Frontiers in Economics and Management Volume 4 Issue 11, 2023
ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

Research on the Impact of Digital Inclusive Finance on Rural People's Sense of Gain

Caixin Pan, Xintong Li, Xinan Yan

Jiangxi University of Finance and Economics, Nanchang, Jiangxi, 330013, China

Abstract

Developing digital inclusive finance is an effective way to promote rural revitalization strategy and enhance rural people's sense of gain. On the basis of constructing the overall indicator of rural people's sense of gain, the article empirically analyzes the effect of digital inclusive finance on enhancing rural people's sense of gain. The research results indicate that: firstly, digital inclusive finance can significantly enhance the sense of gain for rural people; Secondly, compared to high education level groups, digital inclusive finance has a more significant effect on enhancing the sense of gain of low education level groups; Thirdly, compared to the eastern regions, the promotion effect of rural people's sense of gain in the central and western regions is more significant.

Keywords

Digital Inclusive Finance; People's Sense of Gain; Rural Revitalization.

1. Introduction

The State Council issued the "Plan for Promoting the Development of Inclusive Finance" at the end of 2015, proposing for the first time the development of inclusive finance at the national level strategic planning level. In 2021, China proposed for the first time the concept of "developing rural digital inclusive finance", encouraging cities and counties to build shared financial databases within the region, providing effective solutions for promoting rural revitalization and solving financing difficulties for agricultural enterprises. With the advancement of China's digital rural strategy, the development of digital inclusive finance in rural areas will usher in broader prospects.

From existing literature, scholars have conducted extensive research on the role of digital inclusive finance in promoting rural revitalization from different perspectives. Ma Yaming and Zhou Lu (2022) found from the perspective of innovation and entrepreneurship that digital inclusive finance can stimulate rural entrepreneurship vitality, increase innovation and research and development investment, and promote the further implementation of rural revitalization strategy[1]. Kang Shusheng and Yang Nana (2022) believe that the development of digital inclusive finance is conducive to meeting the diversified financial demands of farmers in industrial operations, and has a promoting effect on the transformation and upgrading of rural industries[2]. Sun Jiguo and Zhao Junmei (2019), from the perspective of urban-rural income gap, empirically compared the impact of traditional finance and digital inclusive finance, and found that digital inclusive finance can more significantly narrow the urban-rural income gap [3].

Existing research provides useful reference for this article, but most of them explore the role of digital inclusive finance development in rural areas from the perspectives of rural revitalization, industrial transformation, and farmers' income reduction. Based on the existing policy background and practical significance, this article takes the sense of gain of rural people as the entry point, empirically tests the impact of digital inclusive finance on the sense of gain of rural people, and puts forward corresponding suggestions.

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

2. Theoretical Analysis and Research Hypotheses

The development of digital inclusive finance can gather urban idle capital and innovative technologies into rural areas, and promote economic development in rural areas through three paths: promoting industrial structure upgrading, promoting the development of private enterprises, and increasing residents' income[4], enhancing the sense of economic gain for rural people. County governments actively promote the deep integration of digital inclusive finance and rural industries, solve problems such as difficult and expensive financing, enrich the success of the government's rural revitalization strategy, gain people's trust, and enhance people's political sense of gain. In addition, digital inclusive financial platforms have gradually become an important way for residents to access financial information. Coupled with their convenient and low-cost services, they have greatly improved rural residents' awareness and acceptance of social security[5], which is conducive to improving people's sense of livelihood gains. It can be seen that digital inclusive finance can play a certain role in enhancing the sense of achievement of rural people in three different aspects: economy, politics, and people's livelihood. Based on this, this article proposes research hypothesis H1:

H1: Digital inclusive finance has a positive promoting effect on rural people's sense of achievement.

