

# ***Analysis of the Idea of Promoting Rural Economic Development through Live Broadcast of E-Commerce Selling Agricultural Products Based on New Media Perspective***

**Nianhao Xu<sup>1,a,\*</sup>, Juan Wu<sup>1,b</sup>**

<sup>1</sup>*College of Digital Commerce and Live Broadcasting, Anhui Lvhai Vocational College of Business, Hefei, Anhui, China*

<sup>a</sup>*nianhaoxu@163.com*, <sup>b</sup>*1660071620@qq.com*

<sup>\*</sup>*Corresponding author*

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**Abstract:** As live broadcasting of agricultural products has gradually become a way to promote rural revitalization and increase farmers' income, the rural economy faces problems such as unstable income, lack of employment opportunities, narrow sales channels and weak logistics infrastructure that need to be addressed. This paper explores the impact of live broadcasting on rural development, especially in terms of increasing farmers' income, creating employment opportunities, promoting agricultural product sales and optimizing logistics efficiency. The research method adopts comparative analysis, selects multiple representative rural areas, divides different groups, and collects and compares the changes of farmers' income, employment, sales and logistics in each group. The results show that live broadcasting has significantly increased farmers' income, with an average increase of 1,864.8 yuan in farmers' income, and the income of all interviewed farmers has increased to varying degrees; in terms of employment, rural areas have added an average of 13 jobs through participation in live broadcasting, mainly concentrated in the fields of live broadcasting assistance and warehouse management. By improving distribution efficiency and optimizing warehouse management, the platform has successfully reduced the logistics cost of each order by 4.25 yuan, thereby effectively improving the circulation efficiency of commodities. Live broadcasting has also promoted the branding and marketization of agricultural products and broadened sales channels. Live streaming has a significant effect in solving rural development problems and has injected new impetus into the sustainable development of rural areas.

## **1. Introduction**

E-commerce live streaming has become an important force in promoting the rural economy, especially in terms of agricultural product sales, farmers' income, employment opportunities and logistics efficiency. China's rural economy faces problems such as unstable income, scarce

employment opportunities, limited sales channels and weak logistics infrastructure. The traditional agricultural model has limited impact on income growth, and farmers' income is easily affected by seasonal and environmental changes. There are also insufficient employment opportunities, especially the outflow of young and middle-aged labor. Inefficient sales of agricultural products often lead to unsalable products or price fluctuations. Weak logistics facilities also restrict the entry of rural products into urban markets, affecting competitiveness.

In this context, live streaming has attracted widespread attention from farmers and platforms as a new sales model. E-commerce platforms have promoted the modernization of rural logistics, reduced transportation costs, and improved efficiency. The interactivity of live streaming has enhanced consumer experience, brand building, and market awareness. This study aims to explore the effects of live streaming in increasing farmers' income, creating employment opportunities, expanding sales channels, and optimizing logistics, revealing its role in rural revitalization, and providing practical references for policymakers.

The second part reviews previous research results and summarizes the research progress on the impact of live streaming sales on the rural economy at home and abroad; the third part specifically introduces the research process, including the selection of research areas, experimental design, and data acquisition and processing methods; the fourth part presents the analysis results and discusses the impact of live streaming sales on employment opportunities, product sales, express logistics, etc. in combination with specific data; finally, the fifth part summarizes the key points of this paper and proposes further research and practice directions.

## 2. Related Work

As agricultural product e-commerce live streaming has gradually become an important way to promote rural revitalization and increase farmers' income, its model, development path and optimization strategy have become a hot topic of research and have received widespread attention and in-depth discussion. Zhou studied the role of live broadcasting of agricultural products in promoting rural economic development and poverty alleviation, the problems faced and the optimization strategies [1]. Huang took "agricultural product sales in the new media era" as a case study and explored how to optimize marketing strategies to adapt to the new market environment[2]. Zhou discussed the advantages and difficulties of agricultural product live streaming and put forward countermeasures and suggestions to promote the healthy development of agricultural product live streaming[3]. Zhou proposed a new model for the classification of agricultural product precision marketing on live streaming platforms using clustering[4]. Gao studied the key influencing factors of farmers' participation in the development of agricultural live broadcasting and its impact on rural revitalization, and put forward corresponding countermeasures and suggestions [5]. Duan et al. explored the labor practices of rural live streaming sellers in China and the impact of their platformization process on the economic logic of labor, the urban-rural divide, and the reproduction of power structures [6]. Li and Zhang explored the transformative role of e-commerce logistics in rural China, focusing on its impact on the agricultural sector[7]. He et al. conducted a scientific analysis on e-commerce assistance to farmers in the context of rural revitalization in Lingshan County, Qinzhou City, explored the current situation and challenges of e-commerce development in Lingshan County, Qinzhou City, and finally proposed a scientific promotion strategy [8]. Li and Zhu studied the current status and challenges of the live streaming sales model for agricultural products and proposed innovative development strategies aimed at improving its audience reach, technical means, marketing difficulty, and consumer loyalty[9]. Ji et al. studied the current situation, marketing problems and specific development strategies of rural e-commerce in order to promote the development of rural e-commerce in the context of rural revitalization [10].

