

Research on High Quality Development of Rural Industries from the Perspective of Digital Economy

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Abstract

In the context of the rural revitalization strategy, the Digital transformation of rural industries is of great significance in achieving high-quality industrial development. Specifically, the digital economy can boost the development of modern agriculture, promote industrial transformation and upgrading and farmers' innovation and entrepreneurship, and then promote the optimization and upgrading of the whole rural industry ecology. At present, there are still practical problems in the transformation of digital economy into real productivity, such as weak infrastructure, low level of industrial digital development, and insufficient supply of digital talents. It is necessary to accelerate the construction of digital infrastructure, cultivate and introduce rural digital talents, and accelerate the process of digital technology empowering high-quality development of rural industries. This article first analyzes the mechanism of digital economy promoting high-quality development of rural industries, and then points out the practical challenges of digital economy promoting high-quality development of rural industries. Finally, propose countermeasures and suggestions on how to use the digital economy to empower the high-quality development of rural industries.

Keywords

Digital economy; Rural industries; High quality development.

1. Introduction

Industrial prosperity is the foundation for achieving comprehensive rural revitalization. In recent years, with the support of national policies, China's rural industries have flourished and the industrial forms have been constantly enriched. However, at the same time, they are also facing problems such as imbalanced industrial structure development and insufficient scientific and technological investment. Finding new driving forces for the development of rural industries is the key. With the updating and iteration of information technology, the digital economy has been rapidly developed and widely applied globally, which has had a positive impact on economic growth, employment, and social development. The report of the 20th National Congress of the Communist Party of China proposes to "accelerate the development of the digital economy". In the context of the rural revitalization strategy, the development of the digital economy provides opportunities and injects new momentum into the revitalization of rural industries [2]. Digital technology has also been effective in promoting the integration of multiple rural industries and reshaping industrial structures [3]. Promoting high-quality development of rural industries through digital empowerment will become the main direction of future rural industry revitalization [4]. Therefore, in the process of integrating the digital economy with rural industries, it is necessary to study the mechanism and implementation path of the digital economy on the high-quality development of rural industries, in order to further assist in rural revitalization.

Throughout the research on the relationship between the digital economy and rural industries in China, scholars mainly conduct research from three aspects. One is the mechanism by which the digital economy promotes the high-quality development of rural industries. Wan Shiwei and Tang Kai (2022) [5] believe that the digital economy can promote the transformation and upgrading of rural industries through efficiency improvement, industrial transformation, and structural optimization. Guo Chaoxian and Miao Yufei (2023) [6] believe that empowering rural industries with the digital economy can optimize the development environment of rural industries, increase product supply, improve product quality and safety levels, and lower product prices, thus giving birth to new industries, new forms of business, and new models. Li Benqing et al. (2022) [7] empirically tested the effect and transmission mechanism of digital rural construction in promoting industrial prosperity, and found that the development of digital economy can significantly improve the level of industrial prosperity. Li Yu et al. (2022) [8] investigated the impact and mechanism of digital economy on the high-quality development of rural industries using technological innovation as a mediating variable. The second is the constraints on the high-quality development of rural digital industry. Zhou Xinde and Zhou Yang (2021) [2] believe that the development dilemma of rural digital industry mainly lies in the inadequate digital foundation in rural areas, manifested in issues such as low level of industrial digitization, insufficient supply of digital information technology, shortage of talent resources, and the need for improvement in the development environment. Xing Zhao (2022) [9] conducted research from the perspective of rural industries, believing that the industrial chain is relatively single and lacks integration with digitization, coupled with farmers' weak awareness of informatization, resulting in a lower level of development of rural digital industries. The third is the implementation path of empowering rural industrial development with the digital economy. Based on the problems existing in the development of rural digital industry, Cheng Xin (2023) [10] proposed to upgrade and enrich rural industries with digital empowerment under the background of new development concepts, and use the digital economy to stimulate new vitality in rural e-commerce. Sun Zhuqing (2022) [11] believed that we should strengthen the construction of rural digital information infrastructure, train rural digital talents, optimize the development environment of rural digital economy, and steadily promote the Digital transformation of rural industries. Sun Xiaoying (2023) [12] believes that e-commerce should be taken as a starting point to promote industrial Digital transformation, while improving relevant laws and regulations, and optimizing the application environment of digital technology in rural areas.

Overall, the development of rural digital industry has received public attention and achieved certain results. We need to identify specific paths for the digital economy to empower high-quality development of rural industries, analyze the practical challenges of its development, and propose relevant suggestions to assist in the further development of rural digital industry and continue to promote rural revitalization.

