

Model of Rural E-commerce Boosting Rural Revitalization

Xiaomin Huang*

Marxist Studies College, Hubei University of technology, Wuhan, Hubei, China 1147648620@qq.com

*corresponding author

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Abstract: As a major initiative to accelerate the implementation of the rural revitalization strategy, rural e-commerce provides a path of support for building a strong agricultural country and realizing agricultural and rural modernization. The article studied the development process, case analysis, and scope of application of three models: "rural e-commerce + live streaming", "rural e-commerce + community group buying", and "rural e-commerce + short video". It further analyzed the advantages and disadvantages of each, hoping that the rural e-commerce model can learn from this and promote the prosperous development of rural revitalization by playing to its strengths and avoiding weaknesses.

The 19th National Congress report clearly pointed out that "the most arduous and heavy task of building a socialist modernization country still lies in the countryside." To comprehensively promote the rural revitalization strategy, accelerate the construction of a strong agricultural country, and solidly promote the revitalization of rural industries, talents, culture, ecology, and organizations. E-commerce, relying on its flexible and convenient, low-cost advantages, has become an important channel for promoting economic growth and has an irreplaceable and significant role in promoting rural revitalization[1]. The Central No. 1 Document in 2023, "Opinions on Doing a Good Job in Key Tasks of Comprehensive Rural Revitalization in 2023" issued by the Central Committee of the Communist Party of China and the State Council, further pointed out that e-commerce is an effective form of high-quality development of rural industries, and pointed out the important role and practical path of e-commerce in promoting rural revitalization. Rural e-commerce, as a specific application of e-commerce in rural areas, has significant practical significance for comprehensively

promoting rural revitalization. The article analyzes the development models and applications of three rural e-commerce models, and further analyzes the advantages and disadvantages of each model, in order to provide reference for the development of rural e-commerce[2].

1. Rural e-commerce+live streaming mode -- Taking Daqiao Town, Mianning County, Sichuan Province as an example

1.1. Regional Introduction

First, geographical location. From a geographical perspective, Sichuan Province is located in the hinterland of southwest China, in the middle and upper reaches of the Yangtze River, bordering seven provinces (cities, districts), and is an important junction of southwest, northwest, and central regions[3]. It is a key intersection and transportation corridor that connects South China and Central China, connects northwest, southwest, and connects Central Asia, South Asia, and Southeast Asia, and has important geographical and strategic significance. In terms of topography, Sichuan Province has a complex landform, located at the junction of the first and second steps of China's terrain. The terrain is mainly mountainous and hilly, with a distribution of plateaus. In a sense, it will bring inconvenience to transportation. Daqiao Town is located in the north of Mianning County, with closed traffic and inconvenient movement. Its economic development has always been relatively backward. Since comprehensively promoting the rural revitalization strategy, Mianning County has built a traffic network on the cliffs of the Yalong River Grand Canyon, breaking the long-standing traffic barriers and achieving a historic breakthrough in the full coverage of township roads throughout the county[4].

Second, population composition. In terms of population, Sichuan Province is a populous province in China. According to the results of the seventh population census released by the National Bureau of Statistics on May 11, 2021, as of 0:00 on November 1, 2020, the total population of Sichuan Province reached 83674866, including 66.93% of the labor force and 16.93% of the elderly. It belongs to a moderately aged area, with 16.10% of children, and belongs to a region with severe children shortage; The average length of education for the population aged 15 and above is 9.24 years, lower than the national average of 9.91 years. Sichuan Province is a multi-ethnic region, with many ethnic minorities living in remote villages. Language barriers make the task of poverty alleviation even more difficult. Mianning County is a typical multi-ethnic region, belonging to Liangshan Yi Autonomous Prefecture in Sichuan Province, with over 20 ethnic groups, including Han, Yi, Tibetan, and Hui. At the end of 2020, the total population was 405138, with 180694 ethnic minorities, accounting for 44.6% of the total population[5].

Third, characteristic agricultural products. Due to the unique geographical location and environmental impact of Mianning County, potatoes have become a representative agricultural product in the region. The county has sufficient sunlight and a large temperature difference between day and night. The potatoes produced in the county have the characteristics of high starch content, large size, beautiful and regular appearance, and good taste. In addition, the excellent growth environment, less use of pesticides and fertilizers, and green and pollution-free are in line with the green and natural concept pursued by the modern consumer market. The consumption market is broad, and Daqiao Town is precisely the largest potato production base in the county. Although the county has high-quality agricultural products, it lacks widespread popularity, convenient transportation, and limited consumption capacity within the county. As a result, a large number of potatoes have no market, resulting in a potato commodity rate of only around 40%. A large number of potatoes are stockpiled, resulting in overcapacity, which greatly dampens farmers' enthusiasm for planting [6].

