

Research on the Impact of Digital Inclusive Finance on the Consumption Level of Chinese Residents



Jing Ren^{1,*}

¹ School of Business, Guangzhou College of Technology and Business, China

Abstract: Under the new development pattern featuring domestic circulation as the mainstay and domestic and international circulation reinforcing each other, the influence of digital inclusive finance on residents' consumption is becoming increasingly prominent. This paper takes 31 provinces (autonomous regions and municipalities directly under the Central Government) in China as the research samples and uses panel data from 2014 to 2023. By constructing a fixed-effect model with STATA software and conducting regression analysis, it empirically explores the impact of digital inclusive finance on the consumption level of residents. The research results show that digital inclusive finance has a significant positive impact on the consumption level of residents. From a dimensional perspective, the impact of digital inclusive finance on the consumption level of residents varies. The impact of coverage breadth is the most significant, while the impact of usage depth is not significant, and the digitalization degree is only significant at the 10% level. Based on this, this paper puts forward corresponding suggestions, with the aim of providing some references for giving full play to the promoting role of digital inclusive finance on residents' consumption.

Keywords: digital inclusive finance, consumption level, fixed effects

1. Introduction

Against the backdrop of the global economic digital transformation, digital inclusive finance has emerged. In recent years, with the deep integration of mobile internet, big data, artificial intelligence and other technologies with financial services, digital inclusive finance has entered a golden period of development. The emergence of digital inclusive finance has broken the time and space limitations of traditional financial services, reduced service costs, and expanded the coverage of financial services. At the same time, under the new development pattern with domestic circulation as the main body and domestic and international dual circulation promoting each other, residents' consumption, as an important driving force for economic growth, holds an important position in China's economic development. In 2024, the gross domestic product was 134,908.4 billion yuan, an increase of 5.0% over the previous year; the per capita consumption

expenditure of residents was 28,227 yuan, an actual increase of 5.1% over the previous year. From the overall performance of the macroeconomy, both the gross domestic product and the per capita consumption expenditure of residents have shown an upward trend. Digital inclusive finance, by providing diversified and personalized financial products and services, has changed residents' consumption behavior and consumption patterns, and to a certain extent, influenced residents' consumption decisions, thereby bringing new opportunities for the improvement of residents' consumption levels.

In recent years, scholars have conducted extensive research on the relationship between digital inclusive finance and residents' consumption. Sha and Meng (2025) based on the data of Peking University's digital inclusive finance index and China's household tracking survey, empirically found that digital Inclusive Finance promoted the consumption level and structural optimization of

Corresponding Author: Jing Ren
School of Business, Guangzhou College of Technology and Business, China

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rural residents, and the effect was more significant in groups with high information literacy. Chen (2025) demonstrated through research on the southwestern ethnic regions that digital inclusive finance has increased the consumption levels of rural residents in these areas and facilitated the transformation of consumption types. Qu (2024) from the perspective of residents' income, discovered that digital inclusive finance has promoted the upgrading of residents' consumption, with residents' income playing a mediating role.

In addition, Zhang et al. (2024) based on the extended AIDS model, found that digital inclusive finance inhibits subsistence consumption and promotes development and enjoyment consumption. Hu (2023) using microdata from the China Household Finance Survey, explored that digital inclusive finance influences consumption through multiple channels and boosts the consumption levels of rural households. Li and Li (2023) based on provincial panel data, found that digital inclusive finance enhances residents' consumption levels, with innovation effects and industrial structure upgrading playing mediating roles and showing heterogeneity. Fan and Peng (2023) confirmed that digital inclusive finance indirectly promotes rural consumption through multiple mechanisms and has a threshold effect. Xue and Feng (2022) found that residents' consumption has a mediating effect on the promotion of high-quality economic development by digital inclusive finance. Chen and Wang (2022) based on the life cycle model, discovered that digital inclusive finance has a promoting effect on residents' consumption and influences the consumption of families at different life cycle stages through various means.

