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The Impact of Fintech on the Income Gap between Urban and Rural Residents

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Abstract: *This paper uses the provincial panel data from 2011 to 2020 to establish a fixed effect model and a panel threshold model to study the impact of Fintech on the urban-rural income gap. The results show that: (1) Overall, the development of financial technology will significantly narrow the urban-rural income gap, and has heterogeneity. The development of financial technology has the greatest impact on the urban-rural income gap in the western region, followed by the central region, and finally the eastern region; (2) Further establishing a panel threshold model, it is found that different levels of financial technology development have different effects on the urban-rural income gap, and when financial technology develops to a certain extent, its impact on the urban-rural income gap is significantly weakened.*

Keywords: *FinTech, Urban-Rural Income Gap, Threshold Effect*

1. Introduction

Fintech refers to the products and services provided by various technological means to innovate the traditional financial industry. At present, the digital economy has become a new engine of global economic development and a leading force in building national competitive advantages in the new era. [1-2]Fintech promotes the sustainable development of the digital economy and brings new momentum to the overall economy. It effectively alleviates information asymmetry, reduces transaction costs and optimizes financial service products by means of big data, cloud computing, blockchain and other technologies. [3]

For the long-term goal of 2035, the Fifth Plenary Session of the 19th Central Committee of the Communist Party of China proposed that "all people's common prosperity has made more obvious substantive progress." However, there are still some problems in China, such as unbalanced development between regions and large income gap between urban and rural areas. Financial technology empowers the overall economy and gives new focus to rural economic development. So what is the impact of financial technology development on the urban-rural income gap? Is there a regional difference in the impact of financial technology on income gap? Is there a difference in the impact of different stages of financial technology development on the urban-rural income gap? Exploring these issues is of great significance for improving the level of rural financial development and narrowing the urban-rural income gap.

2. Manuscript Preparation

2.1 Literature Review

The main way for Fintech to achieve financial consumption scenario innovation, business model innovation, product service experience innovation and other changes is the penetration and integration of emerging technologies such as big data, cloud computing, and blockchain in financial products. Most of the existing literature studies the relationship between financial technology and economic growth, commercial banks and traditional inclusive finance. In terms of the impact of fintech on the urban-rural income gap, Yanzhi Tan et al. (2017) [4] found that the use of the Internet can bring 14% individuals, and bring 20% income return to cities, while the return in rural areas is not significant. Zhongwang Cheng et al. (2019) [5] believe that the impact of Internet popularization on the urban-rural income gap shows an "inverted U-shaped" trend of increasing first and then decreasing, and has crossed the inflection point

ISSN 2616-5902 Vol. 5, Issue 4: 10-17, DOI: 10.25236/AJBM.2023.050403

around 2009.Zhentao Yin et al. (2021) [6]found that fintech development improves the happiness of rural families by increasing farmers' income, providing support for farmers to start businesses, and narrowing the income gap between urban and rural areas. Yu Zhang et al. (2021) [7]found that the impact of fintech on income inequality showed a "inverted U-shaped" trend of increasing first and then decreasing. In addition, its improvement on income distribution will be restricted by the "digital divide". Xiaohua Wang et al. (2022) [8] believe that the development of fintech has narrowed the income gap between urban and rural areas, and with the improvement of economic level, the influence of fintech has been significantly enhanced.

2.2 Theoretical Analysis and Research Hypothesis

Traditional finance leads to the widening of urban and rural income gap in terms of financing constraints, information asymmetry and unequal resource allocation[8]. The development of fintech will focus on advanced technology, improve the utilization rate of financial resources for rural residents from two aspects, give full play to the effects of universal benefit and trickle-down, and then narrow the income gap between urban and rural areas. (1) Expand the field of financial services and enhance the visibility of rural finance. The development of fintech can effectively reduce information asymmetry, and in terms of financing, it can increase the channels for bank credit to rural small and medium-sized enterprises. In the agricultural field, according to the scale characteristics of different agricultural products, give full play to the technological advantages of fintech, accurately determine financing needs, and bring more opportunities to narrow the income gap between urban and rural areas[9]; (2) Reduce financial service costs and promote more balanced resource allocation. The development of traditional finance depends on a large amount of human and material resources, which causes the high-cost service that restricts the development of rural finance. However, with big data, artificial intelligence and blockchain technologies, fintech can effectively reduce the operating costs of institutions[10], thus expand the service area of relevant financial institutions, and more rationally allocate funds, projects and technology resources. At the same time, the trickle-down effect of fintech will also provide more opportunities for rural residents to innovate and start, and thus narrow the income gap between urban and rural areas. Therefore, this paper proposes the hypothesis that 1:

H_1: The development of fintech will help narrow the income gap between urban and rural areas.