Research has found that rural residents have lower levels of education and become the main target of financial exclusion. There is an "educational constraint" problem in the development of digital inclusive finance in rural areas of China. There is a positive correlation between education level and people's level of rationality [7], which means that investors who have received higher education have a more objective understanding of the risk return characteristics of financial markets and financial products, and can participate in the financial market rationally. Therefore, the marginal benefits of using digital inclusive finance are lower. On the contrary, residents with lower education level obtain higher marginal benefits through using digital inclusive finance, The improvement effect of sense of achievement is more significant. Based on this, this article proposes the research hypothesis H2:

H2: Digital inclusive finance has a more significant effect on improving the sense of achievement of residents with low education levels.

The level and quality of regional economic development have a significant impact on people's sense of gain. The main reasons for the regional differences in China's financial development are factors such as economic development in different regions, the degree of marketization of the economy, and differences in government financial supply measures. The financial development in the eastern coastal areas of China has received strong support from the government in terms of institutions, policies, and funds. Due to limitations in natural conditions, resource endowments, and other aspects, the financial development in the central and western regions is relatively slow, so there is more room for improvement in the financial development of the central and western regions. Statistical data shows that from 2011 to 2020, the digital inclusive finance business in the western region of China showed an overall annual growth trend. Local people are increasingly enjoying the dividends of income growth and employment opportunities brought by digital financial services, and their sense of gain has significantly improved. Based on this, this article proposes research hypothesis H3:

H3: Compared to the eastern region, digital inclusive finance has a greater impact on enhancing the sense of gain for rural people in the central and western regions.

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

3. Data Source and Variable Selection

3.1. Data Sources

The data in this article mainly comes from the 2015 Chinese General Social Survey (CGSS) questionnaire data and the Digital Inclusive Finance Index of the Peking University Digital Finance Research Center. The two types of data were matched by county level, and a total of 4393 observation values were obtained.

3.2. Variable Selection

3.2.1. Explained Variable

Rural people's sense of gain. This article refers to the approach of Wang Tian et al. (2018) [9] and defines rural people's sense of gain as three dimensions: economic sense of gain, political sense of gain, and sense of livelihood gain, and subdivides them into 12 specific indicators. On this basis, the "minimum maximum standardization" method is used to perform dimensionless processing on the raw data, and finally the dependent variable "rural people's sense of achievement index" is obtained.

3.2.2. Core Explanatory Variables

The degree of digitalization of inclusive finance. This indicator is sourced from the China Digital Inclusive Finance Index provided by the Digital Finance Research Center of Peking University. The total index includes three primary indicators: coverage breadth, depth of use, and degree of digitization. The degree of digitalization is highly correlated with the overall index of digital inclusive finance, so the degree of digitalization of inclusive finance is used as the core explanatory variable.

3.2.3. Control Variable

Drawing on existing literature, the control variables set in this article are: work status, marital status, number of children, and political outlook. The descriptive statistical results of each variable are shown in Table 1.

Table 1. Descriptive Statistics of Variables

Variable Type	Variable	Mean value	Standard Deviation	Minimum	Maximum	Sample Size
Explained Variable	Rural people's sense of gain	50.40	8.121	30	69.40	4,393
Explanatory variable	Degree of digitalization of inclusive finance	54.74	9.583	13.33	70.63	4,393
Control variable	Work situation	0.610	0.488	0	1	4,393
	Political outlook	0.0819	0.274	0	1	4,393
	Marital status	0.813	0.390	0	1	4,393
	Number of children	1.965	1.288	0	6	4,393

3.3. Model Selection

Based on the above analysis, this article sets the benchmark model as follows:

$$Sense_{ij} = \alpha_0 + \alpha_1 Dig_{ij} + \alpha_2 Control_{ij} + \mu_i + \varepsilon_{ij} \quad (1)$$

In equation (1), $Sense_{ij}$ represents the sense of gain of rural people, Dig_{ij} represents the degree of digitalization of inclusive finance, $Control_{ij}$ represents the set of control variables, i represents the region, j represents the individual residents participating in the questionnaire

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

survey in different counties, represents the parameters to be estimated, represents the fixed effects of the region, and represents the random error term in the model.

