Utilizing E-commerce to Promote Competitiveness of Hubei Agricultural Industrial Chain

Die Hu

Abstract: E-commerce plays a decisive role in the transformation and upgrading of traditional agriculture to modern agriculture. It has great significance to enhance the competitiveness of the agricultural industrial chain, increase farmers' income and improve agricultural efficiency by applying it into management of agriculture industry chain. Therefore, it is necessary to make full use of agricultural e-commerce to create an accurate information chain, enhance organization chain, upgrade Logistics chain, maximize the value chain. In this way, we can improve the competitiveness of Hubei's agricultural industry fundamentally.

Key words: Agricultural E-commerce; Hubei; Agricultural Industry Chain

Whether it is policy-oriented or market demand, the development of agricultural e-commerce can indeed be regarded as a major trend of agricultural development. It is also an important segment which is full of vitality and become the center of attention during the process of transformation and upgrading of traditional agriculture.

1. The definitions of agricultural e-commerce and agricultural industry chain

Industrial chain theory stems from Adam Smith's division of labor theory. It refers to the chain of material flow of industrial production process, which includes material supply, intermediate manufacturing and final consumption and other sectors. During the process, the value of resources is transferred and passed on to the next step until reaching to the final consumer. Therefore, some scholars use supply chain and value chain to replace the concept of industrial chain. But I think the industrial chain should be the organic combination of information chain, organizational chain, logistics chain and value chain. Agricultural industry chain is no exception. The agricultural industrial chain runs through the three stages of prenatal, mid-production and post-production of agriculture. It covers many aspects of agriculture, such as production, processing, transportation and selling of agricultural products. It is an organic combination of agricultural value chain, information chain, logistics chain and organization chain.

Die Hu, Wuhan Donghu University, HuBei, China
2. The present situation of Hubei's agricultural industrial chain

Hubei is a major agricultural province. The diversity of natural conditions gave birth to a wide variety of species and resulted in a diversified agricultural composition that included farming, forestry, livestock husbandry and freshwater aquaculture. Therefore, Hubei Province has plentiful agricultural chains. However, overall, at present, the degree of organization of agricultural industrial chain in Hubei Province is not high, and the upstream and downstream of the industrial chain are weak. The mid-stream of industry chain is dominated by a large number of small-scale farmers. Although new types of agricultural producers and agricultural organizations have been emerging in recent years. However, the links through the whole industry chain are not related so closely, presenting a kind of loose chain form. A high efficient industry chain which has adequate allocation of resources and information sharing system has not set up yet, which resulting in limited value creation of the industry.

2.1 The infrastructure services in the upstream of the industrial chain are poor, and a sound agricultural service system has not been established.

Upstream of the agricultural industry chain covers several important areas, agricultural ecological environment, agricultural basic research, agricultural facilities and equipment, agricultural technology and so on. Correspondingly, there are agricultural services, facilities agriculture, seedling industry, etc., and the development of these industries is still unsatisfactory. Modern agricultural service industry can not provide enough research support especially for comprehensive farming plan and design. And it also can not provide scientific and effective information resources for the majority of agricultural producers and managers in the mid-stream, which directly leads to the unplanned and experienced production mode. As a major agricultural province, agricultural service industries only occupies a very low proportion, with the traditional agricultural service as its mainstay.

2.2 The leading enterprises in the midstream of the industrial chain are developing rapidly, but the main body in the mid-stream are still small-scale farmers

The development of leading agricultural industrialization enterprises is an important force that promotes the development of modern agriculture and increases farmers' income. In recent years, with the strong support from Hubei Province, the leading enterprises of agricultural industrialization in Hubei Province have been gradually developing. In the year to 2016, there is a total of 644 key provincial-level enterprises, represented by Hubei Black Duck Food Industrial Park Co., Ltd., Wuhan Baishazhou Agricultural and Sideline Products Market Co., Ltd. and Hubei Liangpinpuzi Food Industry Co., Ltd., Among them, 41 are state-level leading enterprises. Despite the rapid development of leading enterprises in our province, there are still some gaps compared with other provinces. For instance, Shandong Province has 85 state-level industrial enterprises, while we only have less than half of theirs. Large-scale farming households account for only 2.1% of the households in farming. It can be seen that the agricultural production in Hubei Province is still dominated by small-scale farmers.
2.3 The standardization and brand building in downstream industry chain needs to be strengthened.

