

Rural Revitalization Enabled by Digital Economy: Starting from Value Implication, Internal Logic and Practical Path

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Abstract: In the context of rural revitalization and development, the digital economy, as an important engine for a new round of scientific and technological revolution and rural revitalization industry change, provides new development opportunities for rural revitalization. From three dimensions of value implication, internal logic and practical path, this paper discusses how digital economy can enable rural revitalization. The multi-dimensional value of rural revitalization enabled by digital economy is analyzed, including economic value, social value, cultural value and ecological value. The internal logical relationship between digital economy and rural revitalization is revealed, covering industrial development, rural governance, social development and ecological protection. The practical path of rural revitalization enabled by digital economy is proposed, including policy support, digital economy application, rural e-commerce development, digital governance and cultural inheritance, etc. This paper provides a new perspective for further and better promoting the in-depth development of rural revitalization and theoretical research on digital economy and rural revitalization.

Keywords: Digital economy; Rural revitalization; Value implication; Internal logic; Practice path

DOI: 10.62639/sspjiss25.20250203

1. Introduction

The goal of the rural revitalization strategy is to solve the problem of "three farmers", which is an important measure to realize the coordinated development of urban and rural areas. With the development of social digital economy, it has provided new important development opportunities for rural revitalization. In the development process of contemporary society, digital economy has further played the role of new quality productivity. The new quality productivity is the productivity form with technological innovation as the core, and it is the new growth pole to promote the development of digital economy. Driven by the development trend of global digital transformation, empowering modern agriculture with digital economy is an inevitable choice for high-quality agricultural development, and it is also the only way to promote the modernization of agriculture and rural areas.^[1] The digital economy helps rural revitalization, mainly relying on digital technology as the core driving force, to promote high-quality rural development is to be driven by digital technology, to the countryside as the object of action, to lead the countryside toward wisdom, digital transformation, to solve the problems of rural development as the value of the purpose, so as to build intelligent, digital, modern pluralistic integration of the "digital countryside".^[2] With the development of The Times to promote rural revitalization, it is necessary to adapt to the new development direction of the development of the digital economy, and the promotion and promotion of the digital economy to rural revitalization is reflected in all aspects, which is conducive to stimulating new vitality of rural revitalization and development.

(Manuscript NO.: JISS-25-3-80002)

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Xiang,Jianfeng (2003-), Xinjiang Normal University, College of Marxism, Research Area: Rural revitalization,Digital economy.

2. Value Implication

Digital economy is a new economic form and a new field of economics research. Digital economy is a series of economic activities mainly through digital knowledge and information as key production factors, modern information network as an important carrier, and effective use of information and communication technology as an important driving force for efficiency improvement and economic structure optimization.^[3] The external manifestations of rural revitalization and development are abundant material conditions, livable living environment, and satisfying spiritual civilization. At this stage, rural development needs to be further upgraded, traditional industries need to find new momentum support to help them replace, farmers' income needs to expand new income growth points to help ensure the sustainable development of farmers' income, and the overall level of rural development needs a new development model. The emergence of digital economy provides a new growth pole for the traditional rural development model. As a new economic mode, digital economy is conducive to the comprehensive optimization of rural revitalization industries and income increase methods. Among them, the application of digital technologies such as big data, digital cloud platform, and blockchain is an important manifestation of the digital economy enabling rural revitalization.

Digital economy, as a new economic mode, provides multi-dimensional value for rural revitalization. In terms of economic value, the digital economy provides new momentum for industrial upgrading and farmers' income increase by promoting agricultural modernization and the integration of rural primary, secondary and tertiary industries. For example, the application of big data and Internet of Things technologies has enabled precision agriculture and improved agricultural production efficiency; The rural e-commerce platform has broadened the sales channels of agricultural products and increased the income of farmers; Digital finance provides convenient financing services for small and micro enterprises in rural areas and solves the problem of rural financing difficulties. Secondly, in terms of social value, digital governance has improved the efficiency of rural governance, the "Internet + government services" model has improved the accessibility and convenience of public services, and digital technology has also promoted the balanced allocation of resources such as education and medical care, narrowing the digital divide between urban and rural areas. In addition, the digital economy also plays an important role in terms of ecological value, digital technologies help rural environmental monitoring and governance, promote the development of green agriculture and efficient use of resources, and provide technical support for achieving sustainable rural development. Finally, in terms of cultural value, digital economy provides a new platform for the inheritance and dissemination of rural culture. Digital technology records and disseminates rural culture, enhancing the self-confidence of rural culture. At the same time, the development of rural digital cultural tourism also attracts more tourists and investment, injecting new vitality into rural economy. The digital economy provides comprehensive support for rural revitalization through the synergy of economic, social, ecological and cultural values. At the economic level, the digital economy has promoted the upgrading of rural industries and the increase of farmers' income. At the social level, digital governance and public services have improved the quality of rural life; At the ecological level, digital technology contributes to green development and promotes sustainable rural development; At the cultural level, the digital economy provides a new platform for the inheritance and dissemination of rural culture, and enhances the self-confidence of rural culture. The realization of these multi-dimensional values not only reflects the digital economy