1.2. Mode Introduction

First, the development of e-commerce live streaming. E-commerce live streaming started in 2016 as an exploration of new business models on e-commerce platforms, but its development has been relatively slow for a long time and public awareness is not high. Until a lipstick live broadcast between Ma Yun and Li Jiaqi was delivered, e-commerce live broadcast was completely "out of the loop.". Starting in 2019, e-commerce live streaming began to develop rapidly, with a market scale of 433.8 billion yuan[7]. It is expected that the market scale will reach 1201.2 billion yuan by 2021. E-Commerce live streaming is the use of live streaming to develop e-commerce, introducing products, physical displays, and trials to users online, and offering certain exclusive discounts to live streaming rooms to attract users' purchasing desire, increase the authenticity of the product, and increase their trust. As a new marketing model, e-commerce live streaming has the characteristics of being free from time and geographical constraints, freedom and flexibility, and strong online interactivity. In addition to the extremely vivid language of Taobao anchors such as Li Jiaqi and Weiya, e-commerce live streaming quickly became popular, becoming a dark horse driving consumption. Compared to traditional e-commerce, which can only see product images, e-commerce live streaming has more obvious advantages[8]. People can intuitively feel the use of goods with just one mobile phone at home, making them more vivid and vivid. In order to assist the economic development of Hubei Province, the government has actively used the form of e-commerce live streaming to hold multiple promotion conferences for Hubei Province's characteristic agricultural products. For example, the online live streaming of "Thank you, spell a single for Hubei" hosted by CCTV host Zhu Guangquan and e-commerce anchor Li Jiaqi has created Hubei agricultural products with a sales volume of over 40 million yuan within two hours. According to data from the Ministry of Commerce, the online retail sales of agricultural products nationwide reached 397.5 billion yuan in 2019, a year-on-year increase of 27.0%, driving more than 3 million poor farmers to increase their income. In 2020, despite the impact of the epidemic, the online sales of agricultural and sideline products continued to grow, and online live streaming flourished. As of December 2020, the number of e-commerce live streaming users in China reached 388 million, accounting for 39.2% of the overall netizens. The e-commerce live streaming operation mode is shown in Figure 1:

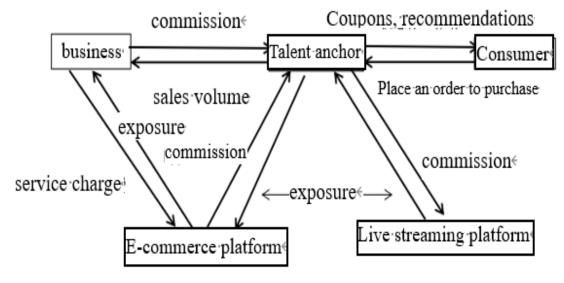


Figure 1. E-commerce live broadcasting operation mode

Second, the specific application of e-commerce live streaming in Daqiao Town. Under the spring

breeze of live streaming e-commerce, Daqiao Town, Mianning County has also begun to try to use the form of live streaming to promote and sell potatoes. According to some relevant information, Mianning County is currently mainly engaged in live broadcasting by some relatively young large farmers, government officials, and invited "online celebrity". At the same time, most villagers are also beginning to learn how to use mobile terminals for e-commerce live streaming. Villagers can go deep into the field and truly show users the growth environment and some specific conditions of agricultural products, thereby improving their satisfaction with agricultural products, thereby increasing users' willingness to buy, which is conducive to solving the problems of local potato backlog, narrow sales channels, and low visibility. From May 31 to June 18, 2020, a team from Xichang brought live streaming tools to help Mianning County launch e-commerce live streaming sales of potatoes, helping 23 villagers in the area sell more than 200 tons of potatoes, with a payment of over 400000 yuan[9].

E-commerce live streaming has greatly changed Mianning County. The most obvious is that it has increased the income of local farmers, and the form of live streaming has broken the constraints of time and space. The consumer market covers the whole country, and the products can be sold further and better; Secondly, after the opening of sales volume, local farmers also pay more attention to improving the quality of potatoes and creating their own brands; In addition, due to the impact of e-commerce live streaming, local employment opportunities will also increase, which can attract more young talents and labor to return to their hometown and accelerate the economic development of Mianning County[10].

