

Research on The Impact of Digital Inclusive Finance on Inclusive Rural Growth

Xu Mian*

School of Economics&Management, Nanjing University of Science and Technology, Nanjing, China

* Corresponding Author Email: xumian@njjust.edu.cn

Abstract. Inequality of income and opportunity has always been one of the important problems in China's economic development. Digital inclusive finance is an important way to promote inclusive growth. Based on the collection of relevant data of 31 provinces in China from 2011 to 2020, this paper constructs the rural inclusive growth system and obtains the rural inclusive growth level of each province. Moreover, the digital inclusive finance index data from 2011 to 2020 provided by the Digital Finance Research Center of Peking University is used to construct a linear panel regression model. Empirical analysis of the impact of digital inclusive finance on rural inclusive growth level. The results show that the level of inclusive rural growth of each province has fluctuated and increased in the past decade, and there are some differences among provinces. There is a positive spatial correlation between digital inclusive finance and rural inclusive growth, that is, the development of digital inclusive finance can promote the growth of rural inclusive level to a certain extent. Finally, policy recommendations are put forward in the context of the epidemic. In short, digital financial inclusion uses its own advantages to push forward the goal of inclusive rural growth.

Keywords: Digital Inclusive Finance, Inclusive Growth, Countryside, Principal component analysis

1. Introduction

At the Third Plenary Session of the 18th CPC Central Committee, China formally put forward the development strategy of "inclusive finance". In 2016, the Hangzhou G20 Summit adopted for the first time an international cooperation framework for "Developing inclusive finance". As a new form of inclusive finance, digital inclusive finance can provide more convenient and fast financial services for remote areas and low- and middle-income people by taking advantage of its strategic advantages such as low cost and wide coverage. Through the rapid economic development in recent years and the perfect implementation of the government's inclusive financial policies, digital inclusive finance has become the mainstream of the current inclusive financial development in China, and formed a unique and generally complete system.

The ultimate purpose of inclusive finance is to promote the all-round development of rural areas and achieve equality in front of finance. From the perspective of the development process of digital inclusive finance, it relies on the combination of Internet technology to break the original regional restrictions, which can effectively alleviate the problem of large urban-rural income gap and unbalanced regional economic development to a large extent, so as to achieve the purpose of inclusive growth.

It is necessary for this paper to empirically analyze the specific impact of the two from the perspective of the development of public digital inclusive finance by constructing an indicator system for inclusive growth in rural areas. The research conclusions of this paper are of more practical significance, which is conducive to financial enterprises and governments to make and implement effective and scientific decisions through the use of digital financial inclusion, so as to accelerate the realization of inclusive rural growth in China.

2. Literature Research and hypothesis

2.1. The relationship between digital inclusive finance and inclusive growth

At present, China's low level of development, unbalanced regional development, unbalanced distribution of income between urban and rural areas, as well as the existing problems of housing,

employment, education, medical treatment, etc., seriously hinder the healthy and sustainable development of China's economy, and become a stumbling block in achieving the second centenary goal. Inclusive growth is an emerging economic growth mode that focuses on the coordinated development of economy and society. The most basic meaning is to share economic growth in a reasonable and fair way, and it is also an inevitable requirement for a country's economic development to a certain stage. The emergence of digital financial inclusion has opened up a new feasible path for promoting inclusive growth in rural areas.

Although domestic and foreign scholars have little research on digital financial inclusion and inclusive development, on the whole, digital financial inclusion has played a pivotal role in promoting inclusive economic development.

