

The Influence of the Development of Digital Inclusive Finance on Rural Revitalization

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Abstract

Implementing rural revitalization strategy is an inevitable requirement to solve the main social contradictions in the new era, realize the goal of "two hundred years" and the great rejuvenation of Chinese dream, and is a key link to achieve common prosperity. Digital inclusive finance can promote the rapid development of rural economy, promote the revitalization of rural industries, and narrow the gap between urban and rural areas, thus accelerating the realization of the great goal of common prosperity. In order to study the influence and mechanism of the development of digital inclusive finance on rural revitalization, firstly, this paper analyzes how the development of digital inclusive finance conducts and affects rural revitalization from three aspects: industrial structure, regional wealth difference and digital credit system; Secondly, a regression model is constructed to empirically analyze the relationship between the development of digital inclusive finance and rural revitalization. The results show that digital inclusive finance can promote the development of rural revitalization. Finally, the paper puts forward some policy suggestions, such as establishing and perfecting the relevant legal norms and financial infrastructure construction of digital inclusive finance, and accelerating the industrial innovation and service upgrading of digital inclusive finance.

Keywords

Digital inclusive finance, Rural revitalization; Influential effect.

1. Introduction

Since General Secretary Xi Jinping put forward the strategy of rural revitalization, rural revitalization has become one of the hot issues in national development. The Rural Revitalization Strategic Plan (2018-2022) points out that the implementation of rural revitalization strategy is an inevitable choice to realize the common prosperity of all people, and common prosperity is to realize the prosperity of all people, not a few people. Digital inclusive finance can promote the rapid development of rural economy and realize the revitalization of rural industries. At the same time, as an important means of serving the real economy, digital finance also plays a great supporting role in eliminating the dual structure of urban and rural areas, narrowing the income gap, cultivating and expanding middle-income groups, and promoting rural residents' entrepreneurship and employment. Compared with the traditional financial system, it lightens the imbalance of urban and rural development opportunities, and then accelerates the realization of the great goal of common prosperity. The revitalization of rural industries can not be separated from the application of financial system under the background of digitalization. Digital technology has broken through the time and space limitations of traditional physical outlets and opened up the "last mile" of rural financial

services. Digital technology can use big data to detect agricultural production activities and improve production accuracy. At the same time, digital technology also reduces the risks and costs of financial institutions to provide services in inclusive finance, and promotes the improvement of rural revitalization and development.

2. Literature Review

On the one hand, it is a theoretical study on the influence of digital inclusive finance on rural revitalization. Mao Yixuan [1] (2021) and Zhang Xun [2] (2019) believe that digital inclusive finance promotes the development of agricultural products e-commerce and provides support for innovation and entrepreneurship. Tian Lin and Zhang Yuanyuan [3] (2021) think that the development of digital inclusive finance has significantly promoted the revitalization of rural industries, and its influence presents a U-shaped relationship of first restraining and then promoting. However, Xiong Deping and Chen Yuran [4] (2020) found that rural residents can benefit more from the development of digital inclusive finance in areas with high economic development level. Compared with the central and western regions, the digital inclusive finance in the eastern region has a greater role in promoting rural revitalization and development. Du Jinmin and Wei Shiwei [5] (2020) based on the analysis of the difficulties faced by rural small and medium-sized enterprises in financing and operating environment, investigated the mechanism of digital inclusive finance in China's industrial structure optimization, and affirmed the contribution of digital inclusive finance in promoting China's industrial structure optimization and industrial upgrading. Zhao Zhouhua [6] (2018) believes that the basis of rural revitalization is to develop the economy. Only when the economy develops will it be conducive to other revitalization, such as cultural and ecological revitalization. Therefore, we should give full play to the role of inclusive finance, make rural revitalization and inclusive finance better narrow the gap between urban and rural development.

On the other hand, it is an empirical study on the influence of digital inclusive finance on rural revitalization. Li Qin and Fan Dan [7] (2022) take the data of 59 regions in Sichuan and Chongqing from 2016 to 2020 as samples, and find that there is spatial autocorrelation in Theil index in Sichuan and Chongqing. By using the spatial Dobbin model, they empirically demonstrate the influence of digital inclusive finance in Chengdu and Chongqing on the income gap between urban and rural areas. Li Jigang and Ma Jun [8] (2021) used systematic GMM method and threshold model to make an empirical study on the relationship between rural revitalization and digital inclusive finance. The results show that the development of digital inclusive finance can really help rural revitalization, and the coverage and digitalization have a significant role in promoting rural revitalization. When the development level of digital inclusive finance is below a certain threshold, it has a positive role in promoting rural revitalization, while when its development level is above the threshold, its promotion can be greatly improved.