Although the above research provides many useful insights for live e-commerce of agricultural products, there are still problems such as insufficient technical means and low market acceptance. The innovation lies in how to improve precision marketing and consumer loyalty.

### **3. Methods**

#### **3.1 Demand Analysis of Rural Economic Development**

Rural economic development faces multiple challenges, among which low income of farmers is the most prominent problem. Most rural residents rely on agricultural production as their main source of income, and agricultural income is easily affected by factors such as natural disasters and climate change, resulting in income fluctuations and instability. With the advancement of agricultural modernization, it is difficult for farmers' income to increase significantly, so new ways to increase income are needed. Another problem is the limited employment opportunities in rural areas. With the mechanization of agriculture and the migration of population to cities, traditional jobs in rural areas are gradually decreasing, and the employment problem of farmers has become more serious[11]. Many farmers rely on traditional market sales methods, which have slow information flow and difficult to transmit changes in market demand to the production end in a timely manner, making it difficult for farmers to obtain higher returns and sometimes even face difficulties in selling products. Especially in remote areas, due to the lack of a modern distribution network, the transportation and storage conditions of products are poor, resulting in serious losses and poor timeliness during the circulation process, which affects the market performance of products and further restricts the development of rural areas. Therefore, how to solve these problems has become the key to current rural development.

#### **3.2 The Role of Live Streaming in Promoting the Transformation of Rural Economic Structure**

Livestreaming has played a key role in the transformation of rural industrial structure. Traditional agriculture relies on natural resources and labor-intensive models, and its development speed is slow and relatively single. Livestreaming has brought new growth momentum to the rural economy, especially in the digitalization[12], branding and modernization of the industrial chain. Through the platform, farmers can display and sell agricultural products, break through geographical and information barriers, improve market competitiveness, and increase income by reducing intermediaries. Live streaming has promoted the branding of rural products[13]. Many farmers have used the platform to build their brand image, increase their visibility, and expand their market. Live streaming has also promoted the modernization of the rural economy[14]. In particular, in terms of transportation and distribution systems, it has shortened delivery time, reduced costs, and improved efficiency by cooperating with platforms and logistics companies. Live streaming has promoted collaboration between rural areas and external markets. The integration of upstream and downstream industrial chains has made rural development no longer limited to agriculture, but has also extended to areas such as live streaming sales, short video creation, transportation and distribution, promoting the diversification and sustainability of rural development. Table 1 shows the impact of live streaming sales on rural economic transformation.

Live streaming has significantly improved the sales volume of agricultural products, the proportion of people employed in rural e-commerce, agricultural product sales, brand awareness and transaction volume. Through data comparison, live streaming has effectively promoted the increase of farmers' income, significantly created employment opportunities, and greatly increased brand market awareness and product sales.

Table 1: Data table on the impact of live streaming sales

Indicator	Before Live streaming	After Live streaming	Growth Rate (%)
Agricultural Product Sales (tons)	200	450	125.00
Proportion of E-commerce Workers (%)	10	30	200.00
Agricultural Sales Growth (RMB 10,000)	30	75	150.00
Brand Awareness Increase (Search Index)	250	1,500	500.00
Online Platform Transaction Volume (orders)	2,000	8,000	300.00

### 3.3 The Impact of Live Streaming on Rural Social Structure and Cultural Identity

Rural residents, especially young people and women, are gradually integrating into the global market, which not only improves their economic status, but also has a profound impact on rural social structure and cultural identity. Through live streaming, rural young people and women can break through traditional gender roles and social restrictions, gain more economic autonomy and social status [15], and change the previous male-dominated labor distribution model. These emerging social networks not only promote the recognition of local brands, but also enhance farmers' confidence in and awareness of inheritance of local culture. In the process of live streaming, farmers enhance their cultural identity by displaying local agricultural products and promoting local traditional culture. This social and cultural change brought about by live streaming provides a new perspective and impetus for the reshaping of rural social structure and the balance of gender roles[16].