Kapoor (2014) has shown through research that the development of digital financial inclusion has a direct impact on regional inclusive growth^[1]. Through relevant data analysis, Zhang Xun et al. (2020) found that digital finance significantly increased the income of rural low-income groups, and came to the conclusion that it could help improve the entrepreneurial behavior of rural residents and promote the inclusive growth of China's economy by solving the capital problem^[2]. Siddik and Kabiraj (2020) studied the positive role between digital finance and inclusive growth through relevant cases^[2]. Ren Biyun and Li Liuying (2019) collected survey data from 2,114 rural residents in Beijing, Tianjin and Hebei provinces. Data is used to discuss and study the impact of four dimensions, namely, the use of digital payment services, digital investment services, digital lending services and the availability of digital financial services in digital inclusive finance, on the inclusive growth of rural areas. It is found that all of them have a significant promoting effect on the inclusive growth of rural areas^[4]. Bei Duoguang et al (2017) analyzed the basic principles of "government guidance and market leadership" in the development of inclusive finance, and combined with China's national conditions and international experience, discussed how the government should formulate inclusive finance development strategies in the context of inclusive growth^[5].

2.2. Literature Review

In summary, the literature review summarizes the scholars' research on the related aspects of this topic, but there are some shortcomings at this stage. First of all, most relevant literatures on inclusive development and inclusive rural development do not comprehensively measure inclusive rural development, especially foreign studies, which basically do not involve the level of equal opportunities, while Chinese scholars mainly focus on urban-rural income gap, entrepreneurship and other aspects, and rarely involve inclusive rural growth. Second, most scholars treat digital inclusive finance as a whole, and lack in-depth discussions on the multi-level and micro-level of inclusive finance.

2.3. Hypothesis

Through the above literature review, combined with previous scholars' research, the following research hypotheses are analyzed and proposed.

H1: there are regional differences in the level of rural inclusive growth, and there is a close positive correlation with the degree of rural economic development in each province.

H2: the development of digital inclusive finance can promote the level of rural inclusive growth to a certain extent, and also indirectly affect its impact on rural inclusive growth by improving the level of economic development.

3. Variable Selection

3.1. The Explained Variable

The level of rural inclusive growth ($F_{i,t}$) is the explained variable. After consulting a large number of literatures, it is found that scholars have not established a unified standard index system for the measurement of inclusive economic growth. Therefore, in order to measure the inclusive growth level

of rural areas in various provinces in a more scientific and reasonable way, by referring to Tang Yu et al. (2020), who divided inclusive growth into three dimensions of economic growth, equal access to opportunities and sharing of development results to build an indicator system^[6], and Zhou Zejiang et al. (2021), who divided inclusive growth into economic growth, green and technological development and opportunities^[7], this paper divides inclusive growth into four aspects: economic growth, scientific and technological level, opportunity equity and achievement sharing to build a comprehensive evaluation index system for inclusive growth in rural areas. The specific 15 indicators are shown in Table 1.

Table 1. Index system for comprehensive evaluation of inclusive rural growth

Primary indicators	Secondary indicators	Calculation method	Unit	property
Economic growth	Index of agriculture, forestry, animal husbandry and fishery(X_1)	/	%	+
	Total investment in fixed assets in rural areas(X_2)	/	Hundred million yuan	+
	Value added of the primary industry as a proportion of GDP(X_3)	$\frac{\text{Value added of rural primary industry}}{\text{Total rural GDP}}$	%	+
	Value added of the tertiary industry as a proportion of GDP(X_4)	$\frac{\text{Value added of rural tertiary industry}}{\text{Total rural GDP}}$	%	+
	Value added of the financial sector as a proportion of GDP(X_5)	$\frac{\text{Value added of rural financial industry}}{\text{Total rural GDP}}$	%	+
Opportunity equity	Number of beds in rural medical institutions(X_6)	$\frac{\text{Number of beds in health facilities}}{\text{Total number of persons (ten thousand)}}$	/	+
	Number of health technicians in rural areas(X_7)	$\frac{\text{Number of health technicians}}{\text{Total number of persons (ten thousand)}}$	/	+
	Number of students in rural areas(X_8)	$\frac{\text{Number of rural students}}{\text{Total rural population (hundred thousand)}}$	/	+
	Number of employed persons in rural areas(X_9)	/	Thousand people	+
	Employment rate of rural tertiary industry(X_{10})	$\frac{\text{Employment in rural tertiary industry}}{\text{Total employment in rural areas}}$	%	+
Achievement sharing	Rural-urban per capita consumption expenditure ratio(X_{11})	$\frac{\text{Urban per capita consumption expenditure}}{\text{Rural per capita consumption expenditure}}$	%	-
	Rural-urban per capita disposable income ratio(X_{12})	$\frac{\text{Urban per capita disposable income}}{\text{Rural per capita disposable income}}$	%	-
	Engel coefficient of rural households(X_{13})	$\frac{\text{Total rural food expenditure}}{\text{Total rural consumption expenditure}}$	%	+
	Number of elderly care institutions in rural areas(X_{14})	/	/	+
Scientific and technological level	The number of main agricultural machinery in rural areas at the end of the year(X_{15})	/	/	+