In the early stage of the development of fintech, rural areas fully enjoyed the dividends brought by technologies such as reduced information cost and precise support of favorable agricultural policies, and the increase of non-agricultural employment rate and the improvement of financial utilization efficiency, thus achieving remarkable results in narrowing the income gap between urban and rural areas But financial technology development to a certain stage, the relevant information infrastructure construction completed, the traditional industrial structure is optimized, financial technology make jobs more dependent on knowledge, technology, rural areas in talent reserve disadvantage began to appear[11], at the same time, rural residents for financial technology concept attention will decline, and the development of financial technology influence on the income gap between urban and rural areas effect will also change. This thesis proposes the hypothesis that 2:

H_2: There is a threshold effect on the relationship between fintech and urban-rural income gap. When fintech reaches a certain threshold value, its effect on the income gap between urban and rural residents will change.

3. Research Design

3.1 Data Source and Variable Selection

In this paper, 31 provincial administrative regions (except Hong Kong, Macao and Taiwan) were selected as the research objects, and considering the availability and consistency of the data, the sample period was determined 2011-2020 as years. The sample data are from the Digital Finance Research Center of Peking University, National Bureau of Statistics, Zero One Think Tank, Flush iFind database and statistical yearbooks of various provinces and cities.

(1) Interpreted Variable: urban-rural income gap ($Theil$). The specific calculation model is as follows:

ISSN 2616-5902 Vol. 5, Issue 4: 10-17, DOI: 10.25236/AJBM.2023.050403

$$Theil_{it} = \sum_{j=1}^{2} \frac{Y_{ijt}}{Y_{it}} \times \ln\left(\frac{Y_{ijt}}{Y_{it}} / \frac{P_{ijt}}{P_{it}}\right) \tag{1}$$

The Theil index is represented by $Theil$, where i refers to a certain area, $j=1$ represents the town, $j=2$ represents the countryside, Y_{ijt} represents the disposable income of the town or the countryside in the t year, Y_t represents the disposable income of the residents in the region in the t year, X_{ijt} represents the number of permanent residents in the town or the countryside in the t year, and X_{it} represents the number of permanent residents in the region in the t year.

(2) Core Explanatory Variable: Fintech (FI). This paper draws on the measurement of financial technology by Huimin Fu (2022) [3]and Li Sun et al. (2022) [12], and examines the two dimensions of financial technology development depth and financial technology development potential in various provinces and cities. Because there are not many index dimensions, there is no significant basis to prove that the importance of the two is different, so the equivalent weighting method is used to add the data of the two dimensions. In the two dimensions, according to the principles of rationality, representativeness and availability, the specific indicators are selected as shown in Table 1:

Table 1: Fintech development level index composition.

dimension	metric	data sources
Depth of fintech development	Number of fintech companies	Zero One financial database
	Inclusive finance index	The Research Center for Digital Finance, Peking University
Fintech development potential	The added value of the financial industry accounted for it	Flush iFind database
	Proportion of fiscal expenditure on science and technology	the Ministry of Finance

(3) Control variables : Based on the research of Xiaohua Wang et al. (2022) [8], this paper selects economic development level ($PGDP$), urbanization level (UR), industrial structure level (IS), economic openness ($OPEN$), population density (POP), education structure level (ES), labor structure level (LS), government fiscal expenditure proportion (FE) and other influencing factors as control variables to reduce analysis errors.

