Research on the Sustainable Development Strategy of E-Commerce Agricultural Aid Model after the Epidemic -- Taking the Practice of Pinduoduo Anti-Epidemic Agricultural Aid as an Example

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Abstract: In the first half of 2020, the national rural online retail sales reached 766.85 billion yuan, a year-on-year increase of 5%. A large number of rural e-commerce companies have entered the epidemic period, and e-commerce has also become an emerging model of poverty alleviation. Relying on contactless distribution, rural e-commerce has not only got rid of the product backlog and unsalable products, but also successfully stabilized the supply of dishes for urban and rural residents. In the post-epidemic era, after getting rid of the temporary dividend, where should the e-commerce model to help agriculture go? This paper will be from the current situation analysis, bottleneck analysis, strategy crack three levels, explore how to help the post-epidemic era how to resolve the embarrassing situation, and the example of electricity platform during the epidemic actively fulfill corporate social responsibility, to become a long-term effective agricultural mechanism to practice.

1. Introduction

Since 2020, under the context of the COVID-19 epidemic, the supply channels of agricultural and sideline products have been instantly interrupted, and the urban short supply and the unsalable difficulties in rural areas coexist, while the consumer demand of urban and rural residents has soared. To solve the outbreak of sudden contradiction between supply and demand, a large number of rural electricity relying on platform supply chain advantage into the online flow pool, but some rural areas infrastructure backward, incomplete "upper design" and other factors lead to the market disorder, resource waste and a series of problems, hinder the electricity to help the development of agriculture, limit the mining of rural economic potential and promotion. Therefore, it is of important theoretical and practical significance to explore the bottleneck of e-commerce in helping the sustainable development of farmers in the post-epidemic era. During the epidemic, the local governments take the initiative to the wiring sales platform, have for unsalable agricultural products area live demand businesses to carry out online sales training activities, including e-commerce

marketing, business planning, agricultural science and technology courses, through the network platform grafting all kinds of resources serving the rural areas, connecting the urban and rural production and marketing supply chain. In remote mountainous areas, the local government has expanded the sales channels for agricultural products by improving e-commerce service sites and cultivating e-commerce enterprises. At the same time, electricity platform spell more, taobao in the critical period to play their own scale benefit, capital information advantage, overall support or dedicated unsalable agricultural products sales area, or open special agricultural logistics channel, or set up special agricultural funds, from flow tilt to logistics train, financial subsidies and other aspects for rural commercial relief, effectively help field unsalable agricultural products into the consumer market, to achieve a win-win situation between supply and demand.

2. Literature Review

The e-commerce industry has changed the traditional industry, spanning the time, space and other limiting factors, and providing the corresponding profit and convenience for the buyers and sellers on the basis of faster and effective communication. The rise of the new model of e-commerce helping agriculture combines the two hot spots of live broadcasting and helping agriculture, which not only caters to the current trend, but also closely adheres to the people's current politics. It is a new way to fully use the Internet thinking and the new economic situation to explore new ways to serve the people [1]. Live broadcast with goods to help farmers is not only a problem of live broadcast, but also involves product production, grading, packaging, logistics and other aspects. It is a system project. In order to do a good job in live broadcasting with goods to help agricultural consumption and poverty alleviation, the key is to give full play to the role of the government and platforms to fulfill corporate social responsibilities and industry associations, cooperate with each other, ensure the quality of agricultural products, improve consumer experience, and finally achieve the purpose of live broadcasting with goods to help farmers [2]. To promote e-commerce to help farmers, we should implement industrial empowerment, create brands, open online stores, and lead people to become rich. Select characteristic agricultural and sideline products, tourism products, rural folk cultural and creative products, and establish a resource database of characteristic high-quality agricultural products. The platform guides brand operation and management, and gradually builds a brand trademark registration and protection, brand authorization management and brand import system. Relying on the FuNeng e-commerce platform, we will integrate local high-quality agricultural products and non-local alliance product resources, and give farmers the supply capacity of characteristic products in the whole town. Establish a unified supply system, form a complete supply and service system, and give farmers the ability to resist risks. Rural e-commerce takes the Internet as the medium to connect the two rural and urban markets[3], on the one hand, to promote the rise of high-quality agricultural products, to expand the sales market of agricultural products; on the other hand, to promote the decline of industrial consumer goods, and activate the rural market. In the process of the flow of factors of production, it can not only broaden the vision of people in poor areas, enhance the poor production and operation capacity and their confidence in getting rid of poverty and becoming rich, but also be conducive to sharing the fruits of development and promoting social equity. However, e-commerce involves a wide range of areas, and rural areas are facing many difficulties, such as weak infrastructure, lack of talents, scattered production and backward service supporting system, which restrict the development of rural e-commerce and must intensify efforts to solve it. Believe that the marketing mode of live streaming to help farmers has four advantages: (1) to expand sales channels; (2) Reduce the intermediate link; (3) Enhance real-time interaction; (4) Expand propaganda efforts [4]. In their study, Li Xiaoxia and Zhao Xiufeng divided the chain effect of the new mode of live

