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The Relationship between Digital Inclusive Finance and Family Residents ' Well-being

-- Based on the Mediating Effect of Financial Literacy

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Abstract

The data of this paper are derived from the digital inclusive finance index in 2019, combined with the China Household Finance Survey (CHFS) data of Southwest University of Finance and Economics, aiming to explore the relationship between digital inclusive finance, financial literacy and residents ' happiness. After research, we found that there is a close relationship between digital inclusive finance and the well-being of family residents. This relationship is positive, that is, there is a positive correlation between the two, that is, digital inclusive finance can simultaneously improve the well-being of family residents. The first-level indicators of the inclusive financial index include coverage, depth of use and digitization. These indicators have a positive impact on the well-being of family residents, and there are structural effects. Among them, the depth of use has the most significant effect on improving the happiness of family residents. The factor analysis method is used to measure financial literacy and study the relationship between financial literacy and the two. The empirical results show that financial literacy plays a part of the intermediary role, and the development of digital inclusive finance improves the happiness of family residents by affecting financial literacy. Therefore, improving the financial literacy of the whole people has immeasurable positive significance for promoting China 's economic development.

Keywords

China Household Finance Survey; Financial Literacy; Digital Inclusive Finance; The Happiness of Family Residents.

1. Introduction

In the report of the 20 th National Congress of the Communist Party of China, the strategic deployment of " meeting the people 's growing spiritual and cultural needs " has created better happiness for the people. Since the founding of the Communist Party, it has shown that its original intention and mission are to seek happiness for the people. This paper focuses on vulnerable groups and explores how to improve their well-being.

Digital inclusive finance covers a wide range of areas, and the cost of financial services is low. At the same time, with the advantages of digitalization, it reduces the entry threshold of financial markets and alleviates the financing constraints caused by information asymmetry. In addition, digital inclusive finance not only has the digital transformation of existing products and services by traditional financial institutions, but also some emerging financial institutions continue to digitally innovate financial products. Financial exclusion has been alleviated to a certain extent, so that low-income rural areas, the elderly, and entrepreneurs with financing difficulties can also enjoy financial services. At the same time, due to the development of the Internet, people 's access to financial services has been broadened. Family residents also

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improve their satisfaction at the spiritual and material levels. It is necessary to explore the relationship between digital inclusive finance and happiness.

With the development of the Internet, most of the residents manage and manage funds online. The whole Chinese people are using Alipay and WeChat, among which Yu 'e Bao and Zhongqiantong are financial products that almost everyone has used. With the advantage of ' at any time ', it is more and more popular with people, but recently financial fraud incidents have emerged in an endless stream, and residents ' happiness has been threatened.

Because financial literacy and digital inclusive finance are related to happiness, it is the purpose of this paper to explore the relationship between the three.

2. Research Design

(1) Data sources

The data of the explained variables and control variables in this paper mainly come from the data of China Household Finance Survey. The calculation of the core explanatory variables is recognized as the total index of digital inclusive finance. The data comes from the official website of Peking University Digital Finance Research Center. After obtaining the data, the data is cleaned and integrated. At the same time, on the basis of the research on the total index of digital inclusive finance, the three first-level dimensions of coverage breadth (CBI), usage depth (UDI) and digitization degree (DI) are subdivided. stata15 is used for empirical test to explore the relationship between the three.

In this paper, the ordered Probit model is used for the following reasons : For the data of the explanatory variables are from the CHFS 's answer to the satisfaction of basic public services, the answer to the question has five options : 1.very happy 2.happy 3.general 4.unhappy 5.very unhappy.

(2) Ordered Probit model

1.ordered Probit model. In order to test the relationship between the development of digital inclusive finance and the happiness of family residents, this paper sets the benchmark model as follows :

happiness _ (i, j =) ∂ _ ilnindex _ j + δ _ icon _ (i, j) + ε _ (i, j) (1)

Explain the formula. From the left and right sides of the equation, happiness _ (i, j) on the right is the explained variable, and lnindex _ j on the left is the explanatory variable. Because the index is different from the calculation method of other variables, there is a big gap in the value. Therefore, the logarithm of the index is processed to ensure the accuracy of the data. Con _ (i, j) is a control variable. Considering the difficulty of data acquisition, this paper still uses the China Financial Survey data released by Southwest University of Finance and Economics to select the control variable. The selection of this control variable is mainly based on the literature, mainly from the household head and family level. Control, ε _ (i, j) represents the random error term, ∂ _ i, δ _ i table is the correlation coefficient, subscripts i and j represent family i and prefecture-level city j, respectively.

(3) Variable definition and calculation method

The explanatory variable is the happiness of family residents. The measurement index is the view of ' satisfaction rate on the effect of basic public services '. The core explanatory variable is digital inclusive finance. Measured by the Digital Inclusive Finance Index, it is recognized and authoritative. The control variables are mainly controlled from the two levels of head of household and family. This index combines many scholars ' research on digital inclusive finance and family residents ' happiness. The householder level is mainly about whether it is a party member or a probationary party member, education level, marital status and other five aspects of control. Since CHFS mainly interviews people over the age of 16, it does not consider age. The

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family level includes total household income and total household consumption. The above control variables are obtained from the 2019 China Household Finance Survey data.

3. Baseline Regression Analysis

(1) Descriptive statistics

Descriptive analysis of the variables, from Table 1, we can see that the family residents are between unhappy and general happiness. The variance reaches 0.86, indicating that residents have great differences in happiness. The overall development prospect of digital inclusive finance is good, with a maximum value of 6.04 and an average value of 5.81.Among them, the degree of digitization is developing rapidly. Compared with the other two, it developed rapidly in 2019, but the volatility is relatively large.

