

Digital Economy Enables Community Group-buying Fresh Agricultural Products Supply Chain Management Optimization

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Abstract: In the context of China's digital economy promoting social development, this paper based on the characteristics of fresh agricultural products perishable, difficult to preserve and easy to wear, with the help of digital economy enabling model, explores the practical problems of community group purchase of fresh agricultural products, and analyzes its supply chain management. The analysis results show that the optimization of supply chain management depends on the digital economy, which can effectively do a good job in factor allocation, model innovation and information transmission, and achieve win-win benefits of multiple entities by improving product quality control, forming core competitiveness, balancing supply and demand and controlling costs, and meeting the diversity requirements of consumers. This study can explain the potential problems of the current agricultural product supply chain to a certain extent, and also provide a reference for the digital economy enabling community group-buying fresh agricultural product supply chain management optimization.

Keywords: Community Group; Digital Economy; Fresh Agricultural Products Supply Chain.

1. Introduction

The concept of China's "digital economy" first appeared at the G20 Summit in Hangzhou, and its subsequent development is rapid and powerful, and has a significant impact on China's industrial economy in various fields. "Digital economy" is the product of the combination of modern information technology and the development of human society and economy, and is closely related to people's modern lifestyle[1]. At the same time, the rapid development of the digital economy has also had a profound impact on the world economic pattern, and the digital economy has reshaped the relationship between individuals, enterprises and society to a certain extent. As an emerging economic system, digital economy mainly digitizes and informationizes production factors through modern information technology, so as to optimize economic structure and development path[2]. The specific performance is as follows: The essential digital technology attribute of the digital economy, with a high degree of digitalization, networking and intelligence, can rapidly promote industrial production, logistics distribution and product sales and other services, build a multi-win relationship among enterprises, distributors, retailers and consumers, ensure that the diversified needs of consumers are met, and maintain a sustainable development state[3].

The supply chain of agricultural products is composed of multiple entities, from the supply side to the demand side, the upstream agricultural material suppliers and agricultural product producers, the midstream logistics providers, suppliers, distributors and retailers, and the downstream consumers, which together constitute a complex and diverse agricultural product ecosystem of capital flow, product flow and information flow[4]. Among them, agricultural producers are connected to agricultural suppliers on the top, and logistics providers and distributors on the bottom. Distributors need to transport agricultural products to retailers around the world through logistics providers, who then sell agricultural products to consumers[5]. In this process,

agricultural suppliers and logistics providers play an important role, participating in the operation of the entire supply chain. At the same time, the flow of products is from the supply side to the demand side, and the flow of money and information is two-way.

2. Community Group Purchase Fresh Agricultural Products Supply Chain Realistic Dilemma

Consumers under the digital economy have begun to accept the new retail model of "online + offline" and are accustomed to the sales of community group-buying goods under social e-commerce. According to relevant statistics, fresh agricultural products, as the mainstream commodities of community group-buying, occupy the main position in sales, indicating that community group-buying fresh agricultural products have a large market and high demand in our country[6]. However, the production of agricultural products themselves are perishable, difficult to preserve and easy to consume, and there are loopholes in the management of the supply chain of fresh agricultural products bought by community groups: low standardization of fresh agricultural products, large uncertainty of distribution, and low level of business integration, leading to prominent problems such as low quality control level, low service level, insufficient informatization level, and difficulty in cost control[7].

2.1. The Low Level of Product Quality Control in Supply Chain

In the process of delivery of fresh agricultural products in the supply chain, there are certain management risks, the product standardization is low, and it is difficult to form a unified quality standard in the market. In community group buying, each platform fights for itself, purchasing and selling based on its own platform advantages, and the quality control of fresh agricultural products is not in place. As the main body of community group buying, fresh agricultural products are

perishable, difficult to store and easy to wear out. They are the daily necessities of community residents and have a high frequency of purchase behavior. Consumers are highly sensitive to the price and quality of fresh agricultural products. The quality control problems in the supply chain of fresh agricultural products are bound to leave a bad impression on consumers, reduce the trust in community group purchase of agricultural products, and then cause the loss of user groups

2.2. The Weak Product Competitiveness of Supply Chain

Community group purchase of fresh agricultural products is based on the e-commerce channels, combined with the characteristics of the community model innovation. This innovative model has low imitation cost and low entry threshold conditions, and it is difficult to form the necessary core competitiveness. In recent years, with the support of capital, the number of community group buying platforms has increased rapidly, showing a blowout trend, such as: buy more food, Tao food, Meituan food, box horse fresh, ten Hui group, etc. However, the increase in the number of community group purchases did not bring about the improvement of the core competitiveness of fresh agricultural products, but the fierce market competition, resulting in the supply chain into the vicious competition of low prices, unable to form the core competitiveness of products.