streaming to assist agriculture into four parts: (1) Market chain of e-commerce supporting industries; (2) Individual farmers live sales emerging chain; (3) Government endorsement and public trust pull the support chain; (4)Star net red drainage belt goods effect chain. Joanna Kitchen put forward a 'Business Models for Sustainability' commercial model that emphasized using stakeholder as orientation in management [5].Lu Yingchun, Ren Peixing and Qi Jianling believe that the development of rural e-commerce also faces comprehensive problems such as technical gap and talent shortage [6]. Zheng Ruiqiang reconstructed traditional resource elements and development modes on the basis of "fragmentation" decomposition, forcing the upgrading of industrial infrastructure in poor areas [7]. Du Yonghong believes that the reasons for the limited development of e-commerce in poor areas are as follows [8]: (1) Poor infrastructure in poor areas. (2) Most of the farmers in poor areas are scattered management; it is difficult to form large-scale production. (3) The homogenization of agricultural products seriously leads to the difficulty of selling agricultural products [9]. (4) Poor areas are remote, logistics facilities are not perfect, and distribution costs are high. (5) Imbalance between supply and demand of agricultural products. (6) Poor areas are short of talents and labor forces with professional knowledge [10]. In the process of promoting relevant policies, Han Shaoqing believes that it is necessary to deal with the complex situation of coexistence of economic development opportunities and hidden risks [11]. Li Zhiping and Wu Fanfu conducted field research on poor households to study the mechanism of rural e-commerce in poverty reduction and rural revitalization [12]. The United States, EU and China, which consist of more than 60 percent of the whole world's GDP, will all slow down apparently during 2022 and 2023, compared to the original forecast made in April and July [13]. Actually, around the world, there has been a really disappointing stakeholder management history for the past decades [14], almost every recorded project that was delivered to the final customers was subject to criticism [15]. Researches have present a great deal of issues of stakeholder management about construction programs, including ambiguous management goals, unidentified beneficiaries, poor communication systems and etc [16]. Some typical parties' opinions are shown in Table 1.

Qiu Zhiwei, 2020	It's a new way of serving the people
E Xiaotong, 2020	A multi-agent role is needed
Li Song, 2019	Need to improve the supply service
Chen Lei, 2020	Infrastructure needs to be improved
Li Ni and Xiaoyu 2020	Broaden sales channels;
Lu Yingchun, (2015)	Need to solve the technology gap, the
	problem of talent shortage

Table 1: Opinions of various parties on e-commerce aid to agriculture.

3. Situation Analysis

Under the COVID-19 epidemic, rural electricity relying on no contact trading methods and online immersive experience advantages developed rapidly, but then also has the listed product quality of uneven, consumer after-sales problems difficult to solve exposed problems, compared with urban electricity, rural e-commerce infrastructure backward, logistics distribution lag, supporting system is not perfect, talent shortage and other problems still exist, will be classified below. The analysis of the current situation of e-commerce assisted agriculture is shown in Table 2.

Table 2: Analysis of the current situation of e-commerce assisting agriculture	
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Weak supply chain links and poor ability to resist risk	
Weak hardware and software foundation	
Serious product quality, lack of brand marketing	
To solve the accumulated problems exposed by the supply-side entrepreneurial survival of self-employed groups in the	
epidemic	

(1) Weak supply chain links and poor ability to resist risk

After the epidemic era, part of the agricultural products online entrants found temporary "outbreak dividend" hidden, the outbreak of customer base surge began to cool loss, relying on online popular agricultural and sideline products unsalable, so forced to quit the electricity market, store closed, back to the market operation, become a short participant in the online market. Product sustainability is affecting the buying preferences of most consumers. Most of the agricultural and sideline products are seasonal products, and the online rural businesses ' continuous ability to supply is poor, even if consumers maintain the desire to buy again, they often want to buy out of goods. In the pre-epidemic native business mode, the pressure of hard expenditure is increased and working capital is often stretched. Therefore, rural commercial businesses are afraid of risks and resist the cumbersome market process and expensive equipment of e-commerce platforms, and can not make long-term investment. Agricultural products in heat insulation, moisturizing, transportation and other issues are demanding, storage and logistics costs are high. Missing the natural fit period of supply and marketing, rural e-commerce companies, as risk aversion people, are naturally difficult to bear the uncontrollable risks of buyers destroying the order, customers complaining and refund, and natural storage quality loss. The specification control of e-commerce and other problems faced in the initial period of e-commerce will also eliminate their entrepreneurial enthusiasm. The responsibility of compensation is easy to pass on to farmers, and eventually farmers will pay for it. In addition, the existing education level gap and unbalanced regional development level lead to narrow channels for farmers ' e-commerce to obtain market information, low information sensitivity, poor active awareness of information collection, and their extensive business mode cannot coordinate the relationship between supply and marketing, and are finally trapped by information barriers, resulting in the emergence of "bankruptcy tide" for e-commerce to help farmers.

