

Exploring the Path of Digital Economy Assisting Rural Revitalization

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Abstract. The rural revitalization strategy is an important strategy proposed by China to solve the issues of agriculture, rural areas, and farmers. The issues of agriculture, rural areas, and farmers are of utmost importance in the work of the entire Party of China. With the continuous deepening of rural revitalization, the penetration and integration role of the digital economy is increasingly evident. The digital economy provides significant support for rural revitalization, fostering its transformation and upgrading, and promoting integrated urban-rural development, thus playing a crucial role in advancing rural revitalization. This article comprehensively studies how the digital economy can help rural revitalization, as discussed in multiple papers. This article elaborates on the process and current situation of rural revitalization, identifies the development and existing problems of digital economy in promoting rural revitalization, and explores how to further optimize the digital economy in promoting rural revitalization. This article offers suggestions and support for rural revitalization, which can promote its comprehensive development and progress, leading to shared prosperity in rural areas.

Keywords: Digital economy; rural revitalization; rural economy.

1. Introduction

Report to the 20th National Congress of the Communist Party of China pointed out that "the most arduous and arduous task of comprehensively building a socialist modernized country still lies in rural areas. We must prioritize the development of agriculture and rural areas, adhere to the integration of urban and rural development, facilitate the flow of urban and rural factors, accelerate the construction of agricultural power, and solidly promote the revitalization of rural industries, talents, culture, ecology, and organizations [1]." From this, it can be seen that the rural revitalization strategy is an important component of the socialist cause with Chinese characteristics. In the new era, digitalization is increasingly deepening in the development of agriculture and rural areas, playing an indispensable role in promoting rural revitalization, and has become an important driving force for the development of agriculture and rural areas in the new era. The integration of the digital economy into rural revitalization is a complex and arduous task that requires efforts and participation from all parties. It is necessary to actively respond to and apply this technology to promote high-quality development of agriculture and rural areas and achieve rural revitalization.

Extensive research has been conducted by scholars both domestically and internationally on the role of the digital economy in supporting rural revitalization. With continuous advancements in this field, noteworthy research outcomes have been achieved in the intersection between rural revitalization and the digital economy. The articles I have read so far are mainly based on three parts: significance, background, issues, and improvements for research. Wen Shuang elaborated on the significance of digital economy in promoting rural revitalization, analyzed the problems of digital economy in promoting rural revitalization, studied the path of digital economy in promoting rural revitalization, and provided reference experience for the development of rural revitalization and the application of digital economy [2]. Ma Qiaoen and Liu Xiang researched the basic dimensions of digital economy empowering rural revitalization, the multiple challenges faced, and the promotion path of digital economy empowering rural revitalization [3]. Liu Xiaofei proposed to promote the digital economy

and bring new impetus to the implementation of the rural revitalization strategy by improving the circulation and sharing of data, improving digital infrastructure construction, cultivating and absorbing high-quality digital talents in rural areas, and addressing the existing problems in rural digital element sharing, rural digital infrastructure construction, and rural digital professional talents [4].

Based on the above analysis, this article attempts to go through three parts. Firstly, the current situation and process of rural revitalization. Secondly, the digital economy drives economic growth by accelerating infrastructure construction, improving agricultural production efficiency and quality, greatly assisting the development of rural e-commerce, and driving the development of rural tourism. Furthermore, the problems and shortcomings of the digital economy in assisting rural revitalization. Finally, a plan for further improvement and optimization was provided. Step by step, research how the digital economy can help rural revitalization.

2. The Process and Current Situation of Rural Revitalization

Agriculture has undergone a comprehensive transformation, with China's grain production reaching 687 million tons in 2022, exceeding 650 million tons for eight consecutive years. The domestic self-sufficiency rate of the three main grains of rice, wheat, and corn has been maintained at around 95% for a long time, and the total amount of important agricultural products such as meat, eggs, and milk has been increasing. New industries and new forms of business emerge in endlessly, and the Internet plus, digital agriculture, rural tourism, and other development trends are strong, which have become an important manifestation and source of new driving forces for the development of modern agriculture. The comprehensive development of farmers has led to a per capita disposable income of rural residents reaching 20133 yuan in 2022, which is 2.3 percentage points higher than the growth rate of urban residents. The gap in disposable income between urban and rural residents has narrowed from 2.88:1 in 2012 to 2.45:1 in 2022. The per capita disposable income of rural residents in poverty-stricken areas is 15111 yuan, higher than the national growth rate of farmers' income. The number of agricultural practitioners has decreased significantly, from 70.5% in 1978 to 22% in 2021, and the absolute number has decreased from 366 million in 2003 to 170 million in 2021, indicating a trend of division of labor among farmers. Rural areas have made comprehensive progress, and the level of infrastructure construction has steadily improved. There has been significant progress in the quantity and quality of water, electricity, roads, gas, housing, and power supply. The public service system is becoming increasingly perfect, and the quality of education, medical care, cultural and sports, and elderly care services is constantly improving. The quality of the living environment is significantly improving.