## 4. Results and Discussion

The experimental design aims to evaluate the effect of live streaming on product sales, farmers' income, employment opportunities and transportation efficiency. Several representative rural areas were selected to ensure diversity at different development stages and geographical locations, and experimental and control groups were set up. The experimental group consisted of farmers and villages participating in live streaming, while the control group consisted of farmers and villages that did not participate in this model. The actual effect of live streaming was evaluated by comparing the data changes between the two groups in agricultural product sales, income, employment and logistics. Regarding income changes, the income data of farmers in the experimental group before and after participation were collected to analyze the magnitude of income growth and the diversification of sources; employment changes were discussed by analyzing the distribution of new jobs, especially live streaming related jobs, warehousing management and logistics distribution, to discuss the impact on rural employment structure. In terms of logistics and distribution, the delivery timeliness and logistics costs of the experimental group were measured to analyze the impact of this model on improving logistics efficiency and cost control.

## 4.1 Changes in Farmers' Income

The change in farmers' income is an important indicator to measure the impact of e-commerce live streaming on rural economic development. The income growth rate is a key evaluation criterion. By analyzing the income data before and after the participation of farmers, it can be intuitively shown whether the income has increased significantly. The diversification of income sources is also of great significance. Live streaming provides farmers with a new source of income beyond traditional agricultural income, such as commissions for promoting agricultural products through live streaming and rewards for participating in platform activities. This diversification of income models has not only improved the income level of farmers, but also enhanced their ability to resist risks to a certain extent. Figure 1 is a comparison of the income of 20 farmers in a rural area before and after participation, in RMB:

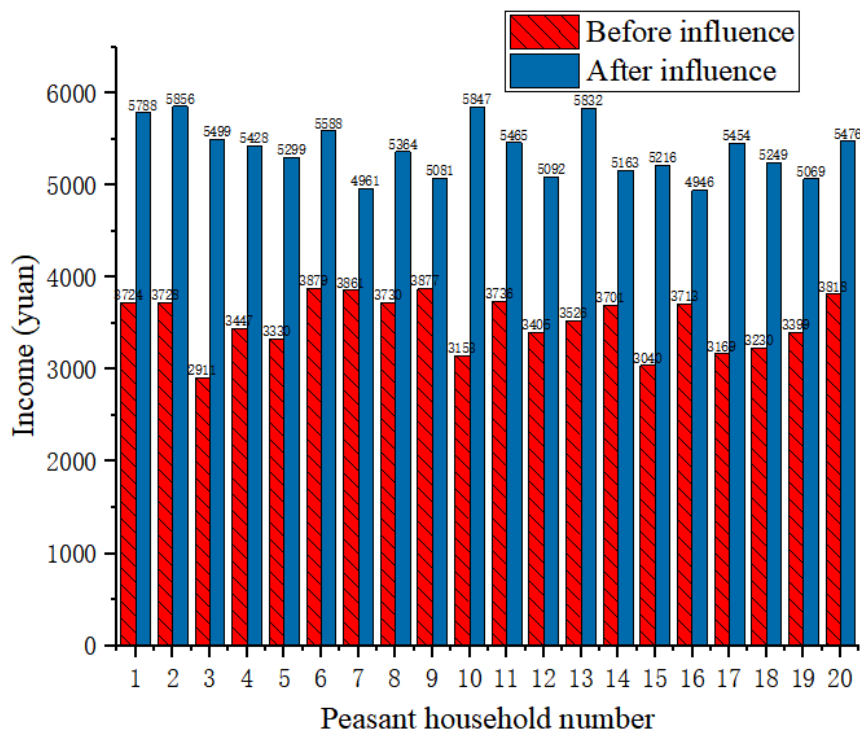


Figure 1: Comparison of income before and after participation

Figure 1 reflects the impact of e-commerce live streaming on farmers' income. By comparing the income data before and after the impact, it can be seen that the income of all farmers has increased to varying degrees, ranging from 1,100 yuan to 2,694 yuan, showing the positive role of e-commerce live streaming in promoting farmers' income. Further calculations show that farmers' income increases by an average of 1,864.8 yuan, indicating that live streaming has a universal and significant impact on improving farmers' economic levels. This shows that live streaming can not only help high-income farmers further improve their economic level but also effectively promote the increase of income of low-income farmers, improve the rural economic situation and enhance their ability to resist risks.