4. Result and Analysis

4.1. Benchmark Regression Analysis

Table 2 shows the benchmark regression results of the impact of inclusive finance digitization on rural people's sense of achievement. Among them, Model 1 only includes core explanatory variables, while Model 3 includes both explanatory and control variables. The regression results are significantly positive at the 5% level, indicating that the digitalization of inclusive finance has a role in improving the sense of gain for rural people. Model 2 and Model 4 incorporate county fixed effects on the basis of the above models, avoiding bias in the regression results among different regions, and the regression results are more significant at the 1% level. In Model 4, for every 1% increase in the digitalization level of inclusive finance, the rural people's sense of gain index will increase by 6.92%. From this, it can be seen that the degree of digitalization of inclusive finance has a significant positive impact on improving the sense of gain of rural people, and hypothesis H1 can be verified.

Table 2. Benchmark Regression Results

	Model (1)	Model (2)	Model (3)	Model (4)
Variable	Rural people's sense of gain	Rural people's sense of gain	Rural people's sense of gain	Rural people's sense of gain
Degree of digitalization of inclusive finance	0.0296** (2.31)	0.0711*** (2.91)	0.0295** (2.34)	0.0692*** (2.82)
Work situation			-1.8141*** (-7.12)	-1.8748*** (-7.34)
Marital status			-1.6900*** (-5.28)	-1.5995*** (-5.11)
Number of children			-0.1131 (-1.18)	-0.1861* (-1.93)
Political outlook			0.9638** (2.18)	0.7690* (1.91)
Constant term	48.7798*** (68.68)	47.0535*** (38.29)	51.4077*** (66.48)	50.0381*** (38.68)
Control variable	NO	NO	YES	YES
County fixed effect	NO	YES	NO	YES
Observations	4,393	4,393	4,393	4,393
R-squared	0.001	0.064	0.024	0.086

Note: *, * *, * * respectively represent significant at the 10%, 5%, and 1% levels, with t-statistics in parentheses, the same below.

4.2. Robust Test

The article conducts robustness testing by replacing the dependent variable and the explanatory variable. Firstly, replace the dependent variable with the sense of economic gain for rural people, and the coefficient of the explanatory variable is significantly positive at the 1% level. Next, replace the explanatory variable with the digital inclusive financial index to replace the degree of digitization, and the estimated results are shown in Table 3. From the benchmark regression results, it is basically consistent with the previous results, and the regression results are significant.

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

Table 3. Robustness Test

Replace the dependent variable			Replace explanatory variables		
	Model (5)	Model (6)		Model (7)	Model (8)
Variable	Economic sense of gain	Economic sense of gain	Variable	Rural people's sense of gain	Rural people's sense of gain
Degree of digitalization of inclusive finance	0.1145*** (3.01)	0.1133*** (2.95)	Degree of digitalization of inclusive finance	0.0522** (2.43)	0.0546** (2.53)
Work situation		-1.7142*** (-3.95)	Work situation		-1.8748*** (-7.34)
Marital status		-0.6519 (-1.20)	marital status		-1.5995*** (-5.11)
Number of children		-0.1656 (-1.01)	Number of children		-0.1861* (-1.93)
Political outlook		-2.0373*** (-3.03)	Political outlook		0.7690* (1.91)
Constant term	42.1566*** (22.84)	44.4594*** (22.71)	Constant term	46.7477*** (30.13)	49.3718*** (30.81)
Control variable	NO	YES	control variable	NO	YES
County fixed effect	YES	YES	County fixed effect	YES	YES
Number of samples	4,393	4,393	Number of samples	4,393	4,393
R-squared	0.036	0.042	R-squared	0.064	0.086