(2) Weak hardware and software foundation

Information infrastructure that is difficult to connect production and marketing is the basis for the full development of rural e-commerce and the prerequisite for e-commerce. There are many weak links in rural areas, both rural network foundation and supporting facilities of e-commerce. In rural areas and agricultural production bases, imperfect network facilities, outdated equipment, network quality is poor, and there is a large gap between rate and stability and cities, leading to the low construction level of e-commerce agricultural platform construction. The coverage rate of broadband and 4G communication technology is low, the absence of complete information network infrastructure can only bind a large number of rural businesses to offline operation, it is difficult for e-commerce to promote farmers on high quality and large scale, and the economic benefits of scale cannot be shown. The lack of e-commerce talents and technology is one of the main constraints on the large-scale rise of agricultural products. There are a large number of human resources engaged in agricultural and sideline products, but most agricultural products operators lack marketing skills and the lack of concepts of standardized production, collection, packaging and transportation of agricultural products. China's rural electricity is in the stage of rapid development, some leading areas have begun to take shape, network construction and maintenance, information collection and release, market analysis and feedback and other links of the division of labor more detailed, in urgent need of professional operation team to build a complete production and marketing information chain, improve market development and product sales ability, capture the rapidly changing market demand.

(3) Serious product quality, lack of brand marketing

Differentiation is a magic weapon of marketing, but agricultural and sideline products have natural homogeneous attributes, so that the e-commerce agricultural products in the eyes of consumers. In particular, the homogenization of county-level e-commerce products is serious, not many marketable online goods products, lack of long-term.Planning and overall layout, the brand value of the platform is low. Rural businesses can only try to break the homogenization with a simple and crude price war. In order to take into account the immediate interests, the use of substandard chemical fertilizers and pesticides and other agricultural materials is more likely, exaggerated edible function for false publicity and even shoddy, misleading or even deceive consumers. Under the price differentiation strategy, the new increased cost is equal to the existing operating cost, the marginal sales cost is zero, and the blind price war often ends with another injury, which is not conducive to the development of the industry. At the same time, the offline agricultural batch market has a strong basic customer base, and it is difficult to sustain the epidemic to attract long-term customers and become users of the platform. The poor user stickiness leads to the difficulty to be sustainable farmers ' e-commerce spawned by the epidemic. In addition, the brand marketing of farmers ' e-commerce seriously lags behind. Even if the varieties of agricultural products are rich and of good quality, the difference in taste cannot only be recognized by the online seller "show the naked eye" and the promotion strength is not strong enough leads to the low brand awareness of agricultural products and the lack of influence.

(4) To solve the accumulated problems exposed by the supply-side entrepreneurial survival of self-employed groups in the epidemic, it is necessary to integrate agriculture-related service resources and promote agricultural supply-side structural reform.

Take the way of government-led and supplemented market operation, give full play to the competitive advantages of government credibility, establish different e-commerce market platforms for agricultural products, carry out online agricultural fairs regularly, automatically match goods on the basis of procurement intention, reduce search and communication costs, and achieve all kinds of precision marketing. Provide a systematic and long-term available agricultural products e-commerce system from information flow to logistics and capital flow. In addition to planning talent training, products also require order production. Connect the e-commerce of agricultural products and the agricultural products futures market, reach long-term contracts based on the electronic futures platform, try to adjust supply and demand in the form of agricultural products futures, give "data" productivity, make market prediction, and form intelligent management and services such as digital transactions and circulation traceability. Supporting financial support mechanism for agricultural production and sales, and effectively absorb social capital into rural e-commerce. The government will be a good market "regulator" and crack down on various illegal acts such as infringement, fake and shoddy products. Establish a use license system for "brand agriculture", distribute "certificates" of agricultural products, and grasp the quality of agricultural and sideline products from the source.