1.3. Scope of application

E-commerce live streaming has the characteristics of freedom, flexibility, and freedom from time and space constraints, with a wide range of applications. However, it requires employees to have certain equipment operating capabilities, as well as stable mobile network support and convenient transportation. Of course, products must also have a certain fresh "selling point", and agricultural specialty products need to have high quality, green, natural, and pollution-free to more attract people's consumption desire. China has a vast territory and abundant products, especially in some remote areas, where there are many agricultural and specialty products with low visibility but excellent quality. They only need an opportunity to open the market, and e-commerce live streaming is undoubtedly a good key to helping products open the market and improve their popularity. In addition, e-commerce live streaming also has certain requirements for the anchors in the live streaming room. In addition to the increasing participation of some celebrities and celebrities in the live streaming, town and county governors in many regions have also become anchors. The anchors need to have a certain degree of credibility and be able to create a sense of trust among users[11].

2. Rural E-commerce+ Community Group Purchase Model -- Taking Xingsheng Preferred as an Example

2.1. Development History

The community group purchase mode is an emerging shopping method based on offline real communities, with group leaders (usually community residents or nearby store operators) as distribution nodes, and through WeChat groups, applets, APP, and other mobile platform tools to conduct group pre-sales, centralizing the needs of people in the same community, paying through WeChat, and then uniformly shipping to the community pickup point, which is picked up by the residents themselves. In 2010, more than 4000 group buying websites nationwide suddenly and

rapidly emerged, forming a consumption model of group buying. However, in 2016, community group buying gradually became popular and developed rapidly, including Daily Youxian, Xingsheng Preferred, Squirrel Spell, Box Community, etc. Among them, Xingsheng Preferred is the representative of growing development[12]. Affected by the epidemic in 2020, community group buying ushered in a new round of development. According to AIMedia Consulting data, in the stage of explosive growth of community group buying in China stimulated by the epidemic, the development and growth rate of the community group buying market will exceed 100% in 2020, with the market size reaching 65 billion. It is expected that the Chinese community group buying market will continue to maintain a good growth trend in the future, and the market size of Chinese community group buying will reach 100 billion level by 2022.

2.2. Case Introduction

Hunan Xingsheng Preferred E-Commerce Co., Ltd. is a community e-commerce company (hereinafter referred to as Xingsheng Preferred), whose main business is household consumer goods, including vegetables and fruits, meat, poultry, eggs and milk, rice, flour, grain and oil, and daily necessities. Its predecessor is the community supermarket Furong Xingsheng, which was born in Yiyangnan County, Hunan Province. Its founder, Yue Lihua, founded Furong Xingsheng Supermarket in 2001; In 2007, it was transformed and positioned as a community supermarket, using the two-way drive of direct sales and franchise to develop its business; In 2009, Yue Lihua led Furong Prosperity to transform into a community convenience store[13]; By 2014, Furong Xingsheng had transformed into an e-commerce model and established Xingsheng Preferred. Since its development, Xingsheng Preferred Cooperative Store has grown from more than 20000 to 400000, showing exponential growth. Its development scope covers 13 provinces and municipalities including Hunan, Hubei, Guangdong, Jiangxi, Sichuan, Chongqing, Shaanxi, Guizhou, Henan, Guangxi, Fujian, Hebei, and Shandong, as well as more than 6000 prefectural (county) level cities and towns. It has successively received investment from many large enterprises such as Tencent, JD.com, Sequoia Capital, and Evergrande Group, It became the first unicorn enterprise in Hunan Province with a valuation of over \$4 billion, and was successfully shortlisted as "China Nezha Enterprise" in 2020.

The operation of Xingsheng Preferred is mainly based on online WeChat applet+store self delivery, relying on community convenience stores. All goods are ordered today and delivered to the self delivery point the next day, in order to try to meet the daily consumption needs of families. From the supply chain, platforms, convenience stores, to consumers, Prosperity Optimization has made efforts[14]. From the perspective of supply chain, Xingsheng selects its own logistics system for centralized procurement and distribution, thereby reducing procurement costs; On the platform, using the WeChat applet and Xingsheng Preferred APP conforms to users' consumption habits. At the same time, it will also use the games within the applet to issue coupons to users. The higher the score of users playing the game, the greater the amount of coupons they receive. At the same time, the threshold for using the coupons is also relatively low, generally based on 10 yuan, which will also stimulate users' desire to buy; From the perspective of convenience stores, it is common to choose convenience stores that are closer to users in the community as their own pickup points. Using convenience stores for commodity storage also reduces enterprise costs. In addition, there is no need for a franchise fee for the prosperity of convenience stores to join. The convenience store manager also acts as the group leader of community group buying. On the one hand, there is a certain consumer group, which is conducive to transforming offline consumers into online consumers, On the other hand, community owners have a certain degree of trust in group leaders, who can help complete after-sales work, increase the user's sense of experience and enhance the user's stickiness; From the perspective of consumers, Xingsheng Preferred offers almost all categories of products, and its prices are more attractive than ordinary supermarkets. Coupled with its distance advantage, it can almost quickly attract consumers[15].