4.3. Heterogeneity Test

4.3.1. Educational Heterogeneity

Table 4. Analysis of educational heterogeneity

	Model (9)		Model (10)	
	Low education group	Higher Education Group	Low education group	Higher Education Group
Variable	Rural people's sense of gain	Rural people's sense of gain	Rural people's sense of gain	Rural people's sense of gain
Degree of digitalization of inclusive finance	0.0697** (2.28)	0.0725* (1.79)	0.0691** (2.24)	0.0706* (1.79)
Work situation			-1.7502*** (-5.92)	-2.7274*** (-5.08)
Marital status			-1.6192*** (-4.31)	0.2792 (0.40)
Number of children			0.0319 (0.28)	-1.0772*** (-3.61)
Political outlook			0.1474 (0.25)	0.9004 (1.51)
Constant term	47.1196*** (32.32)	47.0200*** (20.86)	49.6244*** (31.59)	50.1601*** (22.48)
Control variable	NO		YES	
County fixed effect	YES		YES	
Number of samples	3,336	1,057	3,336	1,057
R-squared	0.072	0.077	0.090	0.117

Grouping the sample data according to educational level for regression testing, define a high school diploma or lower as the low education group, and a high school diploma or higher as the

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

high education group. The regression models (9) and (10) both incorporate county-level fixed effects, with the difference being that model (9) only considers the core explanatory variable of inclusive finance digitization, while model (10) considers both the core explanatory variable and the control variable. The regression results indicate that the degree of digitalization of inclusive finance has a significant impact on the sense of achievement of both groups of educated individuals, and the regression results of the low education group are more significant. From this, it can be seen that the development of digital inclusive finance has a more significant effect on improving the sense of achievement of people with low education levels. Assuming H2 holds true.

4.3.2. Regional Heterogeneity

According to different regions, the sample was divided into eastern and central western regions for empirical analysis. The study found that the degree of digitalization of inclusive finance had a significant impact on residents' sense of gain in both the eastern and central western regions. However, in the model (11) without adding control variables, the coefficient of influence of the degree of digitalization of inclusive finance in the eastern region on people's sense of gain was 0.0708, The coefficient of influence of the digitalization of inclusive finance in the central and western regions on people's sense of gain is 0.2525. Obviously, the development of digital inclusive finance in the central and western regions has a greater impact on the improvement of rural people's sense of gain. The model (12) with the addition of control variables yields the same results.

Table 5. Analysis of Regional Heterogeneity

	Model (11)		Model (12)	
	Eastern	Midwest	Eastern	Midwest
Variable	Rural people's sense of gain	Rural people's sense of gain	Rural people's sense of gain	Rural people's sense of gain
Degree of digitalization of inclusive finance	0.0708*** (2.90)	0.2525*** (5.43)	0.0664*** (2.73)	0.2422*** (5.24)
Work situation			-0.0588 (-0.09)	-2.2071*** (-7.94)
Marital status			-2.1157*** (-2.86)	-1.5221*** (-4.42)
Number of children			-0.2318 (-0.91)	-0.1573 (-1.52)
Political outlook			1.4420 (1.63)	0.6254 (1.39)
Constant term	47.0488*** (38.18)	39.8786*** (17.70)	49.3065*** (32.96)	43.1503*** (18.91)
Control variable	NO		YES	
County fixed effect	YES		YES	
Number of samples	733	3,660	733	3,660
R-squared	0.053	0.063	0.068	0.089

The possible explanation is that the original level of digital inclusive finance development in the eastern region is relatively high, and there is relatively little room for people to improve their sense of gain. On the contrary, the central and western regions are located in inland and remote areas, with relatively backward economic development and low availability and coverage of financial services. The development of digital inclusive finance is conducive to increasing the income of local residents, improving local employment, and ultimately enhancing the sense of

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

gain for rural people. It can be seen that compared to the eastern region, digital inclusive finance has a greater impact on the sense of achievement of rural people in the central and western regions. Assuming H3 is valid.

5. Main Conclusions and Policy Recommendations

5.1. Main Conclusion

Empirical analysis shows that digital inclusive finance has a positive promoting effect on rural people's sense of achievement, and this positive effect still holds after robustness testing. Heterogeneity tests were conducted based on education level and regional affiliation, and it was found that digital inclusive finance has a more significant improvement effect on the sense of achievement of residents in the central and western regions and low education levels.