4. Development Countermeasures

At the present stage, China COVID-19 epidemic under control, offline supply chain has recovered, demand for agricultural and sideline products online consumption is also melting, from

the construction of hardware and software, talent and technical support, brand operation, "top" overall support four levels to break through electricity bottleneck period, to avoid the "failure tide" in the post-epidemic era. Feasible development strategies are shown in Table 3.

Table 3: De	velopment strategy
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Strengthen the infrastructure construction and build a flexible supply chain	
Optimize talent training and get rid of technical shortage	
Build a support system and strengthen the platform resource integration	
Agricultural and sideline products transformation and deepen brand development	

(1) Strengthen the infrastructure construction and build a flexible supply chain

To develop rural e-commerce, the primary problem is that infrastructure must be supporting, high-quality supporting network information infrastructure and efficient and convenient agricultural products e-commerce supply chain, and thus promote the upward trend of agricultural products. We will expand the scale of rural Internet construction and improve the efficiency of Internet transmission, provide farmers with high-speed and low-cost network services for farmers, accelerate the deep integration of digital and rural production and life, and implement the construction of digital rural areas. Activate the logistics supply system, the network, smooth road is the "hard guarantee". With large cities as the hub, build an e-commerce logistics supporting service network with multi-level e-commerce logistics service outlets as the nodes, to ensure that the organization and service of e-commerce logistics outlets radiates to the grass-roots level. In ensure the full coverage of logistics distribution at the same time, the implementation of the digital rural development strategy outline proposed to strengthen agricultural products processing, packaging, cold chain, warehousing and other multi-link facilities construction, ensure fresh products cold chain transportation conditions, standardize the storage, transportation and distribution management of agricultural products, reduce the quantity and quality loss caused by transportation. Through the development and application of intelligent warehousing, a non-contact distribution government and industry suitable for the normal epidemic, and multi-dimensional logistics federation should be established among industries, systematically promote the integration of urban and rural intelligent logistics and supply chain system, and realize cross-regional and cross-industry resources and capacity sharing.

(2) Optimize talent training and get rid of technical shortage

It is one of the keys to solve the long-term shortage of talent and technology in rural areas and the dilemma of getting rid of human resources of e-commerce. Promote e-commerce to help farmers go down, To by market demand, Cultivate new rural commercial businesses with independent upward ability, To build a compound talent team with both agricultural experience and e-commerce operation: government-linked schools and e-commerce platforms to open rural web celebrity colleges, Founded the "E-commerce University", Carry out order-type talent training, Construction of talent information database; Combined with the rural producer knowledge structure, Online business guidance, capital and credit, skills training, warehousing and logistics and other supporting professional courses, Business guidance can include product marketing, website operations, customer viscosity, and data analysis expertise, The course touches rural cadres and new agricultural management entities and other agricultural management managers.

(3) Agricultural and sideline products transformation and deepen brand development

In the post-epidemic era, food safety will be paid more attention. Agriculture has begun to enter the "brand era". Only by first building a health and safety trust system and seizing the highland of consumer trust, can the online stores of rural businesses be "evergreen". We will optimize rural household capital turnover and store management, and innovate in organizational structure and business models. Let the live broadcast become a "new farm work", through the "We Media" platform drainage, to create private brands with goods without wrong farming, at the same time, to establish their own production base and offline experience stores as the support. Only by actively taking measures to win the sense of trust of consumers and enriching the cultural connotation of the products, can we stabilize the consumer group. As far as terms of local agricultural products resources are concerned, farmers can still take community stores as the extension of user service, enhance users ' consumption stickiness, reduce logistics costs, obtain continuous cash flow, "online + offline" simultaneously, put an end to too simplified business model, improve the ability of rural e-commerce to resist risks. Taking the initiative in consumption upgrading in the post-epidemic era and put forward higher requirements for agricultural standardization and quality development in the future. E-commerce is different from standardized production in general farmers ' markets. In order to ensure the quality of agricultural products, it is necessary to start from supporting the initial processing of origin, increase the support for origin screening, classification, packaging and other links, and improve the quality inspection ability of goods before sorting and distribution. While matching the personalized needs of consumers, connecting with the large-scale market can not only adapt to the future consumer changes, but also grow into a long-term business model.