3.2 Benchmark Model Setting

This paper uses $Hausman$ test and over-identification test to determine the selection of fixed effects and random effects. According to the test result p value is 0.0040, so this paper uses the fixed effect model for empirical analysis.

$$Theil_{it} = \alpha_0 + \beta_0 FI_{it} + \gamma_0 control_{it} + u_i + \varepsilon_{it} \tag{2}$$

Among them, i represents the region, t represents the time, α_0 represents the constant term, $Theil_{it}$ represents the level of urban-rural income gap in t years, FI_{it} represents the level of financial technology development in t years, $control_{it}$ represents the control variables, including the level of economic development ($PGDP_{it}$), the level of industrial structure (IS_{it}), the level of labor structure (LS_{it}), the proportion of government expenditure (FE_{it}), u_i represents the individual fixed effect, ε_{it} represents the random error term. This paper focuses on the coefficient of the core explanatory variable FI_{it}. If β_0 is significantly negative, it indicates that the development of financial technology has a promoting effect on the narrowing of the urban-rural income gap, hypothesis 1 is established.

4. Empirical Results and Analysis

4.1 Benchmark Regression Results and Analysis

According to the estimation results of the benchmark regression in the following Table 2, the four

ISSN 2616-5902 Vol. 5, Issue 4: 10-17, DOI: 10.25236/AJBM.2023.050403

regression results show that the regression coefficient of financial technology is significantly negative, indicating that improving the development level of financial technology can indeed narrow the urban-rural income gap, which preliminarily verifies Hypothesis 1. This paper believes that the possible reason is that Fintech, based on a series of technologies such as big data and blockchain, breaks the limitations of time and space in the traditional financial industry, and also plays an inclusive financial effect, which is conducive to rural residents ' more access to corresponding financial services, thereby narrowing the urban-rural income gap.

Table 2: The benchmark regression results of financial technology and urban-rural income gap.

Variable	Explained Variable: Theil			
	(1)	(2)	(3)	(4)
FI	-0.107***	-0.140***	-0.038***	-0.028**
	(-22.07)	(-13.52)	(-3.58)	(-2.21)
UR			-0.343***	-0.362***
			(-10.59)	(-9.93)
OPEN			-0.045***	-0.062***
			(-3.94)	(-4.41)
LS		0.019	-0.113***	-0.143***
		(0.34)	(-2.75)	(-3.17)
IS		-0.044	0.064	0.099*
		(-0.62)	(1.15)	(1.75)
FE		0.142***		0.032
		(4.83)		(1.32)
PGDP		0.057***		-0.021
		(3.33)		(-1.23)
POP				-0.386**
				(-2.21)
ES				0.002
				(0.54)
Constant	0.136***	0.119	0.341***	0.368***
	(68.78)	(1.53)	(5.70)	(5.06)
Observations	310	310	310	310
R-squared	0.637	0.673	0.801	0.809
Company FE	YES	YES	YES	YES

Note : ***, ** and * indicate that the parameter estimates are significant at the significance levels of 1%, 5% and 10%, respectively. The values in parentheses are t-statistic values, the same below.

The estimation results of the control variables show that the influence coefficient of the industrial structure level (IS) under the fixed effect model is 0.099. Through the significance test of 10%, it shows that the increase of the proportion of the secondary and tertiary industries in GDP may reduce the efficiency of asset allocation, resulting in the weakening of the income effect in rural areas and the expansion of the urban-rural income gap. The regression coefficients of urbanization level (UR), economic openness ($OPEN$) and labor structure level (LS) are all negative at the significant level of 1%, which indicates that the improvement of urbanization level means the flow of rural labor force to cities, improves the quality of rural labor force, and promotes the improvement of rural labor force remuneration, thereby narrowing the income gap between urban and rural areas. The improvement of economic openness will further bring more employment opportunities, and the demand for rural labor will increase, thus narrowing the income gap between urban and rural areas. The influence coefficient of education structure level (ES) is 0.002, which fails to pass the significance test, but it means that the improvement of education structure level may lead to unbalanced talent allocation, talent flow to urban areas, and the development of rural areas lags behind, thus expanding the urban-rural income gap, but this effect is small and not obvious. The reason for this phenomenon may be related to the samples selected in this paper and related variables.

4.2 Analysis of Heterogeneity

According to the division standard of the eastern and central regions of China, it is divided into three regions for regional heterogeneity analysis.

