

# Research on the Role and Mechanism of Digital Economy Boosting Rural Revitalization Under the Background of Big Data

Jian Qin  
School of International Trade  
Xinjiang University of Finance and Economics  
Urumqi, Xinjiang, 830012, China

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**Abstract:** The digital economy is an important product of the information technology revolution. With the advent of the big data era, the digital economy is having an increasingly significant impact on traditional economies. Rural revitalization is an important strategy for the current economic development in China, and the digital economy can provide new development opportunities for rural revitalization. This paper reviews the relevant research on the digital economy and rural revitalization, analyzes the role and mechanism of the digital economy in promoting rural revitalization. The results show that the role of the digital economy in rural revitalization lies in promoting agricultural modernization, promoting rural industrial upgrading, improving rural infrastructure, and enhancing rural social services. The mechanism by which the digital economy promotes rural revitalization mainly includes policy support, technological innovation, capital investment, and talent cultivation. This paper aims to provide theoretical basis and practical guidance for the application of the digital economy in rural revitalization.

**Keywords:** Digital economy; rural revitalization; role; mechanism

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## 1. INTRODUCTION

At present, the digital economy is becoming a new engine to promote economic development, and rural revitalization has also become an important strategy for China's current economic development. The digital economy can provide new development opportunities for rural revitalization, and is conducive to the modernization of the rural economy and the optimization and upgrading of the industrial structure. The purpose of this paper is to summarize the relevant research on digital economy and rural revitalization, analyze the role and mechanism of digital economy in promoting rural revitalization, and provide theoretical basis and practical guidance for the application of digital economy in rural revitalization.

The digital economy is an important product of the information technology revolution. It is based on information technology, takes data as the core, takes innovation as the driving force, is supported by the network, and is characterized by digitization. It is a representative of a new round of economic and social technological revolution and industrial transformation. The development of the digital economy has had a major impact on the traditional economy, promoting economic growth, improvement of labor productivity, industrial restructuring and social transformation. The digital economy covers a variety of technologies and application scenarios such as cloud computing, Internet of Things, artificial intelligence, big data, and blockchain, and is a concentrated expression of informatization, intelligence, and networking. Rural revitalization is an important strategy for China's current economic development.

It aims to achieve the goal of coordinated urban and rural development and comprehensively build a modern socialist country through various means such as promoting rural economic development, improving the rural ecological

environment, and increasing farmers' income. The background of rural revitalization is the imbalance between urban and rural development, low income of farmers, and deterioration of the ecological environment. The significance of rural revitalization lies in the realization of balanced development between urban and rural areas, the promotion of agricultural modernization, the increase of farmers' income, and the protection of the ecological environment.

## 2. THE PROPOSED METHODOLOGY

### 2.1 The role of the digital economy in boosting rural revitalization

Digital agriculture is the application of digital economy in the field of agriculture, mainly including intelligent agriculture, Internet of Things agriculture, cloud computing agriculture, big data agriculture, blockchain agriculture, etc. The development of digital agriculture can improve agricultural production efficiency and the quality of agricultural products, promote agricultural modernization, and promote rural economic development.

First, digital agriculture can improve agricultural production efficiency. Digital technology can help farmers automate planting, fertilization, irrigation, and pest control, thereby reducing manual labor and improving labor productivity. For example, through the use of drones, satellite remote sensing and other technologies, farmland can be accurately monitored, and information such as land quality, vegetation conditions, and weather changes can be grasped in a timely manner, so as to guide planting and management and improve crop yield and quality.

Digital rural tourism can promote the development of rural tourism. Digital technology can help the development and integration of rural tourism resources and expand the scale and scope of rural tourism. For example, by establishing a

digital rural tourism platform, it is possible to integrate rural tourism resources, provide diversified tourism products and services, and attract more tourists to travel.

## 2.2 The Mechanism of Digital Economy Boosting Rural Revitalization

Policy mechanism refers to the policies and measures formulated by the government to support the development of the digital economy. The policy mechanism is an important guarantee and support for the digital economy to boost rural revitalization. Policy mechanisms mainly include fiscal and taxation policies, financial policies, and technological policies.

First of all, fiscal and tax policies are an important policy support for the digital economy to boost rural revitalization. Fiscal and tax policies mainly include measures such as tax incentives and financial subsidies. For example, for the investment and development of digital economy enterprises in rural areas, support such as tax incentives and financial subsidies can be given to encourage digital economy enterprises to enter the rural market and promote the development of digital economy in rural areas.

Second, financial policy is an important policy guarantee for the digital economy to boost rural revitalization. Financial policies mainly include measures such as financial innovation and financial support. For example, it is possible to increase support for rural financial institutions, promote rural financial innovation, improve the quality and efficiency of financial services, reduce financial service costs, and further promote the development of digital rural finance.

In addition, science and technology policy is also an important policy support for the digital economy to boost rural revitalization. The science and technology policy mainly includes measures such as technological research and development and personnel training. For example, it is possible to increase support for digital technology application research and personnel training in rural areas, improve the application level and popularization of digital technology in rural areas, and provide a more solid foundation and support for the development of digital rural economy.

## 3. CONCLUSION

The digital economy is an important trend in the current global economic development, and it is also an important opportunity for my country to realize rural revitalization. Research on the role and mechanism of digital economy in boosting rural revitalization has important guiding significance and practical value for realizing rural revitalization. This paper takes the role and mechanism of the digital economy in promoting rural revitalization under the background of big data as the research object, analyzes the role and mechanism of the digital economy in promoting rural revitalization, and puts forward corresponding policy suggestions.

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