

# ***Research on the Development Status and Countermeasures of Rural E-commerce in China***

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**Abstract:** With the rapid development of the internet, the rural e-commerce in China has also evolved prominently. And it becomes increasingly widespread as well. Concurrently, various issues have surfaced in rural areas, which hinder further development of rural e-commerce in China. Recognizing this complexity, the dissertation delves into the current landscape of rural e-commerce, exploring both its inherent strengths and weaknesses, as well as the opportunities and threats it currently faces. The dissertation aims to clarify the fundamental development ideas and direction for the rural e-commerce in China, not just in theory but also in practical application. To illustrate this, it utilizes the example of Pinduoduo, a prominent e-commerce platform, to analyze how such platforms can effectively contribute to the advancement of rural e-commerce. Finally, the dissertation offers a set of forward-looking suggestions for the future of rural e-commerce, such as intensifying policy promotion, cultivating professional talents, and strengthening network infrastructure.

**Keywords:** E-commerce; Rural Revitalization; Pinduoduo.

## **1. Introduction**

As the internet becomes ubiquitous and the digitalisation process accelerates, rural e-commerce has entered a phase of rapid development. This dissertation aims to study the current development status of rural e-commerce in China and the corresponding strategies. A SWOT analysis was employed to examine the current state of rural e-commerce development, and Pinduoduo was used as a case study to analyze how e-commerce platforms can facilitate the development of rural e-commerce. Solutions are proposed to address current issues, thereby aiding the high-quality development of rural e-commerce.

## **2. Current State of Rural E-commerce**

### **2.1. Strength Analysis**

#### **2.1.1. Broad Market**

Rural areas in China account for over 90% of the country's land area, with the rural population making up approximately 36.11% of the total population. In 2023, the GDP of China's primary sector accounted for 7.1% of the total GDP. These factors, combined with a large population and expansive

areas, provide a vast consumer base and merchant body, presenting significant market potential that is yet to be fully tapped.

### **2.1.2. Rich Product Resources**

Rural regions are distributed across diverse geographical locations, from plains to mountainous areas, from coastal to inland regions. These varying environments cultivate a variety of crops that have regional characteristics, meeting the market demand for unique and high-quality agricultural products. This diversity enables the assortment of products available on e-commerce platforms. Additionally, many rural areas still retain traditional agricultural practices and cultures, which means the cultivation techniques and crop varieties used produce agricultural products with distinct regional characteristics and excellent quality, meeting the consumer demand for healthy, green, and high-quality agricultural products [1].

## **2.2. Weakness Analysis**

### **2.2.1. Imperfect Infrastructure**

Despite achieving the goal of becoming a moderately prosperous society, the infrastructure in China's vast rural areas remains less developed compared to urban areas. The growth of e-commerce depends on a fast and stable internet environment, yet some rural areas suffer from inadequate information and communication technology infrastructure development, with incomplete network coverage and limited bandwidth, which hampers the rapid development of rural e-commerce. Furthermore, the inconvenience of rural transportation and poor road conditions lead to high logistics costs and slow transport speeds of goods, which may further impact after-sales services [2].

### **2.2.2. Shortage of Professional Talent**

Currently, the cultural and educational level of the population in rural areas is lower than that in urban areas, requiring an improvement in the overall cultural literacy of the workforce. Moreover, there is a lack of professionals dedicated to e-commerce, with an even greater scarcity of specialised talent. Part of the workforce has not systematically studied relevant professional knowledge, such as managing online stores on shopping platforms, promoting agricultural products, dispatching goods, and handling after-sales services all require specific knowledge and guidance. While some have undergone systematic training, they lack practical experience and are unfamiliar with the cultivation and management of agricultural products, which hampers their ability to apply e-commerce knowledge effectively in rural areas [3].