Downstream of the agricultural industrial chain includes many aspects, such as agricultural products processing, storage, transportation, marketing and selling. The agricultural products processing industry in downstream in turn has an important impact on the entire downstream industry chain. In recent years, the "four batches of projects" implemented in Hubei Province have made remarkable achievements in the agricultural products processing industry. As of 2017, the ratio of the province's agricultural products processing industry output value and agricultural output reached 2.5:1. However, the problems still exist, such as the low value of agricultural products and the urgent need to strengthen brand development. The supply of agricultural products in Hubei Province is dominated by low quality products, and the proportion of high-quality rice, brand-name products, fine fruit and tea, high-quality farm products and aquatic products is relatively low. In addition, the selling channel of agricultural products in Hubei Province is long. Agricultural products will go through different stages, such as traders, suppliers, supermarkets, or cooperatives and leading enterprises, and then reach to final consumers. No matter what kind of sales channels is, the price will go up, resulting in high production costs.

3. Using e-commerce to enhance the competitiveness of Hubei's agricultural industrial chain

3.1 Using agricultural e-commerce to create a precise industrial information chain

Making full use of e-commerce network capabilities, using big data and cloud computing to improve the quality of agricultural information, accelerating the flow of agricultural information, and establishing a shareable agricultural information base so that supply and demand sides can communicate in time and without space limits. In this way, We can timely arrange agricultural production according to market changes and adjust the contradiction between production and market so as to reduce the risk of agricultural production and improve the efficiency of agricultural industry.

3.2 Using agricultural e-commerce to create efficient industrial organization chain

It is important to strengthen rural e-commerce personnel training and effectively improve the farmers’ application capabilities of e-commerce. It will help agricultural operators to establish real-time contact with the big market, establish a stable relationship between production and sales. At the same time, it is of great significance to drive the main bodies in all aspects of the organizational chain to intensify and specialize the production in large scale according to the market demand, and fully integrate scattered social resources, improve the efficiency of allocation of agricultural resources to enhance the organizational efficiency of the industrial chain.

3.3 Using agricultural e-commerce to upgrade agricultural industry logistics chain

The circulation of agricultural products is the most urgent problem to be solved in the agricultural industrial chain in Hubei Province. However, due to the poor quality and low level of standardization of agricultural products, the price of agricultural products can not go up. In addition, too many circulation links, multi-level distribution, and price increases in every link make the final consumers bearing high cost of the purchase. The development of agricultural e-commerce can not only promote the standardization of agricultural products, improve the quality of agricultural production and brand awareness of farmers. It can also enhance the traceability and pricing power of agricultural products to protect the interests of...
consumers and the interests of agricultural producers by using e-commerce technology. Besides, we can also use e-commerce to build direct online selling channels from producers to consumers, to achieve optimal sales mix, reduce inventory and cut the circulation costs of agricultural products. In short, the use of e-commerce can fundamentally subvert the traditional agricultural distribution channel system.

3.4 Using agricultural e-commerce to maximize the agricultural industry value chain

According to Michael Porter's theory of the value chain, the agricultural value chain is a collection of activities of producing, marketing and selling agricultural products. It includes basic value chain and auxiliary value chain. The basic value chain is a value chain that includes activities such as plowing up a land, planting, growth, fertilization, harvesting, processing and marketing of agricultural products. Auxiliary value chain is a value chain that includes auxiliary activities such as agricultural research service, agricultural technical support, agricultural production supply, raw material supply, agricultural equipment supply and human resource management.

Making full use of e-commerce can not only realize the value added of key links in the value chain of agricultural industry, but also expand and extend the agricultural chain so as to enhance the efficiency of the chain. Such as making full use of e-commerce, deep processing products according to market demand, accelerating the development of green organic agricultural products to increase the added value of agricultural products. Making full use of e-commerce to promote agricultural brands, regional agricultural public brands, developing agritourism can increase the profit margins and create value.

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