## 4.2 Creation of Employment Opportunities

E-commerce live streaming has not only promoted the sales of agricultural products in rural areas, but also significantly increased employment opportunities. New jobs are an important

indicator to measure its impact. Judging from the data, live streaming has directly or indirectly created many new jobs. These jobs provide more employment options for rural residents and effectively alleviate the employment pressure caused by the mechanization of traditional agriculture. Many rural residents have achieved flexible employment through e-commerce live streaming, including working part-time as live streaming assistants or temporary delivery jobs; others choose to invest full-time in the e-commerce industry to stabilize their income and improve their family's economic level. This change in employment form has not only increased the total employment, but also improved the quality of employment, injecting new vitality into the rural economy. Figure 2 is a comparison of job positions in 20 villages in a rural area before and after participating in live streaming:

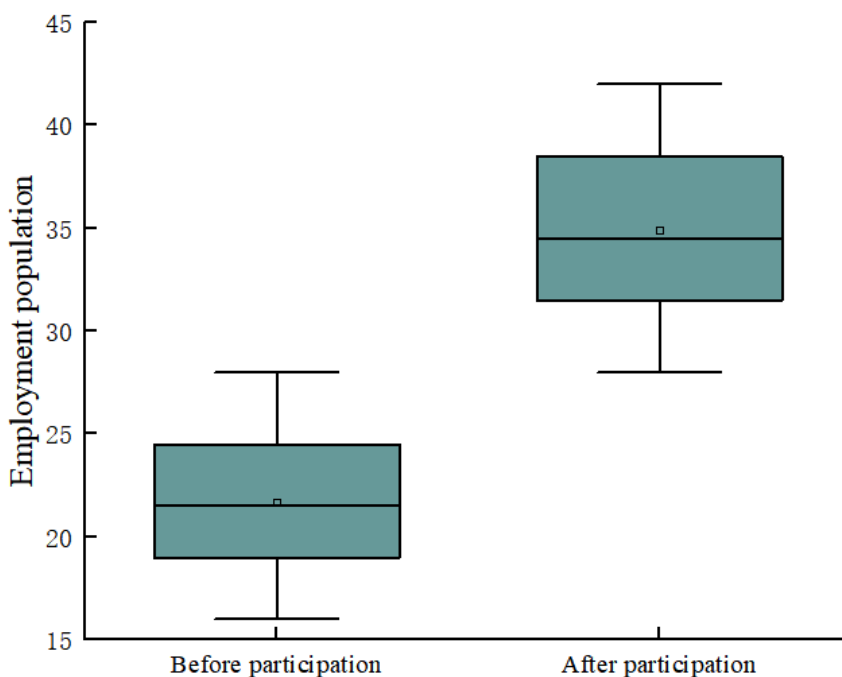


Figure 2: Comparison of job positions before and after participation

The data in Figure 2 reveals the changing trend of jobs in rural areas driven by the live broadcast e-commerce model. Comparative analysis shows that the number of jobs in each village has increased after engaging in live broadcast e-commerce activities. The number of job increases ranges from 10 to 15. Specifically, the number of jobs in Village 1 increased from 25 to 38, an increase of 13; the number of jobs in Village 6 increased from 21 to 39, an increase of 18. The average number of new jobs in villages participating in live broadcasts is 13, which reflects the positive impact of live broadcast e-commerce on the creation of rural jobs. The newly added jobs are mainly concentrated in industries such as logistics, live broadcast support, and warehousing management, and also provide some villagers with opportunities for part-time or flexible work. This change not only reduces the employment burden in rural areas, but also promotes the improvement of the rural labor structure.