Data sources: China Statistical Yearbook, China Rural Statistical Yearbook and 31 provincial statistical yearbooks.

According to the system established in the above table, this paper collected the rural-related data of 31 provinces in China from 2011 to 2020. For some missing index data, interpolation method and mean method are used to supplement, so as to improve the accuracy of data as much as possible. By using the spss software and factor analysis method, a representative sample of 31 provinces was selected to measure the level of rural inclusive growth in our country from 2011 to 2020. First, check the validity of the data. The validity test results of all years are summarized in Table 2. The results show that the data of all years are suitable for factor analysis.

Table 2. KMO and Bartlett test results from 2011 to 2020

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
KMO	0.634	0.589	0.788	0.781	0.923	0.846	0.592	0.873	0.933	0.865
P	0.000	0.002	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000

Secondly, the objective weighting method of spss was used to calculate the score of the rural inclusive growth level of 31 provinces from 2011 to 2020, and the average score was obtained by weighted average. The ranking was conducted according to the average score, and then the corresponding number of principal components was obtained by analysis. According to the results, the variance contribution rate of principal components in each year was greater than 83%. The method of objective assignment makes the index weight more convincing and scientific. Specific score calculation operations are as follows: First, by dividing the correlation coefficient of the principal component matrix by its corresponding principal component eigenvalue, F_i is obtained; Secondly, calculate the arithmetic square root of F_i to get FF_i . In addition, it is found that there are two or more principal components extracted in each year, then the ratio of eigenvalues (λ_i) corresponding to each principal component to the sum of all eigenvalues is calculated as the contribution rate, the calculation formula is: $\beta_i = \lambda_i / \sum \lambda_i$; Furthermore, the product of FF_i and contribution rate β_i is multiplied by the standardized indicator variables to obtain the final rural inclusive economic growth index value of each province, that is, $F = \sum FF_i * \beta_i * X_i$. The results are summarized in Table 3.

Table 3. Comprehensive scores and rankings of inclusive growth in rural areas of 31 provinces from 2011 to 2020

