A Study of the Status and Strategies of Agricultural Products E-commerce in China

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Abstract. To derive a profound understanding of the dilemma in agricultural E-commerce development in China, we mainly analyzed recent situation and focused on restraints in agricultural products E-commerce of our country by integrating theory with practice. In addition, we will make further step to study the process of the agricultural products E-commerce in China.

The Status of Agricultural Products E-commerce in China

With the development of the agricultural products E-commerce, the new competitive structure oligopoly has been formed (2 super companies, some big powers, and niche). The super two is JD and Ali which occupied over 80% market share in China; the big powers refer to many competitive websites such as Womaiwang; niche means those websites which possess unique features like Chinese geographic products online mall.

Trading patterns of agricultural products E-commerce in China

From the view of trading platforms, there are five main agriculture products E-commerce patterns: government agricultural products website, the agricultural future market of network transaction platform, the electronic transaction platform of commodity, the professional wholesaling of agricultural goods online and the commodity retails.

From the view of profit models, the main models are supply chain-driven, marketing-driven, product-driven, and service-driven.

From the fresh agricultural produce, the basic model B2C has turned into F2C model (which supplies goods directly by farm), C2B model (which is made from consumers, and C2F model (which make orders for goods in farm).

Through observing B2B, some novel models of E-commerce have appeared, such as the website called sugar of Guangxi, China cotton and the Chinese grain net.

In terms of the market system, agricultural-related E-commerce models mainly consist of online futures market, the bulk commodity market, and E-trade spot market.

E-payment models of produce in China

Agricultural products E-payment models are diverse, such as internet payments, mobile payments, cash on delivery which is based on POS machines, card-based payments, coupon payments and cash on delivery. It means that the model of modern payments, traditional payments and traditional & modern payments exist simultaneously. What’s more, the offline payment is also popular.

Logistics models of agricultural E-commerce in China

Generally, the circulation of agricultural products usually go through a series of processes such as harvesting, pre-cooling, graded-packaging, storage (ice, simple CA storage and CA storage), translation, wholesale, retail terminals and so on. The agricultural products cold-chain logistics emerges when controlling temperature is considered as the process management.
E-commerce cold chain logistics distribution model for fresh agriculture products

Present logistics modes of fresh agriculture products e-trade includes:
(1) Self-support transportation
(2) Self-support transportation & the third party distribution
(3) Self-support transportation & customers picking up by themselves/ the third party distribution
(4) The third party transportation & customers picking up by themselves/ third party distribution
(5) Logistics alliance distribution
(6) The O-S-O logistics mode
(7) Integration of transportation and distribution mode
(8) The forth party distribution
(9) The fifth party distribution

E-commerce cold chain logistics for fresh agriculture products

With respectively distinctive characteristics and applying areas, there are three ways of cold chain logistics: single economical unit, regional cold chain network, and cross-region cold chain network.

O2O model of agriculture products in China

In 2015, the amount of online retailers who moved from online models to various offline models (O2O model) have continuously increased. With online convenience combined with offline delivering services, for instances, Tiantian Orchard online which is available in Tiantian Deliver Services now; Ali-online goes live in fresh products deliver services; Jingdong online who was set in Jingdong door-to-door deliver services; Xianda online that went into Xuxian deliver services, true life on the natural convenience, Amazon’s fresh goods on the platform of Amazon and so forth, these retailers who have carried out various O2O services that integrated with fully mobilization of cellphone apps and wechat public accounts that oriented to customers' needs have availed themselves to have door-to-door services in the shortest time by optimizing available resources in offline stores.

Factors that restrict the development of agricultural products E-commerce in China

Although agricultural E-trade in China is developing rapidly, the overall level is still lower than Europe and other developed countries. Furthermore, the E-trade penetration rate of agricultural products E-commerce is well below garment and electronics industries because some factors restrict the development of agricultural products E-commerce.

Backward infrastructures of agricultural products E-commerce

In rural areas of China, especially those remote districts, as the result of slow process of cyber infrastructures, fiber is still unavailable in some rural regions. Poor network infrastructures caused the lag of E-commerce platform construction and the lack of rural internet users. The result is that the development of upstream supply chain is impacted. According to the statistics of China Internet Network Information Center (CNNIC), the scale of Chinese rural netizens reached at 156 million, accounting for 27.6% of overall Internet users in 2012; the population of countryside netizens is 177 million (28.6% of all users) in 2014 and the number of netizens amounted to 198 million, 31.5% coverage of all.

The undeveloped standard construction of produce

At present, main fresh food E-commerce platforms includes Easy Go, Sf-express of Optimization, True Life, Zhengdatiandi, and Daily fruit. Data shows that 40 percent goods from these platforms are imported goods. The main reason is the non-standardization of agriculture products. E-commerce transaction demands vendors to show commodities with consistent information, but the truth is that most of our domestic agriculture production scales are small. In addition, these individual production units will cause difficulty to form a quality standard system and cause obvious diversities of produces. Therefore, due to the lack of sound quality standard system, Chinese agricultural products are hard to meet the international standards. The result is that its export is limited and it’s hard to exert
the advantage of the agriculture E-commerce in international trade. According to statistics, the high ratio of refund reached 10% of all online agricultural products international trade as a result of undeveloped standard construction.