#### 4.3 Logistics Distribution Efficiency and Cost Control

Logistics and distribution efficiency and cost control are key factors in the success of e-commerce live streaming of agricultural products. By integrating resources, refining operations and regionalized warehousing, the speed of logistics and distribution has been significantly

improved. Especially in rural areas, e-commerce platforms have achieved an efficient logistics network by building regional distribution centers, ensuring that agricultural products can reach consumers in a shorter time. Logistics costs have also gradually decreased with the popularization of e-commerce live streaming. The innovation of warehousing models and the introduction of logistics information management have also effectively reduced inventory turnover costs and warehousing fees. These measures have worked together to promote a significant reduction in logistics costs, improved the economic situation of farmers, and further promoted economic development. Figure 3 is a comparison of logistics costs in 20 regions before and after participating in live streaming:

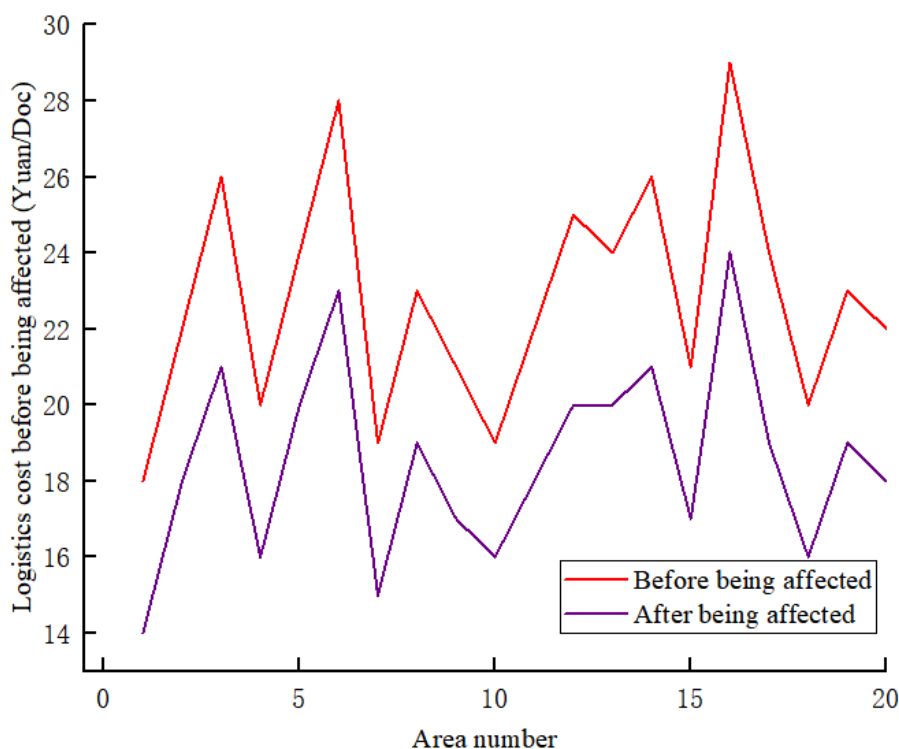


Figure 3: Comparison of logistics costs before and after participation

By analyzing the above figure, it can be concluded that the live streaming model has effectively reduced logistics costs in most areas. There is a large gap between the logistics costs before and after the impact. By calculating the changes in logistics costs in all regions, we can conclude that the average logistics cost has been reduced by 4.25 yuan per order. This result shows that the model has successfully reduced transportation and warehousing costs by optimizing logistics routes, centralized warehousing, and improving distribution efficiency. The reduction in logistics costs in most regions is between 2 yuan and 5 yuan, and the reduction in some regions is more obvious, reflecting that the model has different logistics cost control effects in different regions. This data reveals the important role of live streaming in reducing logistics costs and improving distribution efficiency.

## 5. Conclusion

This paper carefully studies the impact of live streaming on rural revitalization through comparative analysis, especially in terms of farmers' income, employment opportunities, agricultural commodity sales and logistics efficiency. Live streaming has significantly increased

farmers' income, created new employment opportunities, improved the circulation efficiency of agricultural products, and promoted the branding and marketization of agricultural and sideline products. This paper provides theoretical analysis and practical reference for the live streaming model in promoting rural revitalization and long-term development of the rural economy. However, the research also has certain limitations, such as the low universality of the selected research area and the superficial investigation of the application of live streaming platform technology. Future research can further expand the sample range and explore in depth the long-term effects of live streaming and its far-reaching impact on rural social structure, cultural identity and other aspects. In addition, how to further optimize the model of cooperation between e-commerce platforms and rural areas and improve precision marketing capabilities will be the focus of the next exploration.

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