## **2.3. Opportunity Analysis**

### **2.3.1. Policy Support**

In the report of the 19th National Congress of the Communist Party of China, it was explicitly mentioned that the Rural Revitalization Strategy is a strategic goal that must be achieved in the new era of China's social development [4]. The Chinese government highly values the economic construction of rural areas. Furthermore, as e-commerce serves as a significant boost to economic development, combining the two is bound to ignite new vitality in the rural economy. Under the guidance of the Rural Revitalization Strategy, the "Integrated Demonstration of E-commerce into Rural Areas" initiative has been proposed [4]. This initiative supports the improvement of the county, township, and village three-level logistics distribution system, the construction and upgrade of county-level e-commerce public service centers, and the rural e-commerce training system. In 2021,

the Ministry of Commerce first proposed the implementation of the "Digital Commerce Enhances Agriculture" project; In 2022, the "No.1 Central Document" for the first time proposed the implementation of the "Digitization and E-commerce to Revitalize Agriculture" project. In 2023, the offices of nine departments, including the Ministry of Commerce, released the "Three-Year Action Plan for County-level Commerce (2023-2025)", aimed at providing policy guidance to further deepen the "Digitization and E-commerce to Revitalize Agriculture" initiative. These measures collectively ensure at the macro level the successful establishment and growth of e-commerce in rural areas.

## **2.4. Threat Analysis**

### **2.4.1. External Competitive Pressure**

Rural e-commerce has garnered widespread consumer favour due to its fresh, healthy, and affordable products. However, large supermarkets such as Hema and Qi, which possess complete supply chains encompassing production, storage, and transportation to sales, can also provide consumers with origin-based products [5], thus forming competition. They offer even more convenience with services like mini-program ordering and food delivery, heightening the competition with rural e-commerce which already sees numerous participants including large e-commerce platforms, regional e-commerce businesses, and individual operators; hence, the competition is intensely fierce.

### **2.4.2. Lack of Brand Influence and Low Consumer Trust**

Currently, rural e-commerce has not established a strong brand image. On one hand, operators often lack awareness and expertise in brand building, neglecting the importance of a brand, leading to a vague brand image that fails to create a distinct impression in consumers' minds. On the other hand, compared to urban e-commerce, rural e-commerce may face deficiencies in capital, technology, and talent, making it challenging to allocate sufficient resources for brand promotion and development. Due to limited funding, rural e-commerce invests less in market research, brand positioning, and advertising, which affects brand recognition and appeal.

Agricultural products differ from other products in that their quality is influenced by numerous natural factors such as weather, temperature, and humidity. The imperfect logistics system during transportation can easily damage product quality, resulting in unstable quality of agricultural products received by consumers [6]. Additionally, the lack of comprehensive after-sales service in most rural e-commerce businesses significantly impacts consumer recognition of the products.

## **3. Development of Rural E-commerce: The Case of Pinduoduo**

### **3.1. Establishing a Pinduoduo-style Sales Network**

The initial development phase focused on constructing a Pinduoduo-style sales structure (2015-2017), building a ground network architecture centred around the "platform + emerging agricultural operators" model. This used incentive policies to attract new agricultural operators to the platform, with this group forming the foundation of a network that spans from physical to digital realms. Additionally, a "Sky Network" known as the "Agricultural Products Distribution Center" was established, where, after the ground network compiled product data, cloud computing resources matched supply and demand data, ensuring precise delivery of seasonal agricultural products to consumers. During this phase, Pinduoduo's unique sales network facilitated the unimpeded flow of agricultural products through various stages on the platform, laying a solid foundation for rapid future growth.

Entering the second development phase, the high-speed growth phase of agricultural products on Pinduoduo (2018-2020), the platform leveraged its unique rural e-commerce sales network to drive explosive growth in the agricultural sector. Between 2017 and 2020, the sales figures for agricultural products doubled annually, with growth rates peaking at 233%. In just three years, Pinduoduo's sales of agricultural products skyrocketed from 19.6 billion yuan to 270 billion yuan, an increase of 13.8 times. Compared to the national online sales growth of agricultural products, Pinduoduo's annual growth in this sector was five to eight times greater. Clearly, Pinduoduo's development in the agricultural product sector was exceptionally rapid, making it one of China's largest platforms for agricultural product sales after these three years.

Since 2021, Pinduoduo has entered its third phase of development, focusing on building the agricultural industry chain. During this period, although the growth in agricultural product sales has slowed, Pinduoduo gradually shifted its focus from merely promoting sales to fostering the development of the entire agricultural industry. The company supports local creation of agricultural product brands and enhances the added value of products through multiple dimensions such as research and development, production, and sales.

