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The Influence of Digital Financial Inclusion on the Consumption of Urban and Rural Residents

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ABSTRACT
Due to the long-term destruction of the binary industrial layout, the gap between urban and rural areas in China has always been an objective existence, and the gap between urban and rural income and consumption is its concrete manifestation.With the development of technology in the financial industry, inclusive finance presents more and more the development trend of intelligent system, which greatly improves the sustainability of the rural financial industry. From the perspective of the intermediary effect of the income gap, according to the balanced cross-sectional statistical analysis of 31 provinces, cities, autonomous regions and autonomous regions from 2011 to 2018, inclusive finance can reduce the consumption gap between urban and rural residents. And the direct and indirect effects on the rural basis.Among the adjusted independent variables, the urbanization rate, total demand, the level of postal, express, package and communication services, and regional social development, as the indicators of social and economic development, are all conducive to narrowing the gap between urban and rural consumption and conducive to industrial development.
This paper mainly explores the impact mechanism of digital Inclusive Finance on the consumption gap between urban and rural residents, and constructs an intermediary effect model from the perspective of the intermediary effect of the income gap, so as to test the direct and indirect impact of digital Inclusive Finance on the consumption gap between urban and rural residents. The data mainly comes from the inclusive financial index values of all provinces and regions in 2011-2018 compiled by the Institute of Internet finance of Peking University Based on the massive information of ant financial service related data and inclusive financial applications, and some of them come from the website of the National Bureau of statistics, the national research network and the net income of rural residents before 2013.
The results show that the development of Chinese digital inclusive finance generally converges the urban and rural income gap, but mainly reflects the impact of coverage breadth and usage depth; digitalization expands the urban and rural income gap; the convergence effect of different businesses of digital inclusive finance, the basic and dominant digital inclusive finance business converges the urban and rural income gap, while the derivative business tends to expand the urban and rural income gap.

Keywords : *digital inclusion ; finance ; consumption gap between urban and rural ; income gap ; mediating effect*

1. INTRODUCTION

Due to the destruction of the layout of dualistic industry (it usually refers to the coexistence of urban economic structure characterized by socialized production and rural economic structure characterized by small-scale peasant production), the problem of unbalanced and uncoordinated China's economic development is becoming increasingly prominent. The greater imbalance is an imbalance between urban and rural development, and the gap between income and urban and rural consumption is concrete. With the development trend of economic development in today's era, the financial industry has increasingly become the red blood ball driving force of economic development. In the rural economic development, inclusive finance is playing an increasingly important role. So far, inclusive finance has developed rapidly in China, increasingly showing the general trend of the development of intelligent systems. New financial information service projects were expanded in various aspects. It has made outstanding contributions to reducing the uneven allocation of resources of China Finance Bureau and promoting the flow of resources to remote areas. It is considered as an effective way to resolve the differences between the finance bureau and narrow the gap between urban and rural areas[1].

At present, the analysis of the gap between data and information inclusive finance and urban and rural consumption is mainly conducted from the following two aspects: one is the research of data and information inclusive finance. Li Zhen (2016), Qiu Zhaohe, Xiang Xiaojian (2018), Dong Yufeng, and Zhao Xiaoming (2018), these papers have made scientific research on the characteristics, advantages and hidden dangers of inclusive finance, and believes that the data of inclusive finance has the advantages of low cost, convenience, high continuity, and multiple profitabilities and independence[1, 2]. As everyone knows, the progress of data information inclusive finance has also encountered the problems of the relative limitations of the customer financial industry and the lack of national standards. Regulation causes new risks, and vulnerable groups have "data and information contradictions". Song Lidan (2017), Ge Youyi and Zhu Huiwen (2018), Zhang Zihao and Tan Yanzhi (2018), Yi Hongjian and Zhou Li (2018)[3]. The paper studied the harm of data and information inclusive finance, and found that data and information inclusive finance can effectively change the income gap in small towns and promote residents' consumption. Second, the study of consumption vacancy. Research on consumption gap in countries around the world mainly focuses on the measures and influencing factors of consumption gap[2]. Attanasio and Pistaferri (2012), Aguiar and Bils (2015) examined the consumption gap and income gap in the United States, and found that the consumption gap and income gap changed between 1980 and 2010[4]; Shen Shijun, Long Xinchuang (2008), Yang Zhangye et al. (2016) used China's consumption index to calculate the consumption difference, emphasizing that the consumption gap of Chinese residents is further expanding. The main factor depends on the consumption imbalance between the regions[5]. Wei Guoxue (2013), Wang Meng (2013), Zhou Jianjun (2018) and others chose regression analysis to establish VAR model to conduct empirical research on the impact of land finance and house price fluctuation, industrial structure upgrading, regional differences and other factors on the consumption gap. It is found that the above factors have a significant impact on China's urban-rural consumption gap, but their effects vary in different periods and regions[6].

