics supply chain produced by farmers themselves, talent is the key to technological improvement and reform. Agricultural science and technology has made great contributions to the growth of national GDP, and the crops produced by farmers themselves have become the focus of increasing concern. In all stages of agricultural logistics operation mechanism, professional and technical personnel will be required to grasp and innovate the overall supply chain, only in this way can more value be created.

Second, culture. Cultural support is the guarantee of the operation of the supporting mechanism. Agricultural product logistics supply chain based on strategic synergy is guaranteed by cultural support. Therefore, ensuring the cultural support of supply chain is the key to enhance the competition of agricultural products. Excellent cultural environment support can promote the expansion of the effect and scope of agricultural logistics operation, and it is one of the favorable environmental supports.

Third, techniques. Technical support is the fundamental way to support the operation of the mechanism. The development of information logistics technology has gone through more than 100 years, from the initial storage function to the superb level of computer network, which has been achieved through unremitting efforts. From the informationization and autonomy of logistics operation before and after 1990 to the network liberalization at the present stage, logistics technology has undergone the changes of integration, integration and computer network technology integration. The level of agricultural logistics supply chain has a direct impact on the functional improvement and effectiveness of agricultural products logistics supply chain. Therefore, technical support is the key factor to improve the competitive level of modern agricultural products.
4. Summary
The continuous progress of the circulation of agricultural products is the primary concern of the "three rural" issues at this stage, and it is related to the environment for the development of the national economy. This article focuses on the research of the operation system of the agricultural product logistics supply chain based on the scientific analysis of big data. From the perspective of computer e-commerce supply chain coordination and agricultural and sideline product supply chain related theories, it analyzes the basic elements and basic characteristics of the existing agricultural product supply chain structure, and studies the cooperative elements, logistics forms, operating mechanisms and profit issues of agricultural product supply chains. It is hoped that this will have a positive impact on the establishment of a circulation mechanism for agricultural products in the future.

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