Table 1. Descriptive analysis results

Variable	Obs	Mean	Std. Dev.	Min	Max
happiness	76,384	2.150856	.862112	1	5
lnindex	76,466	5.805607	.0936597	5.66147	6.035259
lnbreadth	76,466	5.751684	.0889631	5.626263	5.970567
lndepth	76,466	5.773724	.1425779	5.503861	6.105203
lndigital	76,466	6.00878	.0553599	5.910645	6.154839
gender	76,460	1.503727	.4999894	1	2
edu	76,230	3.364279	1.732605	1	9
party	76,271	1.865925	.3407346	1	2
marry	76,440	2.220644	1.09328	1	6
health	76,426	2.710373	1.019214	1	5
total_income	76,247	89137.05	215910.6	-5493190	1.21e+07
total_cons~p	76,466	87863.03	873217.8	1188	1.70e+08

(2) Ordered Probit model regression results

Table 2. Regression results

	(1) happiness	(2) happiness
lnindex	0.120***	0.157***
	(0.0333)	(0.0334)
gender		-0.0211***
		(0.00627)
edu		0.0540***
		(0.00202)
party		0.185***
		(0.00949)
marry		0.0111***
		(0.00292)
health		0.140***
		(0.00320)
total_income		-7.14e-08***
		(1.47e-08)
total_consump		8.12e-09**
		(3.51e-09)
Constant	1.452***	0.346*
	(0.193)	(0.195)
Observations	76,384	75,727
R-squared	0.000	0.032

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The regression results are shown in Table 2.The regression results are mainly divided into Column (1) and Column (2). Column (1) does not add control variables, and Column (2) adds control variables. Whether or not to add control variables, it can be seen that the development of digital inclusive finance and the subjective well-being of family residents are significant at the level of 1 %, and the symbol is positive. By promoting digital inclusive finance, we can see that this will help to enhance the happiness of family residents.

Next, we focus on the significant coefficient. After controlling the personal characteristics of residents and the economic variables at the family level in Column (2), the significant coefficient of the digital inclusive financial index rises from 0.120 to 0.157, indicating that without considering the influence of other factors, the development of one digital inclusive finance is improved, and the happiness of family residents increases from 0.120 to 0.157.

(3) Robustness test

In order to investigate the ability of the digital inclusive financial index to explain the well-being of family residents, that is, to maintain a relatively consistent and stable interpretation of the evaluation results, this paper starts from the variables, looks for the replacement variables of the explanatory variables for repeated tests, and sees whether the significance has changed after changing the parameter setting. If the significance does not change, it shows that the result is robust.

Table 3. Robustness test results

	(1) happiness	(2) happiness	(3) happiness	(4) happiness	(5) happiness	(6) happiness
lnbreadth	0.158***	0.203***				
	(0.0351)	(0.0352)				
lndepth			0.0549**	0.0727***		
			(0.0219)	(0.0219)		
lndigital					0.162***	0.207***
					(0.0563)	(0.0563)
gender		-0.0212***		-0.0210***		-0.0210***
		(0.00627)		(0.00627)		(0.00627)
edu		0.0538***		0.0543***		0.0543***
		(0.00202)		(0.00201)		(0.00201)
party		0.185***		0.185***		0.185***
		(0.00949)		(0.00949)		(0.00949)
marry		0.0110***		0.0111***		0.0111***
		(0.00292)		(0.00292)		(0.00292)
health		0.141***		0.140***		0.140***
		(0.00320)		(0.00320)		(0.00320)
total_income		-7.29e-08***		-6.86e-08***		-6.93e-08***
		(1.47e-08)		(1.47e-08)		(1.47e-08)
total_consump		8.04e-09**		8.22e-09**		8.20e-09**
		(3.51e-09)		(3.51e-09)		(3.51e-09)
Constant	1.243***	0.0896	1.834***	0.835***	1.180***	0.00964
	(0.202)	(0.203)	(0.126)	(0.128)	(0.339)	(0.339)
Observations	76,384	75,727	76,384	75,727	76,384	75,727
R-squared	0.000	0.032	0.000	0.031	0.000	0.031

In view of the availability of data and the limitations of capabilities, this paper uses the method of substitution variables to analyze, and replaces the explanatory variables with the secondary indicators of the digital inclusive financial index to study the impact of household residents ' well-being, and to study the impact of adding control variables and not adding control variables on household residents ' well-being. The empirical test results are shown in table 3 below.

It can be seen from the table that regardless of whether the control variables are added, the three first-level indicators and the well-being of family residents are significant at the 1 % level and the positive and negative signs remain unchanged; in addition, the significant coefficient

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increases significantly after adding control variables. It shows that the empirical test results of this paper are reliable and stable. Throughout the three first-level indicators, it is learned that the digital use depth significant coefficient is the largest, and the significant coefficient difference between the two is also relatively large, indicating that residents ' in-depth research on digital finance can better experience happiness. The coverage breadth coefficient is the lowest, indicating that digital inclusive finance has no obvious effect on residents ' well-being at this stage. This reflects from the side that China 's digital coverage has almost penetrated into thousands of households and is no longer a luxury enjoyment.

4. Conclusion

Through empirical analysis and mechanism test, this paper draws the following conclusions: digital inclusive finance has a positive relationship with family residents ' happiness ; at the same time, this paper studies the three first-level indicators of digital inclusive finance. From the empirical results, it is concluded that the three second-level indicators of digital inclusive finance have the same impact on the well-being of family residents, all of which have a more significant positive impact. Among them, the use of depth index has the greatest impact, followed by the degree of digital support services, but it is not much different from the impact of coverage breadth, and the variables are replaced for robustness test. The results show that the conclusion is reliable.

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