Many scholars have explored the relationship between digital inclusive finance and residents' consumption from different perspectives, and the research results all indicate that digital inclusive finance has a significant impact on residents' consumption. Therefore, in-depth research on the impact of digital inclusive finance on residents' consumption levels can not only reveal the intrinsic connection between financial innovation and residents' consumption, providing theoretical support

for the development of digital inclusive finance, but also offer a basis for the government to formulate consumption and financial policies, and provide ideas for the future development of financial institutions, thereby promoting economic growth.

2. Impact Analysis and Research Hypotheses

The influence of digital inclusive finance on residents' consumption levels exists both directly and indirectly.

The direct impact of digital inclusive finance on residents' consumption levels mainly lies in the innovation of financial service models through digital technology, which has improved residents' consumption experience in terms of payment and consumer credit. In terms of payment, mobile payment, as one of the significant achievements of digital inclusive finance, has broken the limitations of traditional cash payment and bank card payment. Traditional cash payment requires carrying cash at all times and involves the need for change, which is cumbersome and may also pose security risks. Bank card payment is also restricted by scenarios and requires a POS machine. The rapid development of mobile payment has greatly enhanced the convenience of payment. Relying on connected mobile devices, mobile payment enables residents to complete various consumption payments anytime and anywhere, without the constraints of time and space, making it convenient and fast. This, to a certain extent, has stimulated the residents' enthusiasm for immediate consumption and increased the frequency of consumption. At the same time, mobile payment is fast, effectively reducing the waiting time for transactions and to some extent lowering transaction costs. This makes residents more decisive when facing large-scale consumption and tends to increase their consumption amount. In terms of consumer credit, the development of digital inclusive finance has lowered the threshold for residents to obtain consumer credit. When traditional financial institutions provide consumer credit to consumers, in addition to undergoing strict credit evaluations, they also need to go through relatively cumbersome approval processes and require collateral or guarantees. This makes it difficult for

many residents with incomplete credit records or no collateral to obtain consumer credit support. However, digital inclusive finance utilizes big data, artificial intelligence, and other technologies to build consumer credit profiles by analyzing various data, enabling a more comprehensive assessment of residents' credit and providing consumer credit services to residents not covered by traditional financial institutions. This directly promotes the improvement of residents' consumption levels.

The indirect impact of digital inclusive finance on the consumption level of residents is mainly achieved by promoting the growth of residents' income and enhancing their financial literacy. From the perspective of promoting the growth of residents' income, the emergence of digital inclusive finance has reduced the financing costs and thresholds for small and micro enterprises. As an important part of China's economy, small and micro enterprises have long faced the problem of financing difficulties. The development of digital inclusive finance can provide more unsecured and unguaranteed pure credit loans to small and micro enterprises and individual business owners, which can help them expand production scale or business operations, thereby creating more job opportunities, driving up residents' income, and contributing to the improvement of residents' consumption levels. In terms of enhancing financial literacy, digital inclusive finance platforms usually carry out financial knowledge publicity and education activities covering financial products, risk management, and investment and wealth management, which enables residents to have a better understanding of financial products and financial services. After the improvement of residents' financial literacy, their consumption decisions will be more rational, and their use of consumer credit will be more reasonable. They will also be better able to seize appropriate investment opportunities, increasing their disposable income and thus promoting consumption upgrades and further enhancing residents' consumption levels.

Based on the above analysis, this paper proposes the following hypothesis:

H1: Digital inclusive finance has a positive impact on the consumption level of residents.

3. Research Design

3.1. Model construction

To explore the impact of digital inclusive finance on residents' consumption levels, the following regression model is constructed:

$$xf_{it} = \beta_0 + \beta_1 difi_{it} + Controls_{it} + \lambda_{it} + q_{it} + \varepsilon_{it}$$

Here, i represents the province, and t represents the year; xf_{it} is the level of residents' consumption in province i in year t ; $difi_{it}$ is the digital inclusive finance index of province i in year t ; $Controls_{it}$ is a series of control variables, including residents' income level, population structure, economic level and industrial structure; λ_{it} represents individual fixed effects, and q_{it} represents time fixed effects; ε_{it} is the random error term.