Province	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average score	Rank
Shanghai	0.57	0.71	1.16	1.28	1.45	1.44	1.45	1.51	1.80	1.92	1.33	1
Peking	0.07	0.50	0.84	0.86	1.13	1.12	1.14	1.55	1.76	1.88	1.09	2
Zhejiang	0.45	0.69	0.80	0.82	0.88	1.00	1.05	1.14	1.45	1.36	0.96	3
Sichuan	0.27	0.81	0.86	0.89	0.95	1.01	1.03	1.13	1.14	1.21	0.93	4
Tianjin	0.04	0.53	0.55	0.80	0.83	0.90	0.97	1.05	1.52	1.79	0.90	5
Jiangsu	-0.49	0.28	0.36	0.54	0.64	0.76	0.70	1.06	1.20	1.40	0.65	6
Liaoning	0.03	0.10	0.16	0.64	0.74	0.72	0.86	0.94	0.90	1.00	0.61	7
Yunnan	-1.09	0.24	0.48	0.56	0.61	0.74	0.96	1.08	1.23	1.25	0.61	8
Xinjiang	-0.18	0.32	0.40	0.59	0.69	0.64	0.64	0.63	0.70	0.78	0.52	9
Kwangtung	-0.58	-0.18	-0.05	0.32	0.46	0.84	0.98	0.95	1.15	1.14	0.50	10
Amur River	-0.34	0.16	0.33	0.36	0.48	0.51	0.59	0.63	0.74	0.77	0.42	11
Fujian	-0.61	-0.47	-0.15	0.28	0.58	0.60	0.72	0.72	1.13	1.24	0.40	12
Shandong	-0.22	0.15	0.17	0.27	0.39	0.42	0.58	0.62	0.70	0.74	0.38	13
Guizhou	-0.59	-0.51	-0.11	0.10	0.17	0.21	0.25	0.54	0.60	0.98	0.16	14
Chongqing	-0.35	-0.28	-0.18	-0.17	0.00	0.20	0.35	0.37	0.42	0.89	0.12	15
Anhui	-1.22	-1.00	-0.63	-0.01	0.02	0.23	0.54	0.55	0.72	1.22	0.04	16
Guangxi	-0.89	-1.04	-0.66	-0.11	0.21	0.21	0.16	0.51	0.62	0.86	-0.01	17
Inner Mongolia	-0.77	-0.45	-0.29	-0.16	-0.14	-0.02	0.14	0.19	0.43	0.51	-0.06	18
Hainan	-0.45	-0.44	-0.40	-0.34	-0.15	-0.03	0.19	0.28	0.30	0.41	-0.06	19
Jiangxi	-0.95	-0.68	-0.27	-0.24	-0.02	0.08	0.07	0.12	0.28	0.64	-0.10	20
Hunan	-0.63	-0.46	-0.36	-0.28	-0.16	0.03	0.06	0.19	0.19	0.47	-0.10	21
Hubei	-0.42	-0.41	-0.37	-0.34	-0.13	-0.11	0.00	0.03	0.23	0.36	-0.12	22
Henan	-0.80	-0.63	-0.56	-0.18	-0.12	-0.03	-0.01	0.03	0.25	0.79	-0.13	23
Ji Lin	-0.57	-0.34	-0.30	-0.29	-0.28	-0.18	-0.17	0.19	0.26	0.31	-0.14	24
Shaanxi	-0.54	-0.49	-0.41	-0.32	-0.30	-0.22	-0.20	-0.19	-0.04	0.14	-0.26	25
Shanxi	-1.18	-0.97	-0.39	-0.35	-0.32	-0.18	-0.20	-0.16	-0.14	0.58	-0.34	26
Hebei	-0.73	-0.63	-0.52	-0.50	-0.38	-0.33	-0.30	-0.24	-0.19	-0.05	-0.39	27
Qinghai	-1.21	-1.06	-1.03	-0.62	-0.30	-0.07	-0.02	0.01	0.08	0.21	-0.40	28
Ningxia	-2.16	-1.82	-1.70	-1.70	-1.11	-0.95	-0.92	-0.91	-0.84	0.61	-1.15	29
Gansu	-2.80	-2.60	-2.34	-1.79	-1.56	-1.34	-1.26	-1.03	-0.72	0.58	-1.49	30
Xizang	-2.70	-2.50	-2.30	-2.00	-1.60	-1.11	-1.20	-1.09	-0.76	0.20	-1.51	31

It can be concluded from Table 3: First, in terms of the length of time, the comprehensive score of rural inclusive growth level in most provinces from 2011 to 2020 is generally increasing, and the trend is relatively optimistic. Specifically, the degree of increase varies among provinces in this decade, especially in the backward western regions(Tibet, Gansu, Ningxia, and Yunnan), the increase is particularly large, while the more advanced eastern developed regions such as Shanghai and Zhejiang, the increase is small. The main reason is that with the rapid economic development and the full implementation of the national poverty alleviation policy, the rural development in the western region is more comprehensive and rapid than that in the eastern rural area. Secondly, from the comparison of various provinces, Beijing, Shanghai, Sichuan, Zhejiang, Tianjin, these provinces are more advanced, the score is positive, while Tibet, Gansu, Ningxia and other regions ranked behind, the score is basically negative. The differences in scores between provinces are mainly due to geographical location, economic development, scientific research and education levels, and population size.