2.3. Supply and Demand Imbalance and High Cost in Supply Chain

After the community group purchase of fresh agricultural products has formed a certain scale, consumers will put forward higher requirements for the diversity of fresh agricultural products[8]. For different products, there will be a sharp increase or decrease in the order volume, which will put higher requirements on the toughness and logistics capacity of the supply chain. However, due to the lag of information, it is difficult for the procurement side of the supply chain, distribution logistics and sorting personnel to keep up with the changes in product demand in time, which will occur in two situations: first, when the product demand surges, the supply chain supply is insufficient, will be out of stock, distribution delay and other phenomena, resulting in an imbalance between supply and demand in the supply chain, which will not only lose the opportunity to make profits, but also cause the loss of customers. Second, when the product is reduced sharply, the supply chain is oversupplied, it is easy to have a backlog of products in the warehouse, and the perishable characteristics of fresh agricultural products have higher requirements for storage and preservation, which will lead to high costs in the supply chain.

3. Digital Economy Enables the Management and Optimization of Fresh Agricultural Products Supply Chain

The optimization of supply chain management enabled by digital economy is not only the economic reality of the current society, but also the general trend of the future prospect of supply chain. The enabling advantages of the digital economy are mainly reflected in the following two aspects: First, the digital economy can influence different subjects in the supply chain at the micro level, do a good job in the supply chain of fresh agricultural products quality control, and form the core

competitiveness of the supply chain; Second, the digital economy can adjust the balance between supply and demand at both ends of the supply chain on a macro level, effectively reducing unnecessary cost expenditures.

3.1. Digital Economy Improves Quality Control in Supply Chain

Digital economy can improve the allocation effect of supply chain. This not only increases the quantity of production inputs, but also improves the quality of inputs. Through the Internet technology in the digital economy, we can fully explore, analyze and use big data information to effectively connect producers, sellers and consumers in the middle and downstream of the supply chain to meet the rapid and changing product needs of consumers. The effective use of data information in the supply chain by the digital economy ensures the precision of resource allocation of different links of production factors in the supply chain. Through the accurate allocation of elements in the supply chain, quality control problems caused by resource mismatch can be avoided, so as to do a good job in product quality control of fresh agricultural products.

3.2. Digital Economy Enhances the Core Competitiveness of Supply Chain

The digital economy can improve competitiveness. Digital economy can amplify the positive feedback effect of technological innovation and progress, which is reflected in the innovation of business models and organizational relations, such as the sharing economy and O2O, which are popular in recent years. These business models can not only create new market demand to a certain extent, expand market boundaries, increase the capacity of both ends of supply and demand, and meet the needs of new products and services of different consumer groups. Provide unique product service supply. This innovation brought by the supply chain can enhance the image of products in the minds of consumers and establish core competitiveness.

3.3. Supply and Demand Balance and Cost Control of Supply Chain in Digital Economy

The digital economy can increase the efficient transfer of information along the supply chain. On the one hand, it increases the effectiveness of information and converts complicated data into useful transaction information, especially the matching effect on both supply and demand, which can make up the gap between supply and demand or reduce the surplus between supply and demand. On the other hand, the new price mechanism to coordinate all links of the supply chain avoids unnecessary cost expenditures such as searching information cost and bargaining cost brought by opportunism by reducing information asymmetry. The digital economy can optimize the resource channel management of the supply chain in terms of information provision: first, improve the coordination ability of the supply chain. Make use of the information advantages of the digital economy, effectively search for local market resources, actively cooperate with local suppliers and logistics enterprises, integrate the local mature supply chain into the supply chain system of fresh agricultural products, and reduce the cost of market development; Second, establish a flexible management mechanism for smart supply chains. The

consumer information database of fresh agricultural products is built by using digital economy, and the consumption preference of each community group purchase is depicted by big data images. According to the consumption preferences of different communities, a good balance between supply and demand can not only strengthen the coordination among all links of the supply chain, promote the interaction and cooperation of the main bodies in the upper, middle and lower reaches of the supply chain, achieve complementary advantages and information sharing, but also improve the flexibility and buffering of the supply chain in transportation and warehousing, so that different fresh agricultural products can be delivered to the right consumers. To maximize the diversity of products required by end consumers.

4. Conclusion

As an extension of traditional sales, fresh agricultural products in community group buying have certain characteristics of The Times, which not only conforms to the development law of market economy, but also meets the demand of consumers for fresh agricultural products in modern society. However, there are practical problems in the supply chain of community group purchase of fresh agricultural products. In the fierce market competition, the effective use of digital economy can improve the quality control quality and product competitiveness of the supply chain of fresh agricultural products purchased by community groups, effectively balance supply and demand of the supply chain, effectively reduce supply chain costs, and then optimize the management of the supply chain.

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