2.3. Scope of Application

The model of community group buying is not only applicable to cities, but also to rural areas. Some fruit shops and retail stores can be used as self serving points, and villagers can choose according to their own location. Moreover, Prosperity Optimization is gradually trying offline distribution. Some rural areas have taken action. Due to the fact that rural areas are generally based on a street or a community, residents have a high degree of familiarity and the efficiency of commodity distribution is also relatively high.

From the perspective of poverty alleviation, this community group buying model is also an effective method. Through relevant simple skill training for poor households, they can be engaged in product sorting or distribution business, helping them to find employment again. Due to the limited radiation range of a self delivery point, the time required for commodity distribution is not long, and poor households can also engage in other jobs at the same time to increase their income. After gradually becoming proficient in business, you can also join Xingsheng Preferred for free, become your own team leader, and extract a commission by selling goods.

3. Rural e-commerce+ Short Video Mode -- Taking Li Ziqi's Original Ecological Short Video as an Example

3.1. Development Status

China's short videos have made initial development since 2011. In the early stage, companies such as Second shot and Kwai were the main players, with a small number, but the development trend was very rapid. By 2017, short videos had received capital injection and entered a rapid growth stage. In 2019, Kwai and Tiktok short video platforms increased advertising investment and appeared on the stage of the Spring Festival Gala, and short videos entered thousands of households. According to the "Special Research Report on the Competition of China's Short Video Header Market from 2020 to 2021" by AI Media Consulting, the number of short video users in China has exceeded 700 million in 2020, and it is expected to increase to 809 million in 2021. The short video market size will reach 140.83 billion yuan in 2020, and it is expected to approach 200 billion yuan in 2021. Short video will bring new economic growth points.

Short video, as a newly popular fast-food entertainment, has been widely used in e-commerce. Guan Zhenzhong proposed that short videos rely on smart terminals and the mobile internet, allowing users to switch back and forth among the three identities of the sender, sender, and recipient of information. They can engage in entertainment and social interaction by browsing, liking, commenting, and sharing videos from seconds to minutes. Short videos can attract a large number of fans in a short period of time due to their characteristics such as length, precise content, long retention time, and ease of dissemination. Therefore, many businesses, brands, and individuals will choose short videos to bring goods. It can attract users' interest in a short period of time, and comprehensively display product features in a video format. Although users cannot truly touch the product, it can provide users with a virtual sense of touch through vision and hearing, Thereby giving users a sense of authenticity and trust.

3.2. Pattern Analysis

Short videos are generally produced with the help of specialized short video software, which can meet the needs of ordinary users. The operation is simple and easy to use. Users can directly capture the videos they need in the release interface of the software, and then add filters, special effects, and background music as required. This is also relatively easy for rural residents to operate, does not require too much technology, and to some extent provides a simple way to help farmers promote their products. Farmers promote agricultural products through short videos. During the process of watching the short videos, users can directly click on the shopping cart function below according to their needs and interests, and jump to the product details page to purchase. For farmers, short video production is simple, low cost, and has a wide range of publicity; For users, short videos can quickly express product characteristics, provide authentic content, and facilitate purchase. They can also further judge the quality of the product through comments in the comment area. This "short video+ e-commerce" model can also be applied to poverty alleviation work. Farmers present their unique local culture, the original ecological growth environment, growth process, and the true original appearance and quality of agricultural products to users, meeting their green and ecological needs, thereby promoting the sales of agricultural products and increasing farmers' income.