In recent years, the country has introduced a series of policies and measures to support rural revitalization. For example, the investment mechanism of urban feedback to rural areas continues to improve, including increasing investment in agriculture, forestry, and water conservancy, central budget investments that prioritize agriculture and rural areas, and local government special bond funds. Financial support is also continuously increasing, with significant growth in the balance of agricultural loans and inclusive agricultural loans. These policies and measures provide strong support and guarantees for rural revitalization. In addition, digitalization is also deepening within agriculture and rural areas, contributing to rural revitalization. For example, the Xiaotangshan Technology Demonstration Park in Beijing uses satellite remote sensing technology to monitor crop growth, while the Huangzhunhei and Beijing Tianjin Yiqu areas have conducted wheat remote sensing yield estimation and crop disaster loss assessment. The Guizhou Rice Unmanned Farm relies on an unmanned driving system based on Beidou satellite navigation to remotely control the operation route and speed of agricultural harvesters [4]. The application of digital economy has penetrated into many aspects of agricultural and rural construction, providing strong strength for rural revitalization.

3. The Development Path of Digital Economy Assisting Rural Revitalization

3.1. Accelerate the Construction of Rural Infrastructure

The application of digital technology not only improves the infrastructure conditions such as transportation, water conservancy, and electricity in rural areas but also enhances the productivity and quality of life in rural areas. The digital economy promotes the digital and intelligent transformation of rural infrastructure through the introduction of the Internet, big data, cloud computing, and other advanced technologies. For example, building new infrastructure such as rural 5G networks, artificial intelligence, and the Internet of things can build information connections and interactions for rural economic and social development, enabling urban and rural areas to share digital dividends. The digital economy has also promoted the digital transformation of rural roads, electricity, cold chain logistics, agricultural production and processing infrastructure, and promoted the development of smart agriculture, smart transportation, smart grid, smart logistics and other facilities. The improvement of this infrastructure not only promotes the flow of information and resource sharing but also brings more development opportunities for residents and enterprises in rural areas [5]. The digital economy has injected new vitality into the economic and social development of rural areas and accelerated the pace of rural revitalization by promoting the digital and intelligent transformation of rural infrastructure construction.

3.2. Improving Agricultural and Agricultural Product Production Efficiency and Quality

The digital economy provides more precise and intelligent management for agricultural production processes through the use of digital technologies such as big data and cloud computing. Farmers can obtain real-time soil, meteorological, and other specific data, observe the growth status of crops, and develop more scientific planting plans, thereby promoting the healthy growth of crops and improving agricultural production efficiency. By utilizing digital technology and equipment, the appearance and color of agricultural products can be monitored at any time, and the nutritional content of agricultural products can be detected, which can improve the quality of agricultural products.

3.3. Contribute to the Development of Rural E-commerce

Utilizing e-commerce platforms, agricultural products are able to transcend geographical constraints and leverage social media, short videos, and other digital avenues for effective promotion and advertising, thereby reaching consumers nationwide and even globally in a direct manner. Through data analysis, it is possible to gain a more accurate understanding of consumer needs, develop personalized marketing strategies, and improve sales rates. The digital economy also provides a safer and more transparent trading environment for rural e-commerce, enabling traceability of transaction information, ensuring the security of transactions between both parties, enhancing consumer trust in rural e-commerce, and promoting the sustainable and healthy development of rural e-commerce.

3.4. Promoting the Development of Rural Tourism and Driving Economic Growth

New media can be used in rural areas to effectively integrate and present natural scenery, cultural heritage, folk customs, and other resources, attracting tourists. In addition, virtual reality technology can be combined to allow tourists to experience rural scenery firsthand. For example, in the Tuyuan Tianfu Agricultural Expo Park in Sichuan, from valleys to grasslands, from leaf houses to twin villas, VR headsets can be worn to immerse themselves in various scenes, experience local cultural customs, and harvest dreamy and fairy tale like immersive experiences. The integration of digital technology and excellent rural culture can bring culture to life. This innovative approach can attract more tourists and increase the attractiveness of rural tourism industry. The digital economy provides a broader marketing channel for rural tourism industry. Through digital channels such as social media and short video platforms, rural tourism can be more conveniently promoted and attract more potential tourists. At the same time, e-commerce platforms also provide convenience for the sales and booking of rural tourism products, promoting the online development of the tourism industry. The development of the

digital economy has also promoted the industrial upgrading of rural tourism. On the one hand, the application of digital technology has promoted innovation in the tourism industry, giving birth to new tourism formats and products; On the other hand, the development of the digital economy has also driven the development of related industries, such as tourism souvenir production, catering and accommodation industry, forming an industrial linkage effect, further promoting economic growth. We need to build a new model of integrated online and offline development, allowing digital technology to truly integrate into various aspects of rural tourism production, services, consumption, and enhance market vitality [6].