The contribution of this paper lies in: on the basis of existing research and theoretical analysis, the paper empirically tests the influence of the development of digital inclusive finance on rural revitalization, and puts forward corresponding policy suggestions according to the conclusions drawn from the test results, so as to provide some reference for promoting the process of common prosperity, realizing rural revitalization and promoting the high-quality development of regional economy in China.

3. The Mechanism of Digital Inclusive Finance on Rural Revitalization and Development.

3.1. Digital inclusive finance helps rural industrial structure upgrade

Digital inclusive finance provides inclusiveness and inclusiveness of financial services, which helps to solve the problem of lagging financial services in rural areas, especially plays a key role in the development of small and micro enterprises. The research shows that digital inclusive finance solves the financing constraint problem of small and micro enterprises by increasing the direct financing opportunities and reducing the financing costs, and promotes the innovation-driven effect. With the help of digital technology, rural residents can have more convenient access to financial services, including deposits, loans, payments and insurance. At the same time, the use of new technologies has also brought innovations in financial products and services, providing diversified financial tools and services for rural areas.

3.2. Digital inclusive finance helps narrow the gap between the rich and the poor in the region

With the development of digital inclusive finance, build an efficient financial technology layout to provide residents with more convenient financial services. For example, in agriculture, the digital inclusive finance acts on the upstream and downstream of the agricultural supply chain, and the risk is quantified, the data is visualized and systematically managed through model analysis, which is conducive to realizing agricultural economies of scale and increasing farmers' income. By refining the division of labor, the number of employed people can be increased and the unemployment rate can be reduced. The development speed of digital inclusive finance in underdeveloped areas is higher than that in economically developed areas, which shows that the development of digital inclusive finance is helpful to narrow the gap between the rich and the poor and improve the income level of residents.

3.3. Digital inclusive finance uses its digital credit system to promote rural revitalization

On the one hand, the establishment of digital inclusive finance system can reduce the information asymmetry in industrial development, enrich agricultural insurance products, tap the innovation potential of agricultural financial instruments, and then comprehensively enhance the risk control ability of agricultural development in China; On the other hand, through the establishment of credit information collection, information platform and information sharing, it is conducive to the establishment of a new rural development style of mutual trust and win-win for farmers and enterprises.

4. Empirical Analysis

4.1. Rural evaluation index system construction

The general requirements of rural revitalization strategy include industrial prosperity, ecological livability, rural civilization, effective governance and affluent life. Therefore, this paper constructs the rural revitalization index system from five dimensions of rural revitalization evaluation indicators, as shown in Table 1. Taking 2012-2020 as the sample interval, the comprehensive evaluation method is adopted to measure the level of rural revitalization in China. The data comes from China Rural Statistical Yearbook, China Population and Employment Statistical Yearbook and EPS database.

Table 1. Rating Index System for Rural Revitalization

Dimension	Indicator name	Indicator meaning	Unit
Industrial prosperity	Rural production benefit	Per capita output value of agriculture, forestry, animal husbandry and fishery	Yuan/person
	Comprehensive level of agricultural mechanization	Total power of agricultural machinery per km ²	Ten thousand kw
Ecological livability	Natural ecological condition	forest coverage rate	%
Rural civilization	Education level of farmers	Proportion of rural labor force with junior high school education or above	%
Effective governance	Income gap between urban and rural areas	Ratio of rural income to urban income	-
	Urban-rural consumption gap	Ratio of consumption expenditure of rural residents to urban residents	-
enjoy in affluence	Income level of rural residents	per capita net income of rural residents	Yuan/person

4.2. Empirical analysis of the impact of the development of digital inclusive finance on rural revitalization

4.2.1. Variable delection

Explained variable: the level of rural revitalization (Y). According to the established evaluation index system of rural revitalization and the selected comprehensive evaluation method, the calculated data measure the development level of rural revitalization from 2012 to 2020.

