

# Research on the Development of Rural Digital Economy

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**Abstract:** With the vigorous development of the digital economy, a new source of power has been injected into economic growth, and it has also provided a driving force for the digital transformation of the rural economy. The development of the rural digital economy is a realistic need to innovate the rural economic development model, an important measure to promote urban-rural integration, and a realistic path to promote sustainable rural development. However, in the process of rural digital economy construction, problems such as imperfect infrastructure, shortage of digital talents, imperfect logistics and distribution systems, and lack of security systems have also emerged. This paper mainly proposes strategies to optimize the rural digital economy from the perspectives of improving infrastructure, cultivating digital talents, improving logistics systems, and strengthening security systems.

**Keywords:** Digital Economy; Rural Economy; Digital Transformation; Rural Digital Economy

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## Introduction

"Rural" is a relative concept, which is the industrial, living and ecological space relative to the city. In the era of agricultural economy, the countryside is the foundation of social development; in the era of industrial economy, with the steady development of cities, the countryside is gradually falling behind, and the "hollowing", poverty and backwardness of the countryside have become its main characteristics; with the digital economy era the country is still in a backward state at the beginning stage, which undoubtedly widens the urban-rural divide. And the rural digital economy is an important part of the digital economy of returning home. To a certain extent, it can improve the employment status of the rural population, innovate the agricultural development model, and promote the high-quality development of the rural economy.

## 1. Necessity of rural digital economy construction

### 1.1 The practical needs of innovating the rural economic development

#### model

With the advent of the digital economy era, the values of society are gradually changing, and the needs of consumers are being paid more and more attention. As the main source of farmers' income, agricultural production must adapt to a consumer-oriented production model, and the emergence of the rural digital economy can just solve this problem. The combination of agricultural production and the digital economy can provide a platform for farmers to better understand the market. Based on the market or information, farmers can adjust the production structure and sales model to reduce ineffective supply. The digital economy facilitates the sales of agricultural products. Farmers face consumers directly, and the middleman is reduced. While farmers' income increases, consumers also receive more satisfactory products. At the same time, the digital method has also changed the consumption environment in rural areas, forming an urban-rural integrated consumption mode. Villagers can enjoy faster and more thoughtful after-sales service and improve the quality of life of farmers. <sup>[1]</sup> Therefore, the development of the rural digital economy is a realistic need to innovate the rural economic development model.

## **1.2 Important measures to promote urban-rural integration**

With the continuous development of industrialization, the rural population gradually moved to the cities, and agriculture gradually served the industrial development. This has also produced a serious consequence. While the cities have abundant labor force and talents, abundant information, sufficient funds, and the latest technology and resources, the countryside is obviously backward, forming a dualistic division between urban and rural areas. However, the development of the rural digital economy has broken the information gap between urban and rural areas. Villagers have the opportunity to obtain information related to their production and life, better understand the law of market supply and demand, and better allocate urban and rural resources. With the market information that villagers can obtain through the Internet, they can sell their own agricultural products on the Internet platform by themselves, and they can also buy daily necessities through the Internet. At the same time, the digital economy also provides rural online distance education, remote medical consultation and medical care through the network platform, which promotes the sharing of urban and rural resources. As a result, the urban-rural integration construction has been further advanced.

## **1.3 The realistic path to promote sustainable rural development**

Under the traditional agricultural production mode, one of the ways to improve the quality of agricultural products is to invest a large number of chemical fertilizers and pesticides. The weak agricultural foundation and extensive production methods lead to agricultural pollution, which is a very large pollution. <sup>[2]</sup> Economic development at the expense of the environment is unhealthy and not long-term development. To promote sustainable rural development, this problem must be solved, and the digital economy has just opened up a realistic path for solving this problem. The digital economy represented by the Internet and big data provides intelligent governance ideas for agricultural development, enabling agricultural production activities to be carried out on the basis of accurate data analysis. Through the detection of soil pH, dynamic monitoring of farmland, rational use of agricultural fertilizers, precise spraying of pesticides and farmland irrigation, pollution is reduced and rural sustainable development is promoted.

## **2. The rural digital economy is facing difficulties**

### **2.1 The infrastructure is not perfect, and the foundation of digital economy construction is unstable**

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### **2.2 Lack of digital talents and low participation in digital economy construction**

The key factor in the construction of the digital economy is professional talents, who are also the core element of high-quality economic development in the new era. Villagers, as the main body of rural digital economy construction, are

subject to education managers, and their knowledge level and ability are obviously insufficient; village cadres, as the main force of rural digital economy construction, are subject to the imperfect cultivation system and limited number, and it is difficult for existing personnel to meet the rural digital economy. economic construction needs. In terms of talent introduction, due to the lack of policy and institutional guarantees and long-term incentive mechanisms in rural areas at this stage, even if a group of talents is introduced, they will face the problem of not being able to retain talents. In the context of the shortage of professional digital talents and the weak digital awareness of villagers, the construction of the rural digital economy is difficult, and the participation in the construction of the digital economy is not high.