Since the concept of inclusive finance was proposed in 2005, China's practical development has been through more than 10 years. During this period, Chinese scholars have studied inclusive finance from many aspects, and accumulated certain theoretical achievements and experience[7]. With the deepening of the integration of digital technology and inclusive finance, relevant domestic research literature has been continuously rolled out, and the relationship between the development of digital inclusive finance and the consumption of urban and rural residents has gradually become clear.However, the influence mechanism of digital inclusive finance on the consumption gap between urban and rural residents has not yet formed a systematic theoretical analysis, and also lacked the empirical support of data, so the guiding significance to the reality is weak, and the basis of this paper is based on the study of the above problems. This paper mainly explores the impact mechanism of digital Inclusive Finance on the consumption gap between urban and rural residents, analyzes it from two aspects of direct effect and indirect effect, and further makes an empirical analysis. From the perspective of intermediary effect caused by income gap, this paper constructs an intermediary effect model and sets up the explained variable GAPC, the key variable DIFI. The intermediary variable GAPI and adjustment variables are used to deal with endogenous problems, so as to test the direct and indirect impact of digital Inclusive Finance on the consumption gap between urban and rural areas, and then predict that the data Inclusive Finance will have a long-term development trend in the future, and will become the financial form of every family's daily life, create high-quality consumption in China and lay a foundation for social development and economic construction.

2. ANALYSIS OF THE INFLUENCE MECHANISM OF DIGITAL FINANCIAL INCLUSION ON THE URBAN-RURAL CONSUMPTION GAP

Digital financial inclusion refers to all actions to promote inclusive finance based on the application of digital financial services. It includes various financial products, such as payments, transfers, deposits, bank credit, commercial insurance, securities, financial forecasting and bank receipt. In recent years, with the rapid development of technology and the popularization of intelligent communication equipment, the digital financial inclusion has developed greatly in China and financing institutions and non-financing institutions have become the main body. According to the digital financial inclusion index compiled by the Institute of Digital Finance Peking University, China's digital financial inclusion has grown rapidly since 2011. In 2018, the median digital inclusive finance in various provinces and cities was about 8.9 times that of 2011, and the average index value increased by 36.4%, and the depth, breadth and height of the application were reasonably improved[8]. Compared to traditional inclusive finance, regional differences caused by digital financial inclusion are relatively small[9]. For rural and remote areas, digital financial inclusion is able to increase constraints of time and space and enhance the continuity of financial services with convenience, efficiency, inclusiveness and low cost, making it easier for the low-income groups to embrace financial services that used to be resisted by the traditional financial industry. Digital financial inclusion has inherent advantages in promoting rural consumption and narrowing the gap between urban and rural areas[10]. Its influence mainly includes direct and indirect effects, as shown in Figure 1.

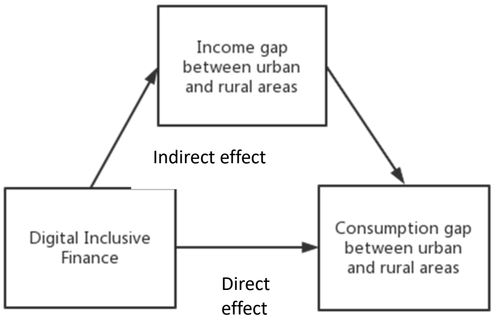

Figure 1 The action mechanism of digital inclusive finance on the gap between urban and rural consumption

2.1 Direct effect

The direct effect of digital financial inclusion on the urban-rural consumption gap is mainly illustrated in three aspects.