ISSN 2616-5902 Vol. 5, Issue 4: 10-17, DOI: 10.25236/AJBM.2023.050403

Table 3: Results of regional heterogeneity regression

Variable	The east part	The middle part	The west part
	Theil	Theil	Theil
FI	-0.0282**	-0.1256***	-0.1341***
	(-2.3624)	(-4.8623)	(-5.3962)
Constant	0.7580***	0.0481	-0.0147
	(6.5458)	(0.4800)	(-0.1044)
controlled variable	YES	YES	YES
Company FE	YES	YES	YES
Observations	110	90	110
R-squared	0.698	0.800	0.813

According to the regression results of Table 3, it is found that the regression coefficient of fintech for the urban-rural income gap in the three regions is significantly negative, but the significance and value of the regression coefficient in the eastern region are less than those in the central and western regions, showing certain regional heterogeneity. This paper holds that the development level of the eastern region is higher than that of the central and western regions, the boundary between urban and rural areas is blurred, and the income gap is small. The improvement of the development level of fintech is not particularly significant for narrowing the gap between urban and rural income. On the other hand, the central and western regions are influenced by policy guidance, and related industries are more dependent on fintech, thus the effect is more obvious than that in the eastern region.

4.3 Robustness Test

4.3.1 Change the Method of Measuring the Urban-Rural Income Gap

Considering that the regression results are affected by the calculation method of the core indicators, the conclusion is not reliable. This paper replaces the Theil index measurement method used to measure the urban-rural income gap with the ratio of the per capita disposable income of urban residents to the per capita disposable income of rural residents throughout the year, that is, the urban-rural income gap ratio. Under the condition of keeping the control variables unchanged, the regression coefficient estimation of its financial technology development level is still significantly negative, and the regression estimation results are basically consistent with the benchmark regression, indicating that it has certain robustness.

4.3.2 Specific Samples were Excluded

Due to the rapid development of financial technology in some provinces and cities, the number of financial institutions is significantly higher than that in most provinces and cities. In order to avoid the impact of extreme values on the regression results, this paper excludes the samples of provinces and cities where the number of financial institutions is significantly ahead of the average level (Beijing, Shanghai, Zhejiang, Guangdong), and re-conducts panel regression on the sample set. The financial technology coefficient in the new regression results is still significantly negative, and Hypothesis 1 is verified again.

4.3.3 Endogenous Problem

Because the benchmark regression does not consider the impact of some unobservable actual factors, and the lag term of the urban-rural income gap will also have a certain impact on the results, resulting in bias in the estimation results. In this paper, the endogenous problem is tested by establishing a dynamic panel. Considering that the system GMM difference GMM estimation is more efficient, and the variable coefficients that do not change with time can be estimated, this paper uses the system GMM to estimate the parameters, and constructs the dynamic panel model with the first-order lag term and the second-order lag term of the urban-rural income gap level as follows:

$$Theil_{it} = \alpha_2 + \rho_1 Theil_{i,t-1} + \rho_2 Theil_{i,t-2} + \beta_3 FI_{it} + \theta_2 control_{it} + \varepsilon_{it} \tag{3}$$

Where $Theil_{i,t-1}$ is the first-order lag term of the urban-rural income gap, and $Theil_{i,t-2}$ is the second-order lag term.

ISSN 2616-5902 Vol. 5, Issue 4: 10-17, DOI: 10.25236/AJBM.2023.050403

Table 4: Dynamic Panel System GMM Estimation Results.

Variables	Theil
Theil, the first-order lag term	0.6418***
	(4.2963)
Theil, the second-order lag term	0.0127
	(0.0550)
FI	-0.0281**
	(-2.0950)
controlled variable	YES
Constant	0.0244***
	(2.8552)
AR(2)	0.9463
sargan	0.4391

According to the estimation results in Table 4, the autocorrelation test p value is 0.9463, that is, the assumption that the second-order autocorrelation coefficient of the disturbance term difference is 0 ' is accepted, and the sample passes the autocorrelation test. In the over-identification test, the p value of 0.4391 indicates that the instrumental variables are valid. At the same time, the financial technology coefficient is negative at the significance level of 5%, which is consistent with the estimation results of the fixed effect model. Hypothesis 1 is verified again, indicating that financial technology can narrow the urban-rural income gap to a certain extent.

5. Further Discussion: the Threshold Effect Test

5.1 Test of the Threshold Effect

The relationship between financial technology and urban-rural income gap is affected by the development stage of financial technology. Considering the existence of heterogeneity, this paper keeps the core explanatory variables unchanged, uses financial technology indicators as threshold variables, adopts panel threshold regression, and uses bootstrap method to repeat sampling 300 times to test whether there is a threshold effect and estimate the corresponding threshold value.