3. Internal Logic

The internal logic of the digital economy enabling rural revitalization is mainly reflected in its digital technology as the core driving force, through the deep integration with rural industrial development, rural governance, rural social development and rural ecological protection, to promote the comprehensive revitalization of rural areas.

(1) The logical relationship between the digital economy and the development of rural industries

Through the application of digital technology, the digital economy promotes the upgrading of rural industries and the integration of rural primary, secondary and tertiary industries. Digital technology has the characteristics of basic, network and spillover, which will not only promote the substantial improvement of economic efficiency, promote social step changes, greatly reduce social costs, and bring great convenience to people's lives.^[4] Digital technologies inject new momentum into the development of rural industries by promoting agricultural modernization and the integration of rural primary, secondary and tertiary industries. The use of digital technology is conducive to the cost reduction of rural primary, secondary and tertiary industries. Among digital technologies: the application of big data, Internet of Things, artificial intelligence, etc., has realized precision agriculture and smart agriculture, and improved agricultural production efficiency. For example, by monitoring the farmland environment through sensors and drones, farmers can grasp soil moisture, temperature and other data in real time to optimize planting decisions. Secondly, the digital economy has promoted the integration of primary, secondary and tertiary industries in rural areas and expanded the industrial chain and value chain. For example, rural e-commerce platforms connect agricultural products directly to urban consumers, reducing intermediate links and increasing farmers' incomes; This process is fully reflected in the rural digital transformation. At the same time, digital technology has also promoted the development of new business forms such as rural cultural tourism and leisure agriculture, and injected new vitality into the rural economy. Taking the construction of "digital countryside" in Zhejiang Province as an example, by promoting smart agricultural technology and digital governance platform, the province has achieved the dual goals of improving agricultural production efficiency and enhancing rural governance capacity. According to the Ministry of Agriculture and Rural Affairs, online retail sales in rural areas reached 2.17 trillion yuan in 2022, up 3.6 percent year on year, of which online retail sales of agricultural products accounted for more than 30 percent. This shows that the digital economy has played an important role in promoting the development of rural industries.^[5]

(2) The logical relationship between digital economy and rural governance

The digital economy has enhanced the efficiency and scientificity of rural governance through the empowerment of digital technology. It has provided important support and help for rural revitalization. Today's "Internet + government services" mode has realized the digitization of village affairs management, saved a lot of cost input in digitization, and improved the popularity and convenience of public services. For example, villagers can handle social security, medical insurance, online government affairs hall and other businesses through mobile apps, reducing the number of errands. Secondly, data-driven decision-making has further improved the scientific and precise nature of rural governance. For example, through big data analysis, local governments can more accurately identify lower-income populations and vulnerable groups, so as to formulate more targeted support policies to help social public governance further forward. Taking Guizhou Province as an example, the province has built a targeted poverty alleviation platform through big data technology, achieving an accuracy rate of more than 95% in identifying poor people and a 30% increase in the efficiency of poverty alleviation policy implementation.^[6]

(3) The logical relationship between digital economy and rural social development

Through the popularization of digital technology, digital economy breaks the barriers of information communication and exchange, and introduces efficiency and convenience into the development of rural social public services. It is conducive to narrowing the digital divide between urban and rural areas and promoting the coordinated development of public services, promoting the balanced allocation of public resources such as education and medical care. For example, distance education and telemedicine enable rural residents to enjoy high-quality urban resources and improve the quality of rural life. In Sichuan Province, for example, through the promotion of distance education platform, rural students' entrance examination rate increased by 10%; Through the telemedicine platform, rural residents' satisfaction with medical treatment increased by 20%.^[7] Secondly, the digital

economy provides a platform for rural innovation and entrepreneurship, and stimulates the endogenous power of rural areas. For example, rural youth can start businesses through e-commerce platforms and drive local economic development. In 2022, online retail sales in rural areas reached 2.17 trillion yuan, up 3.6% year-on-year, of which online retail sales of agricultural products accounted for more than 30%. This shows that the digital economy has played an important role in promoting rural social development. Shandong Province, for example, has increased farmers' incomes by 15 percent and rural employment by 10 percent by promoting rural e-commerce platforms.^[8]