2. The Mechanism of Digital Economy Promoting High-quality Development of Rural Industries

2.1. Digital economy boosts the development of modern agriculture

Agriculture is the foundation of rural development, and the revitalization of rural industries cannot do without the high-quality development of the agricultural industry. Developing the digital economy, applying digital technology, and combining information technology with agricultural development are beneficial for improving agricultural planting and production efficiency, reducing labor input in agricultural production, promoting large-scale planting and production of agricultural products, achieving intelligent, standardized, professional, and modern transformation of agricultural production, and establishing digital service centers to

help farmers solve problems in agricultural production, sales, and other aspects. The application of digital technology is also beneficial for extending the agricultural industry chain, improving rural logistics networks, integrating dispersed industrial resources and information, strengthening collaboration with cities, increasing online sales of agricultural and sideline products and their processed products, and further improving the quality and efficiency of agricultural development.

2.2. Digital economy promotes industrial transformation and upgrading

Traditional rural industries are hindered in upgrading their industrial structure and improving efficiency due to information asymmetry between supply and demand. Integrating the digital economy into the rural revitalization strategy, driving the development and upgrading of traditional rural industries through technological innovation, and effectively transforming rural management models play a positive role in promoting coordinated development between urban and rural areas, promoting rural ecological civilization construction, innovating rural governance, and leading long-term rural development. Through the construction of digital infrastructure, it is beneficial to open up channels for rural information acquisition, change the single production mode in rural areas, utilize digital information and technology, promote the integration of rural industries, promote industrial transformation and upgrading, improve the development level of rural industries and the degree of digitalization of industries, and further narrow the urban-rural gap.

2.3. Digital economy promotes rural innovation and entrepreneurship

The digital economy, supported by internet and digital technology, has given birth to new business development models and quickly gained popularity among consumer groups. Developing the digital economy in rural areas, starting from the extension of the agricultural industry chain, building a more comprehensive e-commerce system for agricultural products, utilizing network platforms to further promote the sales of agricultural and sideline products, and providing diversified channels for increasing farmers' income. With the rapid development of rural leisure tourism, utilizing internet platforms to enhance the visibility of rural characteristic tourism, promoting the flow of resources to rural areas, and building a platform for rural innovation and entrepreneurship. Meanwhile, with the continuous progress of digital technology, farmers have gradually mastered digital skills, improved digital thinking, and provided talent support for innovation and entrepreneurship in rural areas.

2.4. Digital economy optimization of rural whole industry ecology

The construction of the digital economy industry ecosystem is another mechanism for promoting the development of rural industries through the digital economy. There are corresponding links between various formats such as rural tourism, rural e-commerce, and individual farmer production, forming a complete digital economy ecosystem. Taking rural e-commerce as an example, e-commerce circulation, logistics and distribution are all indispensable aspects of the rural e-commerce ecosystem. At the same time, the effective use of big data also provides strong support for breaking information asymmetry. Therefore, the construction of digital economic ecology has made the development of rural industries no longer subject to the restrictions of information, circulation, profit distribution and other aspects, and has also optimized and upgraded the pattern of the whole rural industry.

3. Realistic Challenges of Digital Economy Promoting High-quality Development of Rural Industries

3.1. Weak digital infrastructure and low level of development

With the development of the information age, more and more people have joined the internet industry, using the internet for shopping, travel, tourism, etc. In the era of digital economy, digital technology has become an important driving force for industrial development. To further develop rural industries, it is first necessary to promote the construction of digital infrastructure. Due to factors such as funding, concepts, and information, the information infrastructure in rural areas is still not perfect, especially in the areas of agricultural digital construction and agricultural product circulation. At the same time, the network penetration rate, network quality, and service quality in rural areas of China need to be further improved. Compared with cities, the poor network signal and insufficient supply of service personnel in rural areas have affected the experience of rural users and become a major factor restricting the digital development of industries.

3.2. Low degree of integration between rural industries and digital technology

The empowerment of rural industries by the digital economy is an important guarantee for the high-quality development of industries. The overall level of digitalization in the current development of rural industries is not high. Although digital technology has a certain degree of cross integration with rural industries, such as agriculture and leisure tourism, due to the constraints of traditional rural concepts and insufficient application of digital technology, the integration speed of digital economy and rural industries is slow and the degree of integration is not deep. It is still necessary to further explore the potential of digital empowerment for high-quality development of rural industries.