Firstly, the convenience of digital financial inclusion makes it easier for residents to pay. This convenience is able to affect rural residents online and offline. With the development of Internet, telecommunication infrastructure in rural areas has been gradually improved in recent years. Therefore, compared with the inconvenience of consumption in urban areas in the past, the network provides a convenient consumption channel for rural residents. Meanwhile, the convenience and security of digital financial inclusion provide an important guarantee for rural residents' consumption and payment. Residents, especially rural residents, are stimulated to increase the consumption of clothing, housing, daily necessities, transportation and communication, alleviating the consumption gap between urban and rural areas. The convenience of digital financial inclusion is also able to improve the consumption in the offline market, decreasing the urban-rural income gap. In addition, the low cost of digital financial inclusion can improve the breadth and depth of its use effectively.

Meanwhile, there are an increasing number of residents begin to use digital financial inclusion and stimulated by it to purchase more. This stimulus effect is greater in rural areas, which are underserved by financial services, as a result of which the consumption gap between urban and rural residents can be narrowed. Finally, the inclusion of digital inclusive finance can effectively improve the availability of financial services in rural areas, alleviating liquidity constraints. Small and micro businesses, as well as low-income groups like farmers who have been excluded from the traditional financial system, are able to acquire capital through digital financial inclusion. After obtaining the funds, small and micro enterprises can use them to expand reproduction, and their purchase of raw materials is able to promote consumption. The consumption of the low-income groups increases as the funds they received raise, and the consumption gap is able to be reduced.

2.2 Indirect effect

Digital financial inclusion can not only increase the income of residents, but also it can affect the gap between the rich and the poor in the city, and thus decrease the consumption gap. Firstly, the popularity of digital financial inclusion can effectively alleviate the problem of uneven resource allocation in the financial industry. Low and middle income groups such as rural people and small and medium-sized enterprises have been in the long tail keywords of banking for a long time, which makes it difficult for them to obtain fair financial information services. Even though they are able to acquire with high cost, the problem of uneven allocation of resources in China's financial industry has always existed. With the advancement of smart phones and rural communication equipment the financial industry is becoming more and more inclusive. There is an increasing number of rural areas that can access digital financial inclusion services easily, tackling the uneven distribution to some extent. In addition to consumption, such assets can also be applied to project investment and reproduction, promote the employment of local students, increase the income of farmers and small and medium-sized enterprises, narrow the gap with local areas and the gap between the rich and the poor and finally bridge the gap of consumption in the city[11]. Secondly, digital financial inclusion is able to decrease cost-effectively, which can reduce the financial information service cost of families and enterprises. Compared to traditional finance companies, digital financial inclusion has a relatively low cost of capital, which can reasonably relieve the pressure on farmers and SMEs, thus increasing their incomes and ultimately improving consumption. Lastly, the diversity of digital inclusive financial services can also improve the risk tolerance of rural residents. The inclusion of digital financial inclusion shows not only in borrowing services, but also in insurance and security. With more guarantees, the risk tolerance of rural areas can be effectively improved, and thus Improving the efficiency of capital use, increasing income and consumption and narrowing the purchasing gap.

3 EMPIRICAL ANALYSIS

Digital financial inclusion can affect the consumption gap between urban and rural residents through direct effect, and it also can affect the urban-rural income gap through indirect effect. Consequently, based on the mediating effect of the income gap, this paper constructs a mediating effect model to test the direct and indirect impact of digital financial inclusion on the urban-rural consumption gap.

3.1 Variables and data sources

（1）Explained variable：Consumption gap between Urban and rural residents (GAPC). The ratio of urban and rural resident per capita consumption is adopted as consumption gap between urban and rural residents.

（2）Key independent variable：DIFI, development trend level of digital financial inclusion. This paper adopts the digital financial inclusion index values of each province from 2011 to 2018 compiled by The Institute of Internet Finance of Peking University based on the massive information of Ant Financial's related digital financial inclusion application to represent the development trend level of data inclusive finance.

(3)Intervening variable：Urban gap of wealth (GAPI). The per capita net income of urban residents and that of rural residents is taken to represent the wealth gap of urban residents. In addition, the net income of rural residents before 2013 is adopted.

(4) Adjust variable： To tackle the endogenous problems triggered by the ignorance of independent variables, this paper selects industrial layout (IS), urbanization rate (URBEN), total demand (CPI), postal and communication service quality (PS), urban social security level (YL) and regional economic development status (IGDP) as the adjust factors. In fact, the added value of regional secondary and tertiary industries is not so much the proportion of GDP as the independent variable of industrial layout. The proportion of urban population in the total population is taken as the index to measure the urbanization rate, while the household consumer price index is taken as the index to reflect the total demand. Taking the total population of each service network service item as the index to measure the quality of postal communication service. As for the level of urban social security, the total number of people with health insurance in the town is adopted. The level of urban social security is measured by the total number of people participating in urban medical insurance and the GNP if each region is utilized to measure the economic development of each region.

