

## Original Paper

# Digital Finance Helps “Five-in-one” Rural Revitalization

## Development

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### **Abstract**

*“Three Rural Areas” is a fundamental issue related to the national economy and people's livelihood, and rural revitalization is a way to fully summarize and refine the practical experience in the field of “Three Rural Areas”. Based on China's current national conditions, we analyze the challenges of rural revitalization, and explore whether digital finance can promote the “five-in-one” rural revitalization construction. This paper discusses the feasibility of digital finance for rural revitalization from five perspectives, namely, industrial prosperity, ecological livability, civilized rural culture, effective governance, and affluent life, and explores the realization mechanism of digital finance-driven rural revitalization, and finally puts forward relevant suggestions.*

### **Keywords**

*digital finance, rural revitalization, rural finance*

### **1. Introduction**

The issue of agriculture, rural areas and farmers is a fundamental issue related to the national economy and people's livelihood, and we must always take the solution of the “three rural issues” as the top priority of social development work. To promote Chinese modernization, we must unremittably strengthen the foundation of agriculture, promote the comprehensive revitalization of the countryside, and promote rural revitalization as the general grips of the “three rural” work in the new era and new journey, therefore, promoting rural revitalization and development, and upgrading the quality of agricultural and rural economic development is not only a powerful initiative and inevitable requirement to reasonably undertake the previous poverty alleviation and attack, but also an essential requirement. It is highly in line with the long-term development goals and specific requirements set by

the central government in the field of “three rural areas”, and it is also the proper meaning of promoting high-quality economic development and building a strong socialist modernization country.

Data is a key production factor for the development of digital economy and a new driving force for the modernization of agriculture and rural areas. Only by grasping the direction of digitization, networking and intelligence can we promote the modernization of agriculture and other industries. In recent years, with the acceleration of the digitalization process, digital finance has gradually become an important support for rural economic development. It plays an irreplaceable role in promoting rural industrial upgrading and improving the quality of life of rural residents. Through innovative financial products and service models, digital finance provides more convenient and efficient financing channels for rural revitalization, effectively alleviating the problem of “financing difficulties” in rural revitalization. At the same time, digital finance can also guide the flow of capital to rural industries with special characteristics, promote industrial agglomeration and upgrading, and improve the efficiency of agricultural production and the added value of agricultural products, so as to drive farmers to increase their income and get rich.

## **2. Challenges to Rural Revitalization**

In this era of rapid development of big data, the construction of rural revitalization faces great challenges. At the same time, the growing demand of rural residents for financial services in urban and rural areas has put forward higher requirements for financial institutions - they need to have stronger innovative capabilities to meet the needs of the general public for diversified financial services. In reality, the development of rural revitalization faces many problems.

### *2.1 Insufficient Support of Digital Technology*

Nowadays, compared with urban areas, the popularization of digital technology in rural areas is still insufficient, and the majority of farmers do not have a good understanding of these emerging technologies, which undoubtedly brings a major challenge to the construction of digital villages that we are promoting. From the perspective of two key dimensions, on the one hand, the degree of application of digital technology in rural areas is relatively low. Although our government has attached great importance to and actively promoted the construction of digital villages, in practice, the degree of application of digital technology in many rural areas still needs to be improved. This is mainly reflected in the incomplete construction of Internet infrastructure in rural areas, with narrow network coverage and slow network speed, which leads to many inconveniences for rural residents in enjoying digital services (Wu & Huang, 2022). In addition, the application of digital technology in rural areas is limited by many factors such as capital, technology and management, which undoubtedly further weaken the effect of the application of digital technology in rural areas. On the other hand, farmers' acceptance of new technologies is not ideal. In the tide of digital village construction, the role of farmers as an important participant cannot be ignored. However, due to the constraints of education level and cultural quality in some rural areas, the farmers' cognition and ability to utilize these emerging technologies are

relatively limited, which makes them often encounter various difficulties when enjoying digital services, thus hindering the smooth progress of digital village construction.