3.2. Explanatory Variable

Digital Financial Inclusion Development Index($ifi_{i,t}$).The indicator to evaluate the development level of digital financial inclusion in each province is from the 2011-2020 provincial Digital Financial

Inclusion Index released by the Digital Financial Research Center of Peking University. The index is positively correlated with the development level of digital financial inclusion in each province. In order to better cooperate with other variables for principal component analysis, the value obtained by dividing this variable by 100 is used as the variable for empirical analysis.

3.3. Control Variables

The control variables are as follows.

The proportion of rural fiscal expenditure in GDP ($fe_{i,t}$), which is a variable to measure the level of rural fiscal expenditure in each province. The level of government expenditure is related to the scale of total social demand, and the increase in overall social demand plays a greater role in promoting economic growth, thus further achieving inclusive growth. This variable is calculated by dividing rural fiscal expenditure by the total rural GDP.

The growth rate of the secondary industry ($groi_{i,t}$) and the tertiary industry ($gros_{i,t}$) are two variables that reflect the level of industrial structure. The level of industrial structure is positively correlated with long-term sustainable and stable economic development, and thus has a positive impact on achieving the goal of inclusive rural growth. These two variables are calculated as the total output of the secondary(tertiary) industry divided by the total GDP.

3.4. Variable Descriptive Statistics

Descriptive statistics of each variable are shown in Table 4 below.

Table 4. Descriptive statistics of variables

Variable	N	Mean	SD	Min	Max
F	310	0.1096	0.6658	-2.8012	1.9298
ifi	310	2.1623	0.7982	0.1622	4.3193
fe	310	0.2841	0.2082	0.1103	1.3796
groi	310	0.4263	0.0775	0.1583	0.5895
gros	310	0.4732	0.0800	0.2967	0.8387

Data source: Peking University Digital Financial Inclusion Index (2011-2020) and China Economic Network database.

4. Model Building

4.1. The Model

$$F_{i,t} = \alpha_0 + \alpha_1 ifi_{i,t} + \beta_1 fe_{i,t} + \beta_2 groi_{i,t} + \beta_3 gros_{i,t} + \varepsilon_{i,t} \tag{1}$$

Model (1) is used to test the relationship between digital financial inclusion indexes and control variables and inclusive economic growth, where $F_{i,t}$ are explained variables, namely the rural inclusive growth index of a certain province i in the t period; The remaining variables are explanatory variables and control variables. α_0 represents the constant term, α_1 is the explanatory variable coefficient, $\beta_1, \beta_2, \beta_3$ represents the coefficient of each control variable; $\varepsilon_{i,t}$ is a random error term that follows a distribution with an expected value of 0 and a fixed variance.

4.2. Model Regression Results and Analysis

Because the number of time is less than the number of sections, it is a short panel, so it is not necessary to perform unit root test. In order to reflect the difference of estimation methods and robustness of estimation, based on the panel data of 31 provinces from 2011 to 2020, fixed effects and random effects were respectively adopted for modeling. Then, the most effective estimation model was selected based on the analysis results according to F test and Hausman test. Based on the result analysis, the author decided to adopt the fixed effect model. The regression results of specific models are shown in Table 5.

Table 5. Fixed effect model regression results

Variable	<i>C</i>	<i>ifi</i>	<i>fe</i>	<i>groi</i>	<i>gros</i>	<i>R</i> ²
coefficient	1.0181***	1.3062***	1.1231**	0.5598***	0.6124***	0.9519
t	2.6763	23.9875	2.5278	3.2126	3.9319	/

Note: *, **, and *** indicate that variables pass the significance test at 10%, 5%, and 1% confidence levels, respectively.