Poor level of modern logistics

Logistics is a formidable bottleneck which can set limits on development of agricultural E-commerce in China. Backward logistics technologies and insufficient constructions of rural logistics are contributing to high logistics cost. In agricultural online sales, logistics cost will reach at 25%-40%. In the same circumstance, the logistics cost of costume and electronic products are under 5%.

Within the logistics system of agricultural E-commerce, packaging, refrigerating, and preliminary treatment are must for fresh produce. The reason for these processing is that it can effectively preserve food from decaying and avoid infecting other fresh goods. If the produce of agriculture causes secondary pollution, the transport time and trading radius will become limited. At present, most agricultural products logistics is in natural temperature and status, and cold-chain logistics are hardly used in our country. Actually, the poor situation of transportation brings serious damage to those products.

The frailty of talents and technologies

Nowadays E-commerce has been entering into the mobile cloud computing age. Technology and talents have become mainstay of many enterprise and industries. Building agricultural mobile E-business not only need the talents who excel in network information technology but also should not miss inter-disciplinary talents who know well about agricultural economy rules. But for a long time, cultivating agricultural e-trade talents, has been rarely treasured by government. Therefore, this kind of business is short of elite because of the inadequate investment. The survey of the Taobao network business enterprise from Taobao research revealed that 28% online shop sellers thought they lacked customer service staff, about a quarter of companies were short of promotion, 22% shops had ineffective operation, and 19% enterprise thought they needed art designers.

Study on Countermeasures of the Development of Agricultural E-commerce in China

The enhancement of rural E-trade infrastructure constructions

Internet plays an important role in the development of E-commerce, and the rural areas are the center of farming. Nevertheless, considering the bad effects that the development of agricultural products of E-commerce brings to the countryside, we should attach great importance to the construction of E-commercial infrastructures. First of all, we need to expand the coverage of the internet to the countryside. Next, integrate present information facilities of the villages like the broadcasting, television facility and mobile infrastructure. What’s more, it requires our society to promote the construction of online agricultural information system and to push ahead the public network information platform in rural areas in order to enhance the E-trade of agriculture network usage.

The establishment of the agricultural products standardization system

During the operation of E-commerce, the standardization of commodities is highly required, whereas the standardization of agricultural products in our country is at a low level. Obviously, improving the standardization of agricultural products which include the standardization of quality, craft and specification is of great necessity. The standardization of craft refers to the standard of the processes of production. Also, the standard of specification has problems including the weight, volume, size and model. Issues like “lean meat powder”, “poisonous rice” and “poisonous leeks” have taken place in recent years have caused wide public concern, which reflects a fact that the standardization of quality is an important component of the standardization of agricultural products. However, the quality of agricultural products is affected by the manufacturing environment (such as water quality, soil and atmosphere), technical regulations during the processes of manufacturing and
all kinds of processing (such as picking, fresh preservation and storage). Standardized management system needs to be embedded in each link of the agricultural manufacturing in order to achieve the standardization of the produce better.

On account of the present situation, we should finish three important things of the agricultural standardization construction: Firstly, relevant departments need to contact more and create a set of integrity system for agricultural product standard which involves production, operational procedures of the whole process and the system of index. Secondly, our country should pay attention that domestic food standard reaches international standard. Last but not least, we should make sure that we will concentrate on the enforcement of food standard.

**The establishment of modern agricultural logistics system**

Certain characteristics of the agriculture products manufacture (such as territoriality, seasonality and defects of fresh products like food deterioration, perishable factors and inconvenience of storage) lead to a higher standard of delivery. Our traditional distribution of agricultural merchandise, including numerous trivial steps, low efficiency and high cost of logistics, cannot meet need of the development of the agricultural E-trade. As a matter of fact, modern logistics is the guarantee to realize E-commerce. The agricultural logistics is a novel form of integrated logistics which is based on the modern information technologies, combining logistics functions, just like transportation, store, loading and unloading, packing, circulation processing, delivery and information handing.

The E-commerce of fresh product is sprouting in recent years. Cold-chain logistics is an inevitable question in the development of the business. Cold-chain logistics with a long-term investment payback, which also calls for a large amount of financial supports, has became a big problem for many fresh agricultural E-trade runners. Although some sellers have enough money to establish their own logistics systems, they still face the risk from unstable orders, strong seasonal influence and high operating cost.

**The career training for the agricultural E-commerce talents and modern farmers**

Talents of E-commerce, a crucial part in agricultural E-commerce development, are urgently needed in current domestic market. To change this situation, farmers’ awareness of collecting information, brand effects, modern business should be improved, and hence to promote their ability in using computers, web-searching, info-releasing, on-line trading and preventing risks. Meanwhile, to form a high-quality and well-structured team of agricultural E-commerce that can back up the future progress, we need to focus on cultivating inter-disciplinary talents in the list to act as a leading role.

**The promotion of agricultural branding formation**

The government is supposed to strengthen the policy and financial supports in agricultural branding construction and system enhancement, along with effective forces maneuver in all aspects with local relevant departments together. The local governments, basing on their own characteristic advantage industries, should focus on cultivating agricultural celebrated branding system. The authorities also need to combine with leading corporations and cooperatives as main part, trying their best to use superiority and integrated prime resources considering featured competitive enterprises as their basics. Besides, government should reinforce the quality monitoring on agriculture products, maintaining its reputation, expanding its influence on active marketing campaign.

**References**