3.2. Variable selection

Dependent variable: Resident consumption level (xf). This paper uses per capita resident consumption expenditure to measure it. This indicator reflects the consumption expenditure of residents within a certain period and can directly show the actual consumption capacity and level of residents.

Explanatory variable: Digital inclusive finance index ($difi$). This paper selects the Digital Inclusive Finance Index of Peking University to measure it. This index includes three dimensions: coverage breadth (gd), usage depth (sd), and digitalization degree (szh), which can accurately reflect the development status of digital inclusive finance in various regions of China.

Control variables: This paper selects multiple factors that may affect the resident consumption level as control variables. Resident income level (sr), represented by per capita disposable income of residents, is an important factor affecting consumption. Population structure is measured by the elderly dependency ratio (old) and the child dependency ratio (sn). Economic level ($lngdp$) is measured by the logarithm of regional GDP. Industrial structure (ur) is measured by the ratio of the added value of the tertiary industry to that of the secondary industry.

3.3. Data sources

This paper uses data from 31 provinces (autonomous regions and municipalities directly

under the Central Government) from 2014 to 2023, and analyzes it using STATA 18.0. Data on residents' consumption level, residents' income level, population structure, economic level, and industrial structure are all from the CSMAR database. The digital inclusive finance index is from the Digital Economy Open Research Platform.

3.4. Descriptive statistics

The descriptive statistics of each variable are shown in Table 1. The mean of residents' consumption level (xf) is 20,277.11 yuan, with a standard deviation of 7,917.506 yuan, indicating significant consumption differences among different provinces. The mean of the digital inclusive finance index (difi) is 301.32 and the median is 305.28,

suggesting that the overall development of digital inclusive finance is relatively good. The range of residents' income level (sr) exceeds 70,000 yuan, indicating significant income differences among different regions, which is consistent with the consumption gap. In terms of population structure, the mean of the elderly dependency ratio (old) is 16.99% and the mean of the child dependency ratio (sn) is 23.82%, showing significant regional differences in population structure. The mean of economic level (lngdp) is 9.96 and the mean of industrial structure (ur) is 1.40, indicating a divergence in regional economic and industrial development.

Table 1 Descriptive Statistics of Each Variable

| VarName | Obs | Mean | SD | Min | Median | Max |
|---------|-----|----------|-----------|----------|----------|----------|
| xf | 310 | 20277.11 | 7917.506 | 7316.95 | 18319.77 | 52508.47 |
| difi | 310 | 301.32 | 75.956 | 143.91 | 305.28 | 473.83 |
| gd | 310 | 287.49 | 82.612 | 126.67 | 291.00 | 466.54 |
| sd | 310 | 285.60 | 86.793 | 107.29 | 293.94 | 510.69 |
| szh | 310 | 375.57 | 56.347 | 230.71 | 389.00 | 476.90 |
| sr | 310 | 29295.86 | 13135.276 | 10730.22 | 26324.14 | 84834.00 |
| old | 310 | 16.99 | 4.895 | 7.01 | 16.25 | 30.60 |
| sn | 310 | 23.82 | 6.465 | 12.00 | 24.61 | 38.38 |
| lngdp | 310 | 9.96 | 0.973 | 6.83 | 10.11 | 11.82 |
| ur | 310 | 1.40 | 0.750 | 0.67 | 1.24 | 5.69 |

4. Empirical Analysis

This paper employs a fixed effects model for regression analysis. The VIF values of all

variables are less than 10, indicating no serious multicollinearity issue. The regression results are presented in Table 2.

Table 2 Regression Results

| VARIABLES | (1) xf | (2) xf | (3) xf | (4) xf |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|
| difi | 25.416*** (2.71) | | | |
| gd | | 28.659*** (2.67) | | |
| sd | | | 5.427 (1.04) | |
| szh | | | | 6.358* (1.89) |
| sr | 0.314*** (10.98) | 0.351*** (14.83) | 0.341*** (11.85) | 0.332*** (12.10) |
| old | 27.564 (0.68) | 38.543 (0.96) | 45.082 (1.11) | 33.219 (0.81) |
| sn | -53.605 (-1.30) | -61.449 (-1.47) | -44.716 (-1.07) | -45.265 (-1.09) |
| lngdp | 1,566.291*** (2.76) | 1,450.115** (2.47) | 2,035.723*** (3.76) | 1,957.692*** (3.63) |
| ur | 130.186 (0.42) | 164.620 (0.53) | 70.763 (0.23) | 67.318 (0.22) |
| Constant | -10,662.756** (-1.99) | -10,586.350** (-1.97) | -12,376.047** (-2.30) | -12,074.929** (-2.26) |
| Ind | Y | Y | Y | Y |
| Year | Y | Y | Y | Y |
| Observations | 310 | 310 | 310 | 310 |
| R-squared | 0.963 | 0.963 | 0.962 | 0.962 |