Core explanatory variable: digital inclusive finance level (X1). The data comes from Peking University Digital inclusive finance Index published by Digital Finance Research Center of Peking University, and the data is processed by logarithm.

Control variable: fiscal expenditure level (X2); Level of economic development (X3).

4.2.2. Construction of the model

Because multivariate linear regression analysis must satisfy that there is no multicollinearity between explanatory variables, there is no heteroscedasticity and autocorrelation in the model. Therefore, in this paper, firstly, the variables are treated logarithmically to eliminate the influence of heteroscedasticity on the model results as much as possible. So build the model as follows:

$$\ln Y = \theta_0 + \theta_1 \ln X1 + \theta_2 \ln X2 + \theta_3 \ln X3 + \varepsilon$$

Among them, θ_0 represents the intercept term, θ_i is the parameter to be estimated, ε is a random perturbation term. The regression results of the model are shown in Table 2.

Table 2. Regression results of the model

Variable	Coefficient	P> t
lnX1	0.289	0.001
lnX2	3.044	0.000
lnX3	0.011	0.000
cons	9.336	0.000
R-squared	0.7214	

According to the data in Table 2, the determinable coefficient is 0.7214, which indicates that there is a high degree of fitting among the variables, that is, rural revitalization has a significant positive correlation with the development level, financial expenditure level and economic development level of digital inclusive finance. Among them, the development level and financial expenditure level of digital inclusive finance have great influence on rural revitalization. The better the development level of digital inclusive finance, the more it can promote the development level of rural economy. According to the concept of elastic coefficient, the regression coefficient of the equation reflects the elastic relationship between the explanatory variable and the explained variable. The coefficient of 0.289 indicates the elastic influence of digital inclusive finance on rural revitalization. For every 1% increase of digital inclusive finance index, the development of rural revitalization will increase by 28.9%.

4.2.3. Robustness test

In order to rule out the contingency of the regression results analyzed by the above explained variables, the robustness test adopts the method of replacing control variables, replacing the economic development level with the old-age dependency ratio, that is, expressing it by the number of non-working-age elderly people and working-age people in the total population. The regression results are shown in Table 3. Specifically, the results after replacing variables are almost the same as before, which shows that the model has a good fitting degree.

Table 3. Robustness test results

Variable	Coefficient	P> t
lnX1	0.696	0.000
lnX2	6.319	0.000
lnX3	0.153	0.000
cons	8.560	0.000
R-squared	0.8324	

5. Conclusions and Suggestions

To study the influence of the development of digital inclusive finance on the process of rural revitalization, firstly, it is analyzed theoretically that digital inclusive finance can promote the development of rural revitalization by helping to upgrade the rural industrial structure, narrowing the gap between the rich and the poor in the region and using its digital credit system. Secondly, the index system for measuring rural revitalization and development is constructed, and the time series data from 2012 to 2020 are selected to calculate the rural revitalization and development index by comprehensive evaluation method. Thirdly, build a model to analyze the relationship between them. The empirical analysis shows that the regression coefficient of the development of digital inclusive finance is positive, which means that with the continuous improvement of the development level of digital inclusive finance, it can also promote the development process of rural revitalization. Accordingly, the following suggestions are put forward:

First, we should establish and improve the relevant legal norms and financial infrastructure construction of digital inclusive finance. As a new financial development mode, the rights and obligations of digital inclusive finance's beneficiaries and financial institutions are still unclear. Promoting the establishment of perfect relevant legal norms and speeding up the construction of financial infrastructure will help to further lower the threshold of financial services, improve the availability of digital inclusive finance services, help more low-income people to obtain financial services within a clear legal scope, and give full play to the role of digital inclusive finance in promoting the rural revitalization and development process.

Second, speed up the innovation and service upgrade of digital inclusive finance industry. With the popularity of the Internet and the advantages of big data, digital inclusive finance can break

through the limitations of traditional finance, such as limited coverage, low efficiency and asymmetric information, and truly popularize finance. However, there are still many low-income people who have difficulty in obtaining professional financial services. Financial institutions should accelerate the innovation of financial products, improve the efficiency of loan issuance, give lectures in rural areas, increase business outlets and staff in economically underdeveloped areas, and ensure that the population in rural areas can also obtain professional financial services.

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