As a typical representative of short videos, Li Ziqi focuses on shooting short videos of food that are original, slow living, close to traditional culture and Chinese style. The video content is exquisite and beautiful, with unique style. He quickly gained a large number of fans and quickly became popular. This is a good reference case for remote and poor areas. Each region can create a unique label culture for its own products based on its own environment and agricultural products, and then improve the visibility of agricultural products through short video marketing. The short video+ e-commerce operation mode is shown in Figure 2:

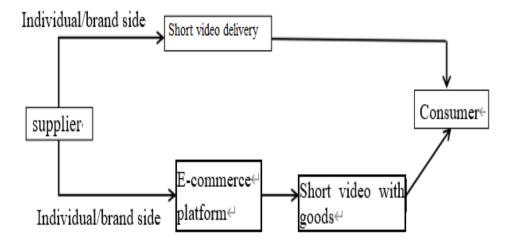


Figure 2. Short video+ e-commerce operation mode

3.3. Scope of Application

The "short video+ e-commerce" model, like live streaming e-commerce, is not limited by time and space, free and flexible, with a wide range of applications, and conforms to the fragmented entertainment methods of modern society. Ordinary mobile terminal devices can basically meet the needs of photography and production. If we want to further refine short videos, we also need a talent pool in related fields, involving photography, copywriting, editing, art, and other aspects. Of course, high-quality short videos cannot be separated from high-quality content, and high-quality agricultural products are the key. Applying "short video+ e-commerce" to remote and impoverished

areas provides new ideas for consolidating the success of poverty alleviation. Considering that if there are no high-quality agricultural products in remote areas, it is also possible to start with natural scenery, local customs, and folk culture to help promote the development of tourism in the region.

4. Comparative Analysis of Three E-Commerce Models

4.1. Advantages and Disadvantages of Different Modes

First, e-commerce live streaming. For e-commerce live streaming, the advantages lie in price concessions and intuitive experience. Generally, live streaming rooms will introduce exclusive coupons, as well as some giveaways, which have a certain attraction for consumers; E-commerce anchors can replace consumers in product trials and trials, and then introduce them to the audience in the live broadcast room based on product characteristics, which can increase the user's sense of authenticity and trust. The disadvantage is that the time of live streaming in e-commerce is generally fixed, and the time span is also relatively long. Some users will be unable to participate due to various reasons; Inadequate promotion and promotion of live streaming activities in the early stage will lead to the loss of some potential customers and fewer viewers entering the live streaming room, making it difficult to drive product sales.

Second, community group buying. The advantages of community group buying are simplicity, convenience, and affordable prices. Residents only need to place an order in the WeChat applet one day in advance, and the order can be delivered the next day. Picking up the goods is simple, and the distance is close. There is no need to go to the supermarket specifically to purchase, and the price is also cheaper than the supermarket. The disadvantage lies in the delivery time limit, which can only be delivered the next day. This next-day delivery mode cannot meet some unexpected needs of residents. In addition, the goods need to be picked up by users themselves, and there is a lack of door-to-door delivery service, which is not attractive for some people with mobility difficulties; At the same time, community group buying relies on WeChat applets and WeChat group marketing, and some elderly people are unfamiliar with the operation, limiting target users.

Third, short video. Short video with goods has the advantage of short time limit, freedom and flexibility, which meets the needs of modern society in pursuit of fragmented entertainment; Rich content, covering all aspects; The operation is simple and can be completed with only one mobile phone; Fast propagation speed and numerous platform users. The drawbacks are also obvious. Due to the fact that platform users are also creators of videos, the quality of short videos is uneven. There are also some illegal elements who use the platform to conduct false propaganda, resulting in a negative impression of false propaganda among users about agricultural product promotion videos. At the same time, the after-sales process of purchasing products is relatively weak, and relevant departments and platforms lack supervision.

4.2. Comparison of Three Modes

Next, this article will conduct a comparative analysis of e-commerce live streaming, community group buying, and short video e-commerce from three perspectives: carrier, time range, and subject. The comparison of the three types of e-commerce models is shown in Table 1:

E-commerce Time frame Carrier Main part mode There is a fixed live There are no clear requirements for Specific online broadcast time, on-screen anchors, but online celebrities live with a live and celebrities will have a greater fan Live streaming broadcasting broadcast duration base and traffic. For ordinary anchors, e-commerce they also need a certain external image room of two hours or and language expression. more There are no clear requirements for the Place an order group leader, and the selection is Online applet before 10 pm on Community relatively random. Generally, the and offline the first day and convenience store manager has a certain group purchase physical store deliver it at noon degree of trust for residents in the on the second day community. Long production There is no special requirement for the time, but short characters to be shown in the film to Short video Short video video content, express humor, interest, and realism. On application ranging from tens e-commerce the contrary, short videos pay more of seconds to attention to the content of the video. minutes

Table 1. Comparison of three types of e-commerce models

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Data Availability

The datasets used during the current study are available from the corresponding author on reasonable request.

Conflict of Interest

The author states that this article has no conflict of interest.

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