3.3. Lack of information literacy and digital talents

The true application of digital technology in rural industries cannot be achieved without the support of professional talents. From a practical perspective, for individual farmers, due to a lack of awareness and literacy that matches the digital economy, they are not aware of the positive impact of the digital economy, making it difficult to actively integrate the digital economy into production and operation. On the other hand, compared to cities and towns, rural talent incentive measures are not sound, and salaries and benefits are low, resulting in a shortage of digital talents in rural areas. There is a lack of new farmers and professional talents who aspire to participate in rural revitalization and actively promote the construction of smart villages and digital industries. Moreover, the permanent residents in rural areas are the elderly and children, who generally have low educational levels and are unable to accept the changes in life and production brought about by digitization. They still rely on traditional production and business models, and the development level of the digital economy is relatively backward.

3.4. Rural e-commerce needs to be upgraded

The development of rural e-commerce provides a way for farmers to increase their income. With the improvement of rural information infrastructure and the layout of smart logistics, farmers have begun to sell agricultural products through the internet. However, overall, the processing and sales of agricultural and sideline products are still in the initial stage, mainly focused on the sale of the products themselves, with a low degree of deep processing. Due to the fragmented and low scale production of agricultural products, the brand effect has not yet formed, and there is a lack of unified planning and guidance. The sales of agricultural products are not high, and the rural e-commerce model needs to be updated.

4. Suggestions for Empowering High-quality Development of Rural Industries with the Digital Economy

4.1. Strengthen the construction of digital infrastructure

Accelerate the construction of digital infrastructure, promote its effective integration with rural revitalization strategies, and provide guarantees for the high-quality development of rural industries. On the one hand, we need to accelerate the construction of new digital infrastructure such as rural 5G layout and the Internet of Things, and promote its application in fields such as agriculture, tourism, and e-commerce. On the other hand, we need to accelerate the digital transformation of traditional infrastructure such as agricultural production facilities, agricultural product production and processing, and rural logistics, improve the level of rural infrastructure construction, and provide long-term material support for the integration and development of the digital economy and rural industries.

4.2. Promoting the integration and development of rural industries and digital technology

To promote the high-quality development of rural industries, it is necessary to optimize agricultural development, extend the industrial chain of agricultural product processing and sales, and promote the integration and development of agriculture and rural characteristic industries, such as developing rural ecotourism. On the one hand, it is necessary to use information literacy and professionals to apply digital technology in agricultural production and agricultural product sales, promote its transformation and upgrading, and use smart logistics to develop e-commerce of agricultural products to drive farmers' income. On the other hand, actively develop rural ecological agricultural tourism, utilize online platforms to expand the visibility of rural tourism, integrate digital technology with the tourism industry, improving tourists' sense of participation and satisfaction, and promote the integrated development of the digital industry.

4.3. Strengthen the construction of rural digital talent team

Digital technology empowers the high-quality development of rural industries, which cannot be separated from the support of a talent team with professional digital literacy. On the one hand, it is necessary to build a platform for digital talents to go to the countryside, provide professional network basic knowledge popularization and network technology application training for rural residents, and improve residents' information literacy and digital technology application ability. On the other hand, it is necessary to improve the talent incentive system, strengthen the training and support for rural digital talents and new farmers, attract more talents from cities to rural areas, and assist in the revitalization of rural industries.

4.4. Innovative rural e-commerce development model

The application of digital technology to innovate the development model of rural e-commerce mainly focuses on the following three aspects. One is to provide unified planning guidance, leverage cluster effects, and use rural big data to help farmers sell agricultural products. The second is to establish industrial brands, explore industrial stories, integrate rural customs and customs into product concepts, so that consumers can deeply understand the story behind the brand when making product purchases, and promote the development of rural tourism industry. The third is to expand sales channels online and offline to meet the needs of different consumers, improve rural logistics infrastructure construction, and stimulate new vitality of rural e-commerce.

5. Summary

With the popularization of the internet in rural areas, the digital economy is integrating with various aspects and links of the economy and society. The fundamental reason for rural revitalization lies in the prosperity of industries. The digital economy has a great promoting effect on the development of rural industries, which can promote the development of agricultural production, trading, informatization, networking, and other aspects, bringing more opportunities and development space to rural areas. Therefore, in the new era, it is necessary to tap into the potential of the digital economy, empower the high-quality development of rural industries, and achieve modernization of agriculture and rural areas. This article analyzes the mechanism of the digital economy promoting the high-quality development of rural industries, analyzes the possible practical problems in the process of industrial digital development, and proposes relevant optimization suggestions to promote the high-quality development of rural digital industries and achieve comprehensive rural revitalization.

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