By regression analysis, the estimated coefficients of each variable are positive. In addition, it can be found that the estimated coefficients of the digital inclusive financial index and the proportion of fiscal expenditure to GDP are relatively large, and the promoting effect is relatively obvious. The other variables also have a positive effect on rural inclusive growth, but it is relatively weak.

At the significance level of 1%, the estimated parameter of the Digital Financial Inclusion Index (*ifi*) is 1.3062, indicating that the development of digital financial inclusion can effectively improve the level of local economic development, provide more digital financial finance-related employment opportunities, and increase the income level of rural people, thus playing a positive correlation role in rural inclusive growth. Therefore, it is also confirmed that digital financial inclusion can promote the sustainable development of rural economy by playing three effects, namely, inclusion effect, poverty reduction effect and growth effect, so as to effectively promote the improvement of inclusive growth level in rural areas. According to the data related to the digital financial Inclusion index released by the Digital Financial Research Center of Peking University, the digital financial inclusion index of Tibet, Xinjiang and other provinces is basically only slightly lower than the national average level, and has a rapid rising trend in recent years, with an extremely optimistic development trend. The Digital financial inclusion index of the eastern provinces is relatively high and has increased steadily in recent years, which is well positioned to provide financial services to micro, small and medium-sized enterprises and low-income people and strive to achieve inclusive growth goals. Therefore, the rapid development of the digital inclusive financial industry, which emerges from the combination of digital technology and inclusive finance, can effectively alleviate the financing difficulties of small and medium-sized enterprises in rural areas, promote the development of rural agriculture, and thus have important practical significance for realizing the goal of inclusive growth in rural areas.

At the significance level of 5%, the estimated parameter of the proportion of fiscal expenditure (*fe*) is 1.1231, indicating that the increase of fiscal expenditure can help rural economic development to a certain extent, thus promoting the improvement of the level of inclusive rural growth. Through the results, it also further reflects that the government's financial expenditure is mainly invested in the related policies of benefiting farmers. At the significance level of 1%, the estimated coefficients of the proportion of secondary industry (*groi*) and tertiary industry (*gros*) are 0.5598 and 0.6124, respectively. The results show that the development of secondary and tertiary industries drives rural economic development, thus further promoting inclusive rural growth.

Compared with the eastern rural areas, the western rural areas are relatively backward in all aspects, such as low-income groups dispersed and difficult to develop, small, medium and micro enterprises exist technical problems and financing problems, etc. Digital inclusive finance has developed slowly in these areas, facing many difficulties and challenges. The effect of financial expenditure ratio (*fe*), the proportion of secondary industry (*groi*) and the proportion of tertiary industry (*gros*) to reflect the level of industrial structure and the scale of fiscal expenditure is positive at the significance level, indicating that industrial structure and fiscal expenditure have a positive correlation to inclusive growth.

4.3. Robust test

The degree of digitalization determines the key factor for the development of inclusive finance to provide facilitation and cost savings, and is also an important guarantee for the realization of digital inclusive finance. However, when digitalization develops to a certain extent, the difference between

digital finance and ordinary finance gradually shrinks, and some advantages of saving time and labor costs gradually weaken. Therefore, the effect of promoting inclusive growth in rural areas through digital inclusive finance will be constrained and limited to a certain extent. The degree of digitization can be shown to some extent by the rural Internet penetration rate. Therefore, in order to ensure the robustness of the empirical results, this paper uses the indicator of rural Internet penetration to replace the variable of Digital Financial Inclusion Index (ifi). Although Internet penetration provides technical support and guarantee for the development of digital financial inclusion, it is not directly related to the rural inclusive growth index. After replacing the core explanatory variables, the new empirical results are basically consistent with the original empirical results, so the research results in this paper are robust.

5. Summary

5.1. Conclusion

Based on the above research results and analysis, combined with relevant theories, this paper collects relevant data from 31 provinces in China and demonstrates the impact of digital financial inclusion on rural inclusive economic growth. Through theoretical and empirical analysis results, the following conclusions are drawn.