4. The Issue of Digital Economy Assisting Rural Revitalization

In the contemporary era, the digital economy emerges as a prominent economic development modality [7], significantly contributing to the advancement of rural infrastructure development, enhancing the efficiency and quality of agricultural and agricultural product production, vigorously promoting the development of rural e-commerce, stimulating the growth of rural tourism, and ultimately fostering economic expansion. However, there are still some issues facing the process of digital economy assisting rural revitalization, as shown below:

4.1. Lack of Digital Infrastructure

Digital infrastructure is the core element of digital economy in promoting rural revitalization. The essence of digital countryside is to use digital technology to promote rural construction and ensure the comprehensive application of digital technology [2]. However, in practical application, there is a lack of support from digital infrastructure. In some remote areas and rural areas, the network equipment in rural areas is backward, the mobile electronic equipment signal is weak, the rural network information transmission is limited [8], and the construction of infrastructure such as the Internet and communication is lagging behind, affecting the popularization and promotion of digital services. This limits the ability of farmers to use digital technology to improve production efficiency and access market information. The weak digital infrastructure has constrained the development of the digital economy.

4.2. Lack of Emerging Talents

Emerging talents are a key element of digital economy in promoting rural revitalization. However, the construction of digital infrastructure in rural areas is relatively lagging behind, which limits the development of emerging talents in rural areas. The lack of a good network environment, data resources, and technological support makes the innovation ability and attractiveness of rural areas relatively weak, making it difficult to attract and retain emerging talents. Meanwhile, due to the weak digital construction in rural areas, lagging platform maintenance and information statistics, it is unable to provide a good business environment for foreign enterprises and investors [9]. In addition, some regions lack effective policies and measures in attracting and cultivating emerging talents. For example, the lack of policies aimed at introducing, cultivating, and incentivizing emerging talents has exacerbated the problem of talent loss and shortage.

4.3. Lack of Innovation Awareness

Lack of innovation awareness is an important factor that hinders the digital economy from promoting rural revitalization. Innovation consciousness is a key driving force for promoting rural economic development and achieving digital transformation, but in practical operation, the lack of innovation consciousness often becomes a bottleneck for development due to various reasons. The influence of traditional concepts may lead people to hold conservative attitudes towards new technologies and models. In some rural areas, traditional agricultural culture and lifestyle are deeply ingrained in people's hearts. People may lack understanding and acceptance of new digital technologies, innovative concepts, and business models, making it difficult to form an innovative atmosphere. In addition, limitations in education level and knowledge structure may also affect the cultivation of

innovation awareness. Rural education resources are relatively insufficient and education levels are relatively backward, resulting in lower educational levels and limited overall cognitive and learning abilities for farmers [10]. This makes it difficult for them to quickly adapt and master new technologies and knowledge, and even more difficult to generate innovative ideas and actions.

5. Conclusion

Firstly, the government should enhance its investment to foster the development and upgrading of infrastructural facilities, including broadband networks and mobile communication networks, in rural regions. This endeavor aims to elevate network coverage, optimize network quality, and accelerate transmission speeds. In addition, more social capital can be introduced to form a diversified investment pattern and accelerate the construction process of digital infrastructure.

Secondly, a multi-level and multi-disciplinary talent cultivation system can be established to meet the needs of rural areas, including higher education, vocational education, and skill training. We should strengthen cooperation with universities and vocational schools to jointly develop specialized courses suitable for rural areas, fostering more talents with innovative spirits and practical abilities for the countryside. Additionally, we can increase investment in talent development in rural areas, improve talent compensation and welfare levels, and attract more talents to develop in rural areas. Meanwhile, a sound talent incentive mechanism should be established to encourage talents to innovate and start businesses in rural areas, contributing wisdom and strength to rural economic development. Furthermore, we can promote talent exchange and cooperation between urban and rural areas, as well as different regions, to achieve resource sharing and complementary advantages.

Finally, it is necessary to strengthen publicity and education, enhance people's awareness and understanding of the digital economy, and guide them to establish innovative awareness. The government, enterprises, and all sectors of society should also work together to create a cultural atmosphere that encourages innovation and tolerates failure. By organizing innovation competitions, establishing innovation funds, and other means, we can stimulate people's enthusiasm for innovation. The government can introduce a series of innovation support policies, such as tax incentives, financial support, etc., to reduce innovation costs and increase innovation enthusiasm. At the same time, increase investment in education, improve the education level in rural areas, and cultivate more talents with innovative awareness and abilities. Strengthen innovation education and cultivate children's innovative awareness and abilities from an early age. Popularize innovative knowledge and improve the innovation quality of the entire population through channels such as schools and communities.

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