### *2.2 Insufficient Basic Financial Services*

In the process of digital village construction, digital infrastructure construction occupies a crucial position, which is not only the cornerstone and prerequisite for the construction of digital village, but also a key link to realize this vision. The so-called digital infrastructure construction is mainly to improve and upgrade the relevant infrastructure with the help of advanced digital technology, so as to provide strong technical support for the construction of digital villages as well as adequate infrastructure protection, making the construction process of digital villages more convenient, efficient, safe and reliable. However, there are still many deficiencies in the Internet, broadband and communication infrastructure in some rural areas, which cannot meet the growing digital needs of local residents. Therefore, in the process of promoting the construction of digital villages, we need to invest a lot of resources, including capital and manpower, to build a large number of network infrastructures, intelligent hardware equipment and digital management systems. However, the construction of these facilities is not an easy task, and they need to meet the challenges of many natural environmental factors such as topography, geomorphology, and climate, as well as the challenges of infrastructure support such as power supply and transportation.

### *2.3 Insufficient Financial Talent Resources*

The problem of lack of digital talents in rural areas is mainly reflected in two aspects, on the one hand, some young people living in rural areas lack the necessary digital skills. Along with the widespread popularization of the Internet, digital technology has been deeply integrated into our daily life and become an indispensable part. However, some young people in rural areas generally lack the corresponding digital skills, making it difficult for them to keep pace with the rapid development of the digital era. On the other hand, the elderly in rural areas also face the same plight of lack of digital skills. In the rural society, which is mainly composed of the elderly, there is the problem of aging digital construction and the digital lag phenomenon of the elderly group. Although many young laborers in rural areas choose to go out to work, their parents and grandparents often lack digital skills, which undoubtedly poses a great challenge to the construction of digital villages. The lack of talents with digital skills in rural areas has become a bottleneck that restricts the construction of digital villages.

The reasons leading to the lack of digital talents in rural areas mainly include the following aspects: firstly, the educational resources in rural areas are relatively scarce, and there is a lack of sufficient education and training opportunities for digital skills; secondly, the level of economic development in rural areas is relatively backward, and there is a lack of sufficient environment for the application of digital skills (He & Li, 2020); thirdly, there is not a strong demand for digital talents in rural areas, and there is a lack of effective incentive mechanisms; finally, there is no effective incentive mechanism; and finally, there is a lack of digital skills in rural areas. lack of effective incentive mechanism; finally, digital talents in rural areas are more mobile and lack a stable employment environment.

### *2.4 Inadequate Information Security*

In the current process of vigorously promoting the construction of digital villages, the problem of information security is becoming more and more prominent, posing a great potential threat to the stability and reliable operation of digital village construction. The information security problems faced by rural areas are mainly manifested by network attacks and information leakage, which can be called “internal and external difficulties”. First of all, network attacks have been proved to be one of the main means of destroying information security in rural areas. The reason for this is that the network infrastructure in rural areas is relatively lagging behind, and the corresponding network security precautions have not yet been fully perfected, which makes the network in the region more vulnerable to attacks by malicious hackers, which in turn leads to the illegal acquisition of relevant personal information, economic data and other sensitive information, thus bringing incalculable losses to the socio-economic development of rural areas. Secondly, information leakage is also a serious challenge to information security in rural areas. Personal information in rural areas mainly covers important content such as names, ID numbers and bank card information, and once such information is leaked, it may cause property loss and privacy infringement of the farmers and many other problems.

## **3. Analysis of the Advantages of Digital Finance**

With the rapid development of information technology, digital finance has gradually become an indispensable part of the modern economy. Compared with traditional finance, digital finance has many advantages, such as efficiency, universality and convenience. These advantages can not only enhance the operational efficiency of financial institutions, but also better meet the different needs of the majority of users, providing support for rapid economic development.