First, digital financial inclusion has a positive correlation with promoting inclusive rural growth. According to the rural panel data of 31 provinces in China from 2011 to 2020, using the linear panel model, it can be concluded that digital financial inclusion has a certain role in promoting the level of rural inclusive growth. This also confirms that actively promoting the development of digital financial inclusion contributes to the development of the rural economy, thus achieving a virtuous circle of the economy. Secondly, through the establishment of the rural inclusive growth level system, we can find that China's rural inclusive growth level in the long run, shows a trend of rising volatility. At the same time, there are also large differences in the rural inclusive growth index among provinces, which reflects that there is a certain gap in the level of rural inclusive growth among provinces. The index in the remote western region is relatively backward, while the inclusive growth index in the eastern region, especially in the rural areas of Jiangsu, Zhejiang and Shanghai, is relatively high, indicating that rural inclusive growth also has a certain spatial effect. The rural economic development of one area can drive the development of the surrounding areas, thus promoting the common progress of this area. Finally, from the perspective of several other control variables, the level of fiscal expenditure and industrial structure can promote the inclusive growth of rural areas. Compared with the secondary industry, the tertiary industry has a relatively higher role in promoting the improvement of inclusive growth in rural areas.

5.2. Related Suggestions

In response to the conclusion that the digital financial inclusion perspective can promote inclusive growth in rural areas, this paper will make the following recommendations from multiple perspectives:

First, to further strengthen the role of digital financial inclusion, infrastructure and legal systems must be improved. Under the impact of the epidemic, digital financial inclusion has advantages such as convenience, cost saving and low threshold, and should be fully developed. The government should expand the coverage of services, accelerate the construction of infrastructure, and increase the penetration rate. The government and financial institutions should strengthen infrastructure construction to promote inclusive rural growth. Relevant security technical issues need to be paid attention to to ensure the security of transactions. Publicity lectures were held to enhance farmers' financial awareness and pay attention to the role of digital financial inclusion in rural economy. We will improve laws and regulations, lower the service threshold, and enable more poor people to legally and effectively access digital financial inclusion.

Second, accelerate the pace of innovation in digital financial inclusion related products and services. All kinds of financial institutions in rural areas should accelerate the innovation of relevant

digital financial products, accelerate the improvement of service quality, dredging the channels for rural people to obtain digital inclusive financial products and services as soon as possible, and ensure the timely supply of digital inclusive financial products and services. Financial institutions should particularly improve digital lending services, realize the combination of online Internet and offline entities through mobile phones, and purchase corresponding financial products on demand. At the same time, small insurance business can also be properly developed and carried out. Through the development of digital insurance business can effectively share such risks, do a good job in underwriting, claims and reinsurance and other businesses, transfer farmers' funds to other production labor, and better promote rural economic development.

Third, the government should formulate and continuously optimize local targeted digital financial inclusion policies and expand the scale of fiscal expenditure. The degree of development of digital inclusive finance among the 31 provinces studied in this paper is quite different, and the economic level is also uneven. It can be seen that the Chinese government and local governments should implement differentiated policies according to the characteristics and background of each province. Compared with the eastern region, the western region needs to deeply implement good policies and measures and strive to complete the task of poverty alleviation. Government policies must be preferential and welfare, and investment funds through subsidies, tax exemptions, compensation and incentives to accelerate the implementation of digital inclusive finance in-depth development. For example, the use of financial subsidies to reduce the cost of digital equipment, improve the use of rural people to use mobile phones, computers and other electronic equipment. In addition, through the empirical analysis results above, it can be seen that the variable of the proportion of fiscal expenditure in GDP has a significant positive correlation with the improvement of the level of inclusive rural growth. Therefore, the regional governments have adjusted the scale of local fiscal expenditure in a timely and stable manner, endeavoring to expand the sources of revenue and more financial control of local governments, and strive to promote inclusive rural growth with high efficiency.

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