5.2. Policy Recommendations

5.2.1. Optimizing the Development Environment of Digital Inclusive Finance in Rural Areas

The government should accelerate the construction of digital infrastructure such as 5G mobile communication in rural areas, improve rural network infrastructure, and provide financial and technical support for the development of digital inclusive finance in rural areas. At the same time, innovation drives the development of supply chain finance, promotes the deep integration of digital inclusive finance with rural industries, and continues to increase credit support for rural poverty alleviation leading enterprises and other new agricultural business entities, making digital inclusive finance deeply rooted in the rural market and effectively serving rural people.

5.2.2. Improving the Financial Quality of Rural People

Relevant departments should widely popularize digital inclusive finance knowledge, vigorously carry out the publicity work of "financial knowledge entering rural areas", deepen rural people's understanding of digital inclusive finance, deeply tap into the digital inclusive finance needs of rural people, and expand the coverage of digital inclusive finance applications in rural areas. At the same time, it is necessary to enhance the financial awareness, risk awareness, responsibility awareness, and rights protection awareness of the vast majority of farmers, reminding rural people to protect their own rights while enjoying inclusive financial services, so that digital inclusive finance can more efficiently enhance people's sense of gain.

5.2.3. Strengthen Risk Prevention of Digital Inclusive Finance

Digital inclusive finance is beneficial for promoting the development of rural economy, but it also brings a series of digital financial risks, which to some extent reduces the enhancing effect of digital inclusive finance development on rural people's sense of gain. Therefore, while vigorously promoting the development of inclusive finance in rural areas, the government should establish an effective regulatory framework for digital inclusive finance and a sound social credit reporting system, formulate corresponding laws and regulations, and effectively safeguard the interests of users of inclusive financial services.

References

[1] Ma Yaming, Zhou Lu. Research on the Path and Mechanism of Digital Inclusive Finance Promoting Rural Revitalization from the Perspective of Mass Entrepreneurship and Innovation [J]. Modern Finance and Economics (Journal of Tianjin University of Finance and Economics), 2022, 42 (02): 3-20.

[2] Kang Shusheng, Yang Nana. Analysis of the Effect of Digital Inclusive Finance Development on Promoting Rural Industrial Revitalization [J]. Financial Theory and Practice, 2022 (02): 110-118.

ISSN: 2692-7608 DOI: 10.6981/FEM.202311_4(11).0012

[3] Sun Jiguo, Zhao Junmei. Has inclusive finance narrowed the urban-rural income gap-- Comparative analysis based on tradition and numbers [J]. Fujian Forum (Humanities and Social Sciences Edition), 2019 (10): 179-189.

[4] Zhang He. The Impact of Digital Inclusive Finance on Economic Growth in Western China under the Background of Comprehensively Promoting Rural Revitalization [J]. Journal of Yunnan University for Nationalities (Philosophy and Social Sciences Edition), 2021,38 (05): 55-62.

[5] Wang Yanan, Tan Zhuohong, Zheng Lekai. Research on the Impact of Digital Inclusive Finance on Social Security [J]. Quantitative Economic and Technological Economic Research, 2020,37 (07): 92-112.

[6] Liang Shuanglu, Liu Peipei. Digital inclusive finance, educational constraints, and the convergence effect of urban-rural income [J]. Industry and Economics Review, 2018,9 (02): 128-138.

[7] Sourdin, P.Pension Contributions as a Commitment Device: Evidence of Sociology among Time Inconsistent Households. Journal of Economic Psychology, 2008,29 (4): 577-596.

[8] Zheng Changde. Decomposition of the Thiel Index of Regional Differences in Financial Development in China and Analysis of Its Forming Factors [J]. Financial Theory and Practice, 2008 (04): 7-13.

[9] Wang Tian, Tan Yuanfa, Fu Xiaoshan. Measurement and influencing factors of residents' sense of gain in China [J]. Financial Science, 2018, No.366 (09): 120-132.