### *3.1 Science and Technology Innovation Empowers Digital Finance*

Innovation promotes the deep combination of finance and technology, prompting the financial industry to open the road of digital transformation. Traditional banks, stock exchanges and insurance companies are working hard to shape the digital operation system, build digital financial service platforms, and actively promote business transformation in order to better adapt to the wave of rapid development of financial technology. At the same time, with the help of advanced technology, the financial industry has realized the transformation and upgrading from the traditional mode to digitalization and intelligence, improved the efficiency of financial services, reduced the input of manpower and material resources, and thus lowered the overall operating costs.

### *3.2 Core competitiveness of Data Assets*

Data as a production factor is a key difference between the new economy and the traditional economy, leading to data entering the production process and becoming a production factor. Digital finance is able to utilize advanced technologies such as big data, cloud computing, and artificial intelligence to quickly process massive amounts of data, thereby greatly reducing transaction time and improving transaction efficiency. This efficient data processing capability gives digital finance an advantage in

market competition. At the same time, through technical means such as big data analysis, it can more accurately grasp market demand and investment opportunities, thus realizing the reasonable distribution and utilization of funds and achieving a balanced allocation of funds.

### *3.3 Enhancement of Service Quality of Financial Institutions*

The enhancement of digital financial technology promotes the operational performance and competitive strength of financial institutions. More critically, it profoundly changes the interaction mode between financial institutions and customers. With the in-depth understanding of customer behavior and preferences through digital tools, financial institutions are able to provide customers with precise marketing and more convenient, efficient, safe and reliable personalized services, thus significantly enhancing customer satisfaction and loyalty. On the other hand, digital finance applies cutting-edge encryption technology and a highly sophisticated firewall system to monitor market dynamics and risk conditions in real time, and adjusts its strategy in a timely manner according to the actual situation, thus better controlling risks and safeguarding revenues, ensuring the security and confidentiality of user information, and effectively reducing the potential risk of information leakage. This strong security protection not only greatly enhances consumers' trust in digital financial services, but also earns financial institutions an outstanding reputation.

## **4. The Feasibility of Digital Finance Driving the “Five-in-One” Development of Rural Revitalization**

The strategy of rural revitalization adheres to the priority development of agriculture and rural areas, and the goal is to establish and improve the institutional mechanism and policy system for the integrated development of urban and rural areas in accordance with the general requirements of industrial prosperity, ecological livability, civilized rural culture, effective governance, and affluent life (Han, 2020), and accelerate the modernization of agriculture and rural areas, and the impact of digital finance on rural revitalization is mainly reflected in five aspects.

### *4.1 Digital Finance Helps Industries Flourish*

Through innovative chain financial services, new financing models and financial products, digital finance provides sufficient financial support for agricultural innovation activities, and meets the diversified financial needs of the agricultural industry's scale expansion, intelligent transformation, and rural innovation and development.

### *4.2 Digital Finance Contributes to Ecological Livability*

The development of digital finance, accompanied by the improvement of infrastructure, not only enhances the information acquisition ability of rural residents and helps to narrow the gap between urban and rural areas in terms of culture, education and residents' incomes, but also greatly facilitates the procurement of materials for rural residents in production and life with the rise of mobile payment and e-commerce, injecting new vitality into rural areas.

#### *4.3 Digital Finance Contributes to Rural Civilization*

Through the implementation of comprehensive financial literacy education and public welfare social services, digital finance significantly improves rural residents' financial literacy and ability to apply financial tools, strengthens their professional knowledge base, and provides strong support for the construction of rural civilization (Zeng & Luo, 2022). By strengthening the construction of the credit system in rural areas and implementing the credit assessment mechanism for farmers and other measures, it has effectively promoted a good social culture of trust and trustworthiness in rural areas.

#### *4.4 Digital Finance Contributes to Effective Governance*

Through the introduction of digital technology, local governments can build an advanced big data rural governance platform, which not only provides staff with convenient data retrieval and analysis tools, but also provides interactive communication channels, greatly enhancing the efficiency of government processing, effectively solving various problems in agricultural and rural development, thus promoting the modernization of rural governance.