(4) The logical relationship between digital economy and rural ecological protection

Through the application of digital technology, the digital economy has promoted the green development of rural areas. Digital technology helps rural environmental monitoring and governance. First of all, digital technology: remote sensing technology, sensor network, etc., can monitor rural environmental changes in real time and provide data support for ecological protection. For example, by monitoring water and air quality, local governments can take timely measures to deal with pollution problems. Second, the digital economy promotes the efficient use of resources, reducing waste and pollution. For example, smart agriculture reduces the use of fertilizers and water and reduces agricultural non-point source pollution through precise fertilization and irrigation. Hunan Province, for example, has achieved a 15 percent reduction in fertilizer use and a 20 percent increase in water utilization by promoting smart agricultural technologies.^[9]

4. Practice Path

It is self-evident that the digital economy plays an important role in the modern development of rural revitalization, and it is necessary to help the digital economy to enable the all-round improvement of the quality and efficiency of rural revitalization, starting from the analysis of the internal logic of the digital economy, the use of digital economy norms, digital economy-related talent education, policy support, technology application, model innovation and other aspects. Construct a systematic practice path.

(1) Policy support and top-level design: system innovation and resource allocation

Policy support is the foundation of rural revitalization enabled by digital economy. According to the theory of institutional innovation, by formulating special policies and optimizing resource allocation, the government can reduce the institutional cost of digital transformation and promote the popularization and application of digital technology in rural areas.^[10] By issuing the Action Plan for the Construction of Digital Countryside, Zhejiang has clarified the goal and path of the construction of digital countryside, and provided a reference experience for the whole country.^[11] According to the theory of resource allocation, optimizing resource allocation can improve the efficiency of digital technology and promote the all-round development of rural economy and society.^[12] In the development of the digital economy, the distribution of rural resources related to the digital economy is constantly increased, and the top-level design of the relevant rural industrial system is accelerated in view of the computing power resources of the digital economy. In the top-level design, the concept of "digital government" can be launched, and the digital technology in the digital economy can be more efficient, convenient and collaborative to promote the relevant utilization mechanism.^[13]

(2) Digital technology and agricultural modernization: Technological innovation and industrial upgrading

The application of digital technology is the key to promoting agricultural modernization. By promoting the transformation of agricultural production mode, digital technology has realized the precision and intelligence of agricultural production. Promote smart agricultural technologies: drones, sensors, blockchain, etc., to achieve precision and intelligence in agricultural production. For example, by monitoring the farmland environment with drones, farmers can grasp the growth of crops in real time and optimize planting decisions. Build an agricultural big

data platform, integrate the data of agricultural production, circulation, sales and other links, realize the digitalization of the entire process of agricultural production, and improve agricultural efficiency and quality. According to the theory of industrial upgrading, the application of digital technology not only improves the efficiency of agricultural production, but also promotes the integration of primary, secondary and tertiary industries in rural areas, and expands the industrial chain and value chain. Rural e-commerce platforms directly connect agricultural products to urban consumers, reducing intermediate links and increasing farmers' incomes.

(3) Rural e-commerce and digital finance: Platform economy and inclusive finance

Rural e-commerce and digital finance are an important starting point for rural revitalization enabled by digital economy. According to the theory of platform economy, rural e-commerce platforms reduce transaction costs and improve market efficiency by connecting producers and consumers.^[14] Agricultural products can be directly connected to urban consumers through e-commerce platforms, reducing intermediate links and increasing farmers' income. According to the theory of inclusive finance, digital finance solves the problem of rural financing difficulties by lowering the threshold of financial services. For example, the use of blockchain technology to build a rural credit system to provide farmers and small and micro enterprises with convenient financing services. According to empirical research, the popularization of digital finance has significantly improved financial inclusion in rural areas and promoted the development of rural economy.