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The regression results show that digital inclusive finance has a significant positive impact on the consumption level of residents, verifying Hypothesis 1 proposed in this paper. There are certain differences in the impact of different dimensions on the consumption level of residents. In Model (1), the coefficient of the digital inclusive finance index (difi) is 25.416 and is significant at the 1% level, indicating that the development of digital inclusive finance can significantly promote the improvement of the consumption level of residents. Looking at the different dimensions, in Model (2), the coefficient of coverage breadth (gd) is 28.659 and is significant at the 1% level, which is a key force driving consumption; in Model (3), the coefficient of usage depth (sd) is 5.427, but it does not pass the 10% significance test; in Model (4), the coefficient of digitalization degree (szh) is 6.358 and is only significant at the 10% level. This also indicates that the current promotion effect of digital inclusive finance on the consumption level of residents mainly depends on the expansion of coverage breadth, and the role of usage depth and digitalization degree has not been fully manifested. In addition, the coefficient of resident income level (sr) is positive and significant at the 1% level in all four models, indicating that resident income is a core factor influencing resident consumption. The coefficient of economic level (lngdp) is positive in all four models and is significant at the 1% or 5% level, indicating that regional economic development can drive the growth of consumption. The coefficients of the elderly dependency ratio (old), the child dependency ratio (sn), and the industrial structure (ur) are not significant, and the impact of these factors on the consumption level of residents has not been fully reflected.

5. Conclusions and Suggestions

This paper, taking 31 provinces (autonomous regions and municipalities directly under the Central Government) in China as samples and based on the relevant data from 2014 to 2023, constructs a fixed-effect model for empirical analysis to explore the impact of digital inclusive finance on residents' consumption levels, and reaches the following

conclusions:

Digital inclusive finance has a significant positive promoting effect on residents' consumption levels, verifying Hypothesis 1. The impact of different dimensions of digital inclusive finance on residents' consumption levels varies. The coverage breadth has a significant positive impact on residents' consumption levels and is a key force driving consumption; the digitalization degree has a relatively weak impact; the usage depth did not pass the significance test.

Based on this, the following suggestions are proposed: First, further expand the coverage of digital inclusive finance on the existing basis. For remote areas, more investment should be made in the construction of digital financial infrastructure, and efforts should be made to promote the penetration of mobile payment terminals and online financial service platforms. Second, adopt multiple measures to enhance the usage depth and digitalization degree of digital inclusive finance. Actively guide inclusive financial institutions to innovate products in line with residents' actual needs and around their diversified consumption demands. Encourage financial institutions to utilize big data and artificial intelligence technologies to optimize credit assessment models, simplify business processes, and improve the accuracy of financial services, fully unleashing the potential of usage depth and digitalization degree in empowering residents' consumption. Third, increase support for small and micro enterprises and individual business owners, provide certain policy preferences, help them expand production scale or business scope, create more job opportunities, and contribute to the increase in residents' income levels. Fourth, formulate differentiated policies and development strategies in light of the actual conditions of each region. For instance, in areas with a high proportion of elderly population, actively promote the integration of digital inclusive finance and elderly care services, develop elderly-friendly financial products, and help them adapt to digital consumption methods. In regions undergoing industrial structure transformation, guide digital inclusive finance to tilt towards the tertiary industry, support the development of emerging

industries such as tourism and health, and gradually leverage the supporting role of industrial structure in consumption.

Conflict of Interest

The author declares that she has no conflicts of interest to this work.

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