#### *4.5 Digital Finance Contributes to the Prosperity of Life*

Relying on advanced digital technology, digital finance provides rural residents with more extensive and in-depth financial services, significantly improves the availability, coverage and universality of financial services, effectively alleviates the financing constraints in rural areas, and injects financial power into the sustained development of the rural economy.

### **5. Realization Mechanism of Digital Finance Driving Rural Revitalization**

Digital finance has had a positive impact on rural revitalization by deepening the financial inclusion mechanism, reducing transaction costs, promoting industrial structure upgrading, sounding the rural credit system and other multi-party mechanisms.

#### *5.1 Deepening Financial Inclusion Mechanism and Enriching Financial Market Structure*

With the rapid development of big data, Internet and mobile communication technologies, digital finance has been able to penetrate into the rural areas beyond the reach of traditional financial institutions, especially those remote and economically backward areas, thus effectively enhancing the popularity and coverage of financial services. According to the "Digital Finance for Rural Revitalization Development Report" directed by China Banking and Insurance News and edited by China Inclusive Finance Research Institute, in China's county-level financial institution organization system, large banks have gradually strengthened their branches in county areas, while rural commercial banks and local financial institutions, such as microfinance companies, have also been continuously upgrading their service level in county areas, which further enriches the structural diversity of China's county-level financial market. structural diversity of China's county-level financial market.

#### *5.2 Reducing Transaction Costs and Improving Rural Financial Efficiency*

Digital finance provides online services with the help of technical support, effectively reducing the operating costs of the financial services industry. At the same time, it has significantly reduced the

transaction costs that farmers and agriculture-related small and micro-enterprises need to pay when obtaining financial services. In the digital financial programs implemented in rural areas, innovations such as credit payment modes and non-contact payment means have greatly relaxed the time and space constraints of payment, thus reducing the transaction costs incurred in the payment process, and thus enhancing the convenience and efficiency of financial services.

### *5.3 Promoting Industrial Structure Upgrading and Rural Economic Development*

Digital finance has provided residents in rural areas and small and medium-sized micro-enterprises with more extensive and sufficient financial support and services, which has significantly increased the income level and wealth accumulation speed of these groups, and thus significantly improved their living standards and consumption capacity. In addition, digital finance has also injected more capital sources and market opportunities for the development of rural industries, strongly promoting the optimization, adjustment and transformation and upgrading of the rural industrial structure, and further enhancing the vitality and competitiveness of the rural economy.

### *5.4 Improving the Rural Credit System and Enhancing the Quality of Financial Services*

Under the strong support of modern financial technology, government departments and various financial institutions and other stakeholders have the ability to deeply integrate and open up the financial information field owned by the demand side of rural financial services, efficiently solve the problem of information asymmetry, and gradually establish and improve the corresponding joint incentive mechanism for trustworthiness and joint disciplinary system for breach of trust. Such an initiative can not only effectively avoid the risk of breach of trust faced by the demand side of rural financial services, but also help to create a favorable credit environment in the rural areas, and provide a more reliable and convincing basis for credit decision-making by various types of financial institutions.

### *5.5 Accelerating Rural Digital Construction and Building a People-Friendly Service System*

The development of rural digital financial inclusion needs to be supported by a good digital infrastructure. In recent years, the rural network penetration rate has increased significantly, laying the foundation for the development of digital finance in the countryside. In the construction of digital villages, the coverage and application of Internet technology and mobile communication networks and other infrastructure are vigorously promoted to provide farmers with better educational resources, medical and health services, cultural and recreational activities and other conveniences, and effectively improve the quality of life of residents. At the same time, the implementation of the rural revitalization strategy is being promoted through the optimization of the rural industrial structure through basic digital construction and the strengthening of rural infrastructure construction.