Table 5: Results of the threshold effect test

The threshold type	Fintech development level				
	F price	P price	Threshold estimate	null hypothesis H_0	The threshold estimate 95% value confidence interval
A single threshold	66.38	0.0033	0.6129	refuse	[0.6002,0.6141]
Double threshold	17.15	0.1067	0.2669	accept	[0.2586,0.2763]
Triple threshold	12.16	0.3200	0.7190	accept	[0.6742,0.7522]

According to the above test results, from the P value, at the significance level of 10%, the double threshold effect test and the triple threshold effect test results show that both accept the original hypothesis, that is, there is no double threshold effect and triple threshold effect. The P value of the single threshold effect test is 0.0033, at the significance level of 1% indicating that there is a single threshold effect. It can be seen Table 5 that the threshold estimate is 0.6129, indicating that financial technology at different stages of development has different degrees of impact on the urban-rural income gap, which verifies Hypothesis 2.

5.2 Panel Threshold Model Setting

Based on the $Hausen$ （1999） threshold panel model, this paper takes the financial technology development index (FI_{it}) as the threshold variable to explore whether there is a phased and non-linear impact. Therefore, a single threshold panel model is constructed as follows:

$$Theil_{it} = \alpha_1 + \beta_1 FI_{it} I(q_{it} \leqslant \gamma_1) + \beta_2 FI_{it} I(q_{it} > \gamma_1) + \theta_1 control_{it} + \varepsilon_{it} \tag{4}$$

Where q_{it} represents the threshold variable, γ_1 represents the threshold value to be estimated, ε_{it}

ISSN 2616-5902 Vol. 5, Issue 4: 10-17, DOI: 10.25236/AJBM.2023.050403

is a random disturbance term, $I(\cdot)$ is independent and identically distributed, and d represents the indicative function :

$$I(\cdot)=\begin{cases}1 & if\ IFI_{it}\leqslant\gamma_1\\ 0 & if\ IFI_{it}>\gamma_1\end{cases} \tag{5}$$

5.3 Interpretation of Result

Table 6: Threshold regression results of fintech and urban-rural income gap

FI	Theil
The interval one ($FI\leqslant 0.6129$)	-0.1339***
	(-17.4779)
The interval two ($FI>0.6129$)	-0.0977***
	(-12.4514)
Constant	0.1122
	(1.5917)
controlled variable	YES
Number of province	31
R-squared	0.717

Table 6 shows the regression results of the panel threshold model. The estimated results of the financial technology development level coefficient are always significantly negative, but the coefficient estimation results are different, that is, the effect of narrowing the urban-rural income gap will change with the degree of financial technology development. When the development of financial technology is less than the threshold value, it has a significant effect on narrowing the urban-rural income gap. When it is greater than the threshold value, its effect is still significant, but weaker than the previous interval. This paper believes that financial technology can improve the overall efficiency of the financial industry and better play the inclusive effect, thus promoting the narrowing of the urban-rural income gap. However, when financial technology develops to a certain extent, there will be phenomena such as capital profit-seeking. The increase in scale will bring operational and technical risks, which will affect its effect of narrowing the urban-rural income gap. On the other hand, some provinces and cities with a high level of fintech development, such as Beijing and Shanghai, have relatively strong economic strength and a small income gap between urban and rural residents. The impact of fintech on them is difficult to reflect in a short period of time.

6. Research Conclusions and Countermeasures

Based on the provincial panel data from 2011 to 2020, this paper uses the fixed effect model and panel threshold model to conduct a comprehensive and systematic empirical analysis on the impact of fintech on the urban-rural income gap. The results show that improving the level of fintech development can narrow the urban-rural income gap. The conclusion is still valid after changing the urban-rural income measurement method and eliminating specific regions; the level of financial technology development has a more significant role in promoting the narrowing of the urban-rural income gap in the central and western regions, and its impact is significantly greater than that in the eastern region; the development level of financial technology has a single threshold effect on narrowing the urban-rural income gap. After crossing the threshold estimate, the effect becomes smaller. That is, when financial technology develops to a certain extent, its efforts to reduce the urban-rural income gap are weakened.