In the R&D sector, Pinduoduo has set up an agricultural research fund worth several billion yuan, committed to enhancing the quality and scientific production levels of agricultural products through smart agriculture technologies. In terms of supply chain, Pinduoduo actively promotes the "Duo Duo Farm" model, cooperating with governments, farmers, and new-type agriculturalists to optimize the rural industry chain and create local characteristic agricultural product brands. On the sales front, Pinduoduo utilizes various channels such as the "Duo Duo Grocery" community group buying service, the Hundred Counties Live Streaming events, and Origin Direct Sales Festivals to expand the sales network for specialty agricultural products. Pinduoduo has announced that, in its 2021-2025 plan, the company will support the establishment of 100 industrial belts, launch 100,000 customized new brand products, and through these efforts, achieve a sales volume of one trillion yuan on the platform [7].

### 3.2. Cultivating Tech-Savvy Farmers

Pinduoduo has been a supporter of the Technology Mini-Campus Grand Competition for two consecutive sessions, facilitating exchanges and competitions among university students to enhance agricultural technologies. The Technology Mini-Campus, initiated in 2009 by Zhang, a Chinese Academy of Engineering academician and professor at China Agricultural University, in Quzhou County, Hebei Province, has expanded to over a thousand villages across 31 provinces over the past 15 years. As more educational institutions and students have joined, and the fruits of industry-academia-research-application have become more evident, the Technology Mini-Campus has now reached beyond China to eight countries in Laos and Africa. Additionally, the service model of the Technology Mini-Campus has evolved from the initial 1.0 model, which assisted one household at a time, to the current 3.0 model that empowers rural revitalization comprehensively through technology and talent support [8]. In 2020, the Technology Mini-Campus Competition was incorporated as a special event within the China Graduate Rural Revitalization Technology Empowerment + Innovation Competition, becoming a part of the thematic series of innovative practice competitions for Chinese postgraduate students. The 'Technology Mini-Campus' not only aids farmers in solving technical problems but also provides training classes, shifting from "giving fish" to "teaching how to fish," thereby cultivating a large number of 'tech-savvy farmers' to aid the development of rural e-commerce.

## 4. Strategies and Measures for the Development of Rural E-commerce

### 4.1. Policy Promotion and Implementation

Despite the central government issuing a series of policies to support rural e-commerce, some regions are still unaware of these policies or the local government's implementation is lacking, preventing these policies from effectively benefiting individual rural e-commerce entities. Localities should heed the central call, enforce these policies comprehensively, tailor specific tax relief policies and establish special funds based on local circumstances [9], strengthen policy publicity, and organize grassroots personnel to learn and understand relevant policies to assist farmers in applying for loans and other support.

### 4.2. Strengthening Infrastructure

Firstly, it is essential to enhance the broadband network coverage in rural areas. Broadband coverage is a requirement of the information age and a crucial support for the development of rural e-commerce, necessitating a gradual achievement of complete broadband coverage in remote areas. In areas where network coverage has been established, it is necessary to optimize network layouts and improve internet speeds to reduce the digital divide between rural and urban areas [10].

Secondly, improving the transportation and logistics capabilities in rural areas is vital. The country should increase fiscal expenditure to perfect the logistics network in remote rural areas, regularly maintain roads, and ensure local governments prepare emergency plans for extreme weather, safeguarding the safety and efficiency of road transport under adverse conditions.

### 4.3. Enhancing Agricultural Product Quality and Brand Image

The quality and brand image of agricultural products are key to the success of live-streaming efforts that assist farmers. However, currently, many agricultural products sold through e-commerce channels are of low quality and lack a prominent brand image. It is necessary to further improve the quality management of agricultural products [9]. Emphasizing the standardization, normalization, and branding of agricultural production to ensure product quality stability, and strengthening brand building through collaboration with governments, businesses, and e-commerce platforms can help create distinctive local agricultural product brands, thus enhancing the market competitiveness and consumer recognition of these products.

## 5. Conclusion

The development of rural e-commerce is currently at a stage where opportunities and challenges coexist. It boasts a vast consumer market and rich product resources, supported by robust policies. However, the imperfect rural infrastructure and the lack of professional talent are hindering further development. By analyzing these issues, it is clear that strengthening policy promotion and implementation, improving infrastructure, and enhancing the quality and brand image of agricultural products can facilitate better development of rural e-commerce. With a favourable macro environment and policy support, rural e-commerce in China is poised for significant growth.

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