(4) Digital rural governance: technology empowerment and governance modernization

Digital governance is an important means to improve the efficiency of rural governance. The application of digital technology has not only changed the tools and means of rural governance, but also reshaped the structure and process of rural governance, and promoted the modernization of rural governance. Build a "digital village" platform to realize the digitization of village affairs management. Through the digital platform to integrate village affairs information, improve the transparency of village affairs and decision-making efficiency. We will promote "Internet plus government services" to improve the accessibility and convenience of public services. Villagers can handle social security, medical insurance and other businesses through mobile apps to reduce the number of errands. According to the theory of governance modernization, digital governance enhances the capacity and efficiency of rural governance by improving the scientificity and accuracy of governance.

(5) Digital technology and rural cultural inheritance: cultural digitization and cultural self-confidence

Digital technology provides a new platform for the inheritance and dissemination of rural culture. According to the theory of cultural digitization, digital technology enhances the self-confidence of rural culture by recording and disseminating rural culture. For example, through digital means to record rural traditional crafts, folk activities, etc., to enhance the self-confidence of rural culture. According to the theory of cultural self-confidence, the inheritance and dissemination of rural culture not only enhances the soft power of rural culture, but also injects new vitality into the development of rural economy. For example, the use of virtual reality (VR) technology to show rural scenery, create immersive cultural travel experience, and promote rural economic development. According to the empirical research, the development of rural digital cultural tourism has significantly improved the rural tourism income and employment rate.

(6) Digital technology and rural ecological protection: green development and sustainable development

The application of digital technology in rural ecological protection has promoted rural green development and sustainable development. According to the theory of green development, digital technology improves the efficiency and accuracy of rural environmental governance through real-time monitoring and data analysis. For example, through remote sensing technology and sensor networks, local governments can monitor water and air quality in real time and take timely measures to deal with pollution problems. According to the theory of sustainable development, digital technologies promote the efficient use of resources and reduce waste and pollution. For

example, smart agriculture reduces the use of fertilizers and water and reduces agricultural non-point source pollution through precise fertilization and irrigation. According to the empirical research, the application of digital technology has significantly improved the effect of rural environmental governance and promoted the sustainable development of rural areas.

(7) Digital technologies and rural social development: Social capital and community participation

The application of digital technology in rural social development has promoted the accumulation of social capital and the improvement of community participation. According to the social capital theory, digital technology enhances the cohesion and cooperation capacity of rural society by enhancing the connection and interaction of social networks. Through social media platforms, villagers can communicate and cooperate more easily, enhancing community cohesion. According to the community participation theory, digital technology improves villagers' awareness and ability to participate by providing convenient access to information and participation channels. According to empirical research, the application of digital technology has significantly improved the cohesion and participation of rural society, and promoted the overall development of rural society.

5. Conclusion

At the present stage, digital economy is an important part of rural revitalization and development. With the continuous development and promotion of artificial intelligence and digital intelligence technology, and the continuous deepening and construction of the concept of new quality productivity, digital economy enables a new development period of rural revitalization, promotes the coordinated development of urban and rural areas, Bridges the "digital divide" between urban and rural areas, realizes the comprehensive revitalization of rural industries, and reduces the material development gap between urban and rural areas. To achieve a peaceful life for the people in rural areas and achieve high-quality development. This paper deeply explores how the digital economy enables rural revitalization under the background of the new era, and systematically discusses the mechanism and path of rural revitalization enabled by the digital economy from three dimensions: value implication, internal logic and practical path.

The research shows that the digital economy can not only promote the upgrading of rural industries and the modernization of governance, but also promote the balanced allocation and sustainable development of urban and rural resources. The research of this paper not only enriched the theoretical research of digital economy and rural revitalization, but also provided practical policy suggestions for local governments. Solutions and implementation paths are proposed, providing an important reference for the further promotion and development of rural revitalization, and building a clear theoretical framework for understanding the important role of digital economy in future rural revitalization. Through the empowerment of the digital economy, we can stimulate the endogenous impetus for the development of rural industries, stimulate the subjective initiative of farmers, accelerate the improvement of farmers' digital literacy, turn digital investment into a better rural brand premium, and transform it into an important force to speed up the shortcomings in infrastructure, public services and other fields in rural construction, so that more farmers can enjoy the development dividend. Looking forward to the future, the digital economy will play a more important role in promoting the upgrading of rural industries and the improvement of rural productivity, and make greater contributions to the modernization of agriculture and rural areas and the overall revitalization of rural areas.

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