Table 1 Robustness test results 2

Variable	LLC	IPS	Fisher-ADF	Fisher-PP	Test Results
LNGAPC	-5.8796	-12.6774	110.4906	93.6757	stable
LNGAPI	-8.2903	-21.705	100.8369	103.7703	stable
LNDIFI	-56.7454	-27.6708	110.0183	1563.9364	stable
LNIS	-3.3662	-2.446	84.4771	134.7093	stable
LNURBEN	-4.2139	-2.2136	100.2092	276.3355	stable
LNCPI	-11.6194	-3.0847	119.6593	276.6481	stable
LNPS	-10.9823	-4.761	97.6749	286.7522	stable
LNYL	-3.8286	-1.9007	85.4098	136.6986	stable
LNIGDP	-12.9249	-3.104	149.0349	90.9372	stable

Table 2 Robustness test results 2

LNGAPI	—	—	0.7156*** (0.1935)
LNGAPI L1	—	0.7520*** (0.1387)	—
LNDIFI	−0.4192*** (0.0814)	−0.0794*** (0.0272)	−0.3358*** (0.0575)
LNIS	1.4398** (0.6263)	0.5651** (0.2261)	1.3316** (0.5846)
LNURBEN	−0.4415*** (0.1160)	−0.1247* (0.0756)	−0.0807 (0.1046)
LNCPI	−4.2473*** (1.1289)	−2.9301*** (0.6296)	−2.9482*** (0.7718)
LNPS	−0.0867** (0.0372)	−0.0295** (0.0127)	−0.0663 ** (0.0277)
LNYL	0.0638*** (0.0176)	0.0171** (0.0074)	0.0365*** (0.0125)
LNIGDP	−1.4750** (0.7433)	−0.3046 (0.4256)	−1.1752* (0.6494)
_CONS	29.3430*** (5.7567)	15.6145*** (4.3223)	20.9930*** (4.7943)
AR(1)	0.0125	0.0048	0.0127
AR(2)	0.1898	0.2780	0.4711
Sargan test	0.2792	0.9956	0.9959

Based on research on digital financial inclusion and consumption, the below effects can be acquired.

The development trend of digital financial inclusion makes a significant contribution to the improvement of resident consumption. Based on the digital financial inclusion index, the depth and breadth of the digital financial inclusion index, as well as the in-depth investigation of the digital financial inclusion index, it is easy to find that the digital financial inclusion is able to affect the total average consumption level and consumption level between urban and rural residents obviously. In terms of the future of enterprises, digital financial inclusion enables the improvement of individual consumption, which is able to account for the poor effect of the demand stimulus policy. Based on the flourish of digital financial inclusion, personal consumption level can be enhanced.

Secondly, the digital publicity of inclusive finance is able to change the purchasing differences of housing in urbanization construction. The content of this paper is based on the digital inclusive financial index to investigate the consumption difference between urban and rural residents. It is found that various depth1 index values such as digital financial index value and digital financial diversity index value cause negative harm to the consumption difference between urban and rural residents.

Thirdly, the promotion to the in-depth development trend of digital inclusive finance can stimulate the development trend of digital inclusive finance. It can also be seen from the possible results of the data that the depth 1 and depth breadth index of digital Inclusive Finance have a higher impact on the consumption prospect than the depth 1 index of digital Inclusive Finance.

4. CONCLUSION

In conclusion, this paper explores the impact mechanism of digital Inclusive Finance on the consumption gap between urban and rural residents, analyzes it from two aspects of direct effect and indirect effect, further constructs an intermediary effect model for empirical analysis, and comes to the conclusion that digital inclusive finance can significantly improve the consumption level of individuals and narrow the difference between urban and rural residents. Then it is predicted that data Inclusive Finance will have a long-term development trend in the future, and will create high-quality consumption in China and lay a foundation for social development and economic construction. In this paper, the data selection of intermediary variables for empirical analysis is early, there is no latest data, and the index selection is not innovative enough. There is still room for improvement in the above aspects. In order to make the research of this paper have guiding significance to the society, future research can focus on the consumption / economic improvement effects of different types of digital inclusive financial services on different groups, so as to provide appropriate and effective financial services.

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