## **2.3 The logistics distribution system is not perfect, and the driving force for the construction of the digital economy is not strong**

Due to the influence and limitation of various factors, the development of rural logistics distribution system is slow. First of all, the construction of rural transportation facilities is backward. Although more investment in rural transportation has been made in recent years, the number of rural roads is relatively small and the road conditions are relatively complex. They are often affected by natural disasters, and inadequate maintenance in the later period has led to the backwardness of rural transportation construction. Secondly, rural logistics and distribution outlets are sparse. Rural areas are vast and sparsely populated. In many places, there are only express delivery points in towns. Villagers need to personally go to the express delivery station to pick up their own express. Some villages are located in relatively remote places, and logistics cannot be covered in many cases. Even if they are covered, logistics costs will be high due to long logistics routes and small consumption, resulting in meager profits of rural e-commerce, thus hindering the development of rural e-commerce, affecting the high-quality development of the rural economy.

## **2.4 The network security system is not perfect, and the guarantee of digital economy construction is insufficient**

The main technology on which the development of the digital economy is based is the Internet technology. However, due to the openness and anonymity of the network, many uninvited guests have taken advantage of it, and the resulting network security problems cannot be ignored. Since the rise of digital development has not been around for a long time, the network supervision mechanism has not yet been perfected. For example, rural e-commerce has developed rapidly in recent years, but online e-commerce platforms have not yet established a comprehensive regulatory system, which makes it impossible to form a standardized rights protection mechanism and to ensure the steady advancement of the rural digital economy.

# **3. Mechanism for resolving the dilemma of rural digital economy**

## **3.1 Improve digital infrastructure and consolidate the foundation of construction**

To improve the rural digital infrastructure, it is necessary to promote the full coverage of the network infrastructure, ensure the possibility of villagers using the Internet as much as possible, and help agricultural producers to obtain consumer demand information through the Internet. At the same time, it is necessary to accelerate the digital transformation of traditional infrastructure, integrate infrastructure resources, and help build a national unified data platform. On the one hand, we must do well in top-level design, ensure capital investment, and continuously optimize infrastructure and environment. On the other hand, we should also cultivate local digital leading enterprises and encourage social capital to participate in the promotion of digital infrastructure construction.

### **3.2 Attach importance to the cultivation of digital talents and form a joint force of construction**

The construction of rural digital economy talent team is mainly carried out from two dimensions: the improvement of the digital skills level of the existing labor force and the attraction of policy-based digital talents. On the one hand, it is necessary to strengthen the cultivation of villagers' digital literacy, provide villagers with training on digital applications and digital concepts such as mobile phone applications, e-commerce logistics, and live delivery of goods, so that they are familiar with these basic applications, and improve the participation and sense of gain in the construction of rural digital economy. On the other hand, we should attract and nurture digital talents through policy means. According to the requirements of rural digital talents, we should optimize the institutional framework for selecting and employing talents, and create a sharing platform for digital talents. At the same time, while introducing digital talents, we should pay attention to the cultivation of talents, pay attention to localization as the basic direction, and strengthen the management of digital talents.

### **3.3 Improve the rural logistics distribution system and stimulate the construction momentum**

Improving the logistics distribution system needs to be carried out from the two dimensions of distribution network construction and logistics infrastructure construction. On the one hand, we must solve the last mile logistics and distribution services in rural areas, reasonably plan the location of distribution outlets, plan rationally according to different geographical characteristics. For areas with a large area and a small population, it is divided into relatively small logistics areas, which can not only facilitate the life of the villagers, but also improve the logistics and distribution. On the other hand, based on preferential policies, it will attract major e-commerce platforms and logistics enterprises to actively participate in the construction of logistics distribution infrastructure and strengthen the construction of logistics outlets, thereby stimulating the driving force for the construction of rural digital economy.

### **3.4 Establish a safety system to ensure construction safety**

In the process of rural digital economy construction, network security is directly related to the direct interests of the majority of villagers. It is necessary to protect the network security issues when villagers participate in the rural digital economy, so that villagers can produce and sell agricultural products with peace of mind. On the one hand, relevant departments should further improve the laws and regulations related to network security, and at the same time do a good job in network supervision and crack down on all network telecommunication frauds. On the other hand, villagers should also actively learn relevant knowledge of network security, improve their awareness of network security, and strive to identify network security problems from the source, so as not to give criminals an opportunity<sup>[4]</sup>.

## **Conclusion**

Based on information technologies such as big data, artificial intelligence, and mobile Internet, the economy is gradually transforming into digitalization, which effectively reduces social costs and improves the efficiency of resource allocation. Driven by the digital economy, the agricultural industry has been developed and the rural economic environment has been improved, which fundamentally promotes the progress and upgrading of rural areas and improves the living conditions of farmers. However, it is necessary to develop the rural digital economy according to local conditions, develop a digital economy with rural characteristics, and proceed from the fundamental interests of the villagers to promote the high-quality development of the rural economy.

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