## **6. Digital Finance for Rural Revitalization**

Rural revitalization strategy is a major practical strategy for China's "three rural areas" work. With the continuous advancement of modernization in the new era, it is of great theoretical and practical

significance to accelerate the development of digital finance in rural areas, analyze the problems of economic development in rural areas, and explore the impact of digital finance on the development of rural revitalization. According to the above analysis this paper puts forward the following suggestions:

### *6.1 Technology Helps Financial Development and Improves the Efficiency of Technological Empowerment*

In view of the current problems of unsound credit system construction and poor information sharing in rural areas of China, a perfect rural credit system should be established, a credit information database should be set up, and credit rating work should be carried out to effectively improve the credit environment in rural areas. Strengthen the construction of basic technology, effectively utilize the support of information technology such as 5G, cloud computing, blockchain, etc., and establish a demonstration project for digital finance to empower the cause of rural revitalization. Giving full play to the platform advantage of digital finance of “one point, many functions, one network, many uses”, actively constructing the “three rural” big data platform, realizing the interconnection and interoperability between digital finance and the development of rural areas, and consolidating the data foundation for rural revitalization.

### *6.2 Broaden Financial Service Channels and Enhance Regional Economic Vitality*

Economic development is an important manifestation of rural revitalization. The government should establish a long-term mechanism for rural digital financial innovation and development, and give support to rural digital finance in terms of funding, policy and technology. Strengthen the cooperation between rural financial institutions and the government, universities, research institutes, etc., and promote the promotion and application of digital technology in rural areas. Actively create multi-category, multi-scene and multi-people digital financial products, and endeavor to build an efficient financial service platform to help farmers. Give full play to the advantages of digital financial technology combined with regional characteristics, promote innovation in financial products, services and models, inject vitality into the physical development of rural areas, enhance the income of regional residents, and then pull the level of consumption in rural areas to accelerate regional construction.

### *6.3 Promoting the Construction of Rural Revitalization Talents and Releasing Regional Innovation Vitality*

Setting up excellent rural revitalization demonstration bases and actively introducing technical and managerial talents for rural revitalization construction. Cultivating the professional capacity and digital financial literacy of rural financial practitioners can improve their understanding and ability to use digital financial tools and promote the effective application of digital inclusive finance in rural revitalization. Through efficient talent training and platform construction, make full use of the financial support of digital finance to promote innovation and entrepreneurship vitality in rural areas, realize talent to help agriculture and industry to prosper, realize more anti-rural employment and entrepreneurship opportunities for regional economic construction, and give full play to hometown enthusiasm to help rural construction.



#### 6.4 Strengthen the Rural Financial Regulatory Mechanism and Improve Information Security

Given the slow economic development in rural areas, the financial regulatory framework is relatively weak, and the effectiveness of regulation needs to be strengthened. At the same time, with the widespread application of digital finance in rural areas, new types of risks and challenges continue to emerge, requiring us to further improve the financial risk prevention and control mechanism in rural areas to effectively prevent and resolve potential financial risks, in order to promote the smooth implementation of the strategy of rural revitalization (Zhang, 2023). In order to achieve this goal, it is necessary to deepen the reform and improvement of the financial regulatory system in rural areas, and ensure the sound development of rural financial institutions through policy guidance and standardized management. Specifically, the rural financial regulatory system should be improved, a comprehensive and rigorous risk prevention and control system should be created, and the optimization of the internal governance structure of financial institutions should be strengthened. In addition, it is necessary to increase the supervision of rural financial institutions to ensure that they strictly comply with and implement all financial regulatory policies and measures, so as to ensure the sound operation and sustainable development of the rural financial market.

#### 7. Conclusion

In summary, digital finance is of great significance to rural revitalization. Digital finance provides new opportunities and impetus for rural revitalization, and rural revitalization can likewise promote the development of digital finance. Rural revitalization and digital finance have a coupled relationship, and the two promote each other and integrate development. Therefore, the government and relevant departments increase policy support and continuously improve the enabling role of science and technology; strengthen the research and development and application of digital financial technology to broaden financial service channels and enhance the vitality of the regional economy; and promote the construction of rural revitalization talents and cultivate professionals to release the vitality of regional innovation.

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