(4) Build a support system and strengthen the platform resource integration

To solve the accumulated problems exposed by the supply-side entrepreneurial survival of self-employed groups in the epidemic, it is necessary to integrate agriculture-related service resources and promote agricultural supply-side structural reform. Take the way of government-led and supplemented market operation, give full play to the competitive advantages of government credibility, establish different e-commerce market platforms for agricultural products, carry out online agricultural fairs regularly, automatically match goods on the basis of procurement intention, reduce search and communication costs, and achieve all kinds of precision marketing. Provide a systematic and long-term available agricultural products e-commerce system from information flow to logistics and capital flow. In addition to planning talent training, products also require order production. Connect the e-commerce of agricultural products and the agricultural products futures market, reach long-term contracts based on the electronic futures platform, try to adjust supply and demand in the form of agricultural products futures, give "data" productivity, make market prediction, and form intelligent management and services such as digital transactions and circulation traceability. Supporting financial support mechanism for agricultural production and sales, and effectively absorb social capital into rural e-commerce. The government will be a good market "regulator" and crack down on various illegal acts such as infringement, fake and shoddy products. Establish a use license system for "brand agriculture", distribute "certificates" of agricultural products, and grasp the quality of agricultural and sideline products from the source.

5. Case Analysis--Pinduoduo's CSR Practice during the Epidemic

During the epidemic prevention and control period, Pinduoduo has been committed to opening up the difficulties and pain points of agricultural products, vigorously promoting the "connection between agricultural goods production and marketing", and giving full play to the advantages of the supply and demand matching mechanism of the platform "Skynet" + "and" land network " agricultural products. At the beginning of February 2020, Pinduoduo officially launched the "anti-epidemic fight, love to help farmers" special area, and urgently opened the "unsalable agricultural goods feedback channel". The area covers nearly 400 agricultural-producing areas, including more than 230 state-level poverty-stricken counties, and its commodities cover navel oranges, apples, strawberries and other fruits and main fresh food materials. As of 12 o ' clock on March 6, the number of transaction orders in the special area has reached 7.6 million orders, and the total of unsalable agricultural products is nearly 80 million jin sold, helping more than 24,000 households of all types of farmers. Pinduoduo has three kinds of social responsibility practices in fighting the epidemic and assisting agriculture, as shown in Table 4.

Table 4: Pinduoduo's corporate social responsibility practice during the epidemic

Concentrate the whole platform resources; optimize the connection between production and marketing.

Pinduoduo has united with all forces to open up the upward path of agricultural products

Implement corporate social responsibility, provide financial support, and stabilize the supply chain of agricultural products.

(1) Concentrate the whole platform resources; optimize the connection between production and marketing.

Pinduoduo in order to solve the problem of direct supply and demand of agricultural products and fresh orders of fruits and vegetables, both online and offline. Offline, nearly 60,000 new rural farmers were launched directly or indirectly to connect with more than 400 producing areas to help agricultural products get out of villages. Online, through the "anti-epidemic agricultural goods" area, give the highest priority flow support of agricultural products, help agricultural products into the city, direct consumers with the shortest path, and buy fruits and vegetables from the origin at the most preferential price.

(2) As the initiator of the "National Agricultural Products Production and Marketing Docking Service Public Welfare Alliance", Pinduoduo has united with all forces to open up the upward path of agricultural products.

On the one hand, through the new farmers quickly find out the inventory situation of the major producing areas, sort the agricultural products according to the sales cycle, and push the agricultural products with tight inventory and short consumption cycle to consumers. On the other hand, we will coordinate postal, SF and other backbone logistics enterprises to ensure the smooth rise of agricultural products in key production areas. At the same time, the information and replanning, logistics data and nodes of the producing areas in the agricultural and cargo system of the platform have been urgently replanned to optimize the upward network of agricultural products.

(3) Implement corporate social responsibility, provide financial support, and stabilize the supply chain of agricultural products.

Pinduoduo has provided a special subsidy of 500 million yuan for high-frequency rigid agricultural products. On the one hand, it guides rural businesses to buy unsalable agricultural products higher than the average market price to ensure the income of small farmers; on the other hand, it suppresses the price of agricultural products so that consumers can get benefits. In addition, Pinduoduo has also set up a special logistics subsidy fund of 1 billion yuan, subsidizing 2 to 3 yuan per order for qualified agricultural product orders, to mobilize the enthusiasm of small farmers and logistics enterprises to ensure the supply at the source.

6. Conclusion

After years of great development, Pinduoduo and other e-commerce platforms have entered and deeply affected all aspects of the Chinese people's lives. During the epidemic prevention and control period, major e-commerce platforms actively fulfilled their corporate social responsibilities and helped the government to minimize the impact of the epidemic on economic and social development. Looking forward to the future, the major electricity platform will be more concerned about farmers, more attention to agriculture, improve support to help farmers, sustainable

development to improve electricity mode, truly realize the "electricity of the last kilometer" and "first one kilometer" direct docking, help farmers constantly improve happiness and gain, promote the continuous development of China's agricultural production and rural economy.

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