According to the research conclusions of this paper and the development status of China 's financial technology, the following suggestions are put forward :

First, strengthen the digital infrastructure in rural areas and consolidate the foundation for the development of financial technology. In view of the different development status in different regions, financial technology should be developed according to local conditions. Encouraging large financial institutions to actively cooperate with rural credit cooperatives and rural commercial banks, and giving corresponding policy support to the development of financial technology in rural areas can give full play to the nature of financial technology to reduce the cost and risk of traditional financial industry, expand its popularity in rural areas, and improve the level of financial technology development. On the other hand, for the more advantageous regions such as the east, make full use of existing resources, promote

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the development of fintech in the direction of " fine, " while avoiding excessive development and leading to marginal diminishing effect.

Second, increase the training and introduction of financial technology professionals, and promote the sustainable and balanced development of financial technology. Encourage colleges and universities to set up financial technology related majors and courses, and cultivate professional talents with innovative and practical abilities. Increase the special financial support for financial technology, increase subsidies for related financial technology projects, and encourage financial technology institutions to continuously improve employees ' innovation literacy and make breakthroughs in practice. Improve the financial technology talent training system and reserve strength for its long-term development.

Third, establish a financial technology supervision system to ensure the healthy development of financial technology. At present, the development of financial technology is in the exploratory stage, and the regulatory system is not perfect. We should make full use of its technological characteristics to supervise the development of financial technology through artificial intelligence, blockchain and other technologies. Combined with the current development status, we actively innovate the existing ' regulatory sandbox ' model to make the supervision of fintech development more transparent and effective. At the same time, considering the differences in the acceptance of different residents, we should pay attention to protecting the rights and interests of users of financial technology products. For residents with low acceptance, we should emphasize their risks and give corresponding technical support.

References

[1] Song Tang, Xuesha Su, Danni Zhao Fintech and Enterprise Digital Transformation ——From the Perspective of Enterprise Life Cycle [J]. Finance and Economics Science, 2022, (2): 17-32
[2] Yunfeng Yan, Xiaojing Zhao. Research on the International Competitiveness of China's Digital Technology Industry in the Global Value Chain [J]. Journal of Guangxi University of Finance and Economics, 2020, 33 (5): 68-82
[3] Huimin Fu, Shiyin Jiang. Study on the Economic Growth Effect and Heterogeneity of Fintech——An Empirical Test Based on Digital Financial Inclusion Index [J]. Research on Financial Development, 2022, (8): 12-19
[4] Yanzhi Tan, Yunzhong Li, Wanjun Hu Digital Divide or Information Dividend: Information Research on the Difference of Return Rate between Urban and Rural Income [J]. Discussion on modern Economy, 2017, (10): 88-95
[5] Mingwang Cheng, jiaping Zhang Internet Popularization and Urban-rural Income Gap: A Theoretical and Empirical Analysis [J]. Rural Economy in China, 2019, (2): 19-41
[6] Zhentao Yin, Juncheng Li, Lu Yang Can the Development of Fintech Improve the Well-being of Rural Households? An Analysis from the Perspective of Happiness Economics [J]. Rural Economy in China, 2021, (8): 63-79
[7] Yu Zhang, Wenqian Wang Can fintech alleviate income inequality?—— Research study based on multinational panel data [J]. Shanghai Finance, 2021, (06): 59-71.
[8] Xiaohua Wang, Dacheng Hu. The Impact of FinTech Development on Urban-Rural Income Gap [J]. Journal of Southwest University (Natural Science Edition), 2022,44 (07): 141-151.
[9] Guinian Zhang. Research on financial support for new agricultural business entities —— Based on the perspective of the background of rural revitalization strategy [J]. Journal of Shanxi University of Finance and Economics, 2018,40 (S2): 46-48.
[10] Xin Wang. A Study on Internet Finance Helping Relieve SMEs Financing Constraints [J]. Financial Research, 2015 (09): 128-139.
[11] Guonan Zheng, Changzhi Li. Does the Digital Divide Affect the Equilibrium Distribution of the Digital Dividend: An Empirical Test Based on the Provincial-level Urban-Rural Income Disparity in China [J]. Macroeconomic Research, 2022, (09): 33-50.
[12] Li Sun, Jiahuan Yu. China Fin Tech Development Level Index: A Three-dimensional Model [J]. Zhejiang Finance, 2022, (8): 27-38