Development Economics of China
2025, VOL. 9, NO. 3, 65-71
DOI: 10.47297/wspdecWSP2515-797312.20250903

The Impact of Regional Financial Development on the Urban-Rural Income Gap: A Case Study of Jiangsu Province

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ABSTRACT
The social economy is currently growing rapidly. Under this trend, regional finance plays a very important role in system management, resource allocation, risk prevention, and information provision. It deepens the reform of the financial system and promotes healthy and rapid economic development. The income gap of regional residents is an urgent problem to be solved. Although the average income of urban and rural residents in Jiangsu Province is higher than the national average, the income gap between urban and rural residents is gradually expanding, and the unfairness of income distribution between urban and rural residents is slightly higher than the national average. By analyzing how the development of regional finance makes the financial development of urban and rural areas unbalanced in the banking, insurance, and securities industries, it will affect the unbalanced development of urban and rural economies between regions, and eventually have an expanding effect on the income gap between urban and rural residents.

KEYWORDS
regional finance; urban-rural income; financial scale; financial efficiency

1 Introduction

1.1 Research Background

In modern economic society, the importance of regional economy development has gained great popularity, meanwhile economic development has become a key factor to regional and national economic development. There are significant differences between rural-urban economic development in three major areas of Jiangsu province, due to nature, society and history. However, the disparity of distribution in economic resources is also a pivotal factor. The long-term inequity of allocation of urban-rural financial resources will lead to expansion between rural-urban residential income. As a result, solving unbalanced and insufficient development in regional finance will play an essential role in eliminate the discrepancy between rural-urban income gap.

1.2 Research implications

In the process of national economic performance, financial development is a significant topic, reasonable allocation of economic resources can shorten the differences in regions, achieving the goal of national economic health and sustainable development. It has been found that researches on regional economic development on rural-urban income discrepancy only focused on superficial part of economic development, ignoring the inequal and specialized regional characteristics. This study takes Jiangsu province as an example, analyzing current status of regional bank, insurance and securities, delving into rural-urban residential gap, which aims at helping governments allocate social resources based on reality, promoting sustainable development, bridging rural-urban income gap.

2 Research status and literature review

2.1 Research status

Though rural-urban income gap in Jiangsu province is narrowing, huge rural-urban income gap still exists in south Jiangsu, northern Jiangsu and central Jiangsu. The absolute value of the income gap between urban and rural residents in the economically developed southern Jiangsu region is greater than the per capita net income of rural residents in northern Jiangsu, which is about the same as the average income level of residents in northern Jiangsu and slightly lower than the average income level of residents in central Jiangsu. It is obvious that the rural-urban income gap in three regional parts of Jiangsu is still a problem.

2.2 Literature review

The relationship between regional financial development and the income gap between urban and rural residents in

Jiangsu Province is distinctive: Firstly, the unfairness in income distribution between urban and rural residents in Jiangsu Province is not particularly significant compared to the national level; for rural residents in Jiangsu Province, the income level of urban residents is much higher than the national average for urban residents. Secondly, although the financial development in Southern Jiangsu is far ahead of the national level, the financial development in Central and Northern Jiangsu may be slightly above the national average, but it is relatively lagging, resulting in a slightly higher degree of imbalance in regional financial development in Jiangsu Province compared to the national level. The uneven development of the financial system is influenced by the level of economic development, people's outdated concepts, and the degree of social development; however, the underdeveloped rural financial system also restricts further improvement in economic levels. In this context, enhancing the operational efficiency of rural financial services and leveraging their positive impact on the economy will serve as a driving force for narrowing the income gap between urban and rural residents and promoting overall economic development in society. Currently, improving the rural financial system in Jiangsu Province, especially overcoming the threshold effect of rural finance, is particularly important. The developed financial system in Southern Jiangsu plays a positive role in promoting overall economic development, which currently leads to the imbalance in regional financial development. However, with continuous economic development, more employment opportunities will be provided in Central Jiangsu, Northern Jiangsu, and vast rural areas, exerting a radiating effect that will drive a qualitative leap in the overall economy of Jiangsu Province, significantly aiding in increasing the income of rural residents. The increase in rural residents' income will further promote the development of rural finance, thereby reducing the phenomenon of uneven regional financial development and narrowing the income gap between urban and rural residents.

3 An empirical analysis of the impact of regional financial development on the urban-rural income gap in Jiangsu Province

3.1 Data Source

Data used in this article is research data of three regions in Jiangsu province between 2008 and 2017. The author obtained the required data by consulting the Jiangsu Statistical Yearbook from 2009 to 2018 and other materials, and completed the examination using Eviews 9.0.

3.2 Indicator selection

This article conducts an empirical study on the relationship between financial development in various regions of Jiangsu Province and the urban-rural income gap from 2008 to 2017, primarily using four indicators: financial development efficiency indicator, financial development scale indicator, urbanization indicator, and regional resident income gap indicator.

3.2.1 Indicator of rural-urban income gap(UR)

There are many methods and indicators to measure the income gap between urban and rural areas, such as the Gini coefficient, the coefficient of variation, the extreme mean ratio, the mean difference coefficient, the extreme ratio and the coefficient of variation, and the tire index. This paper directly uses the ratio of income gap between urban and rural residents to clearly and accurately reflect the income gap indicator. Urban-rural income gap indicator (UR) = per capita disposable income of urban residents / per capita net income of rural residents.

3.2.2 Financial Development Scale Index (FD)

The M2 ratio of GDP in the McS indicator is used to measure the scale of financial development. However, in the process of real social and economic development, due to the integration of financial development and people's real life, the differentiation of distinguishing financial assets has become particularly blurred. More financial products are presented in the form of money, however, the supply of money is not subsumed into financial instruments that have a monetary function. Considering the credit development in some underdeveloped areas, the scale of the financial market in Jiangsu Province is mainly dominated by banking financial institutions, so the ratio of the loan balance of financial institutions to GDP is more reasonable.Financial Development Scale Index (FD) = Financial Institution Loan Index/GDP.

3.2.3 Urbanization Indicator (CI)

In the process of urbanization, the labor force is constantly flowing, the most obvious is the flow of rural labor to the city, and there is a theoretical logic between urbanization and the gap between urban and rural areas. In short, urbanization absorbs rural labor force to urban employment, and promotes rural economic development with the strong radiation capacity of urban industry, resulting in a "trickle effect". It is conceivable that through the process of raising the income level of Chinese farmers, the development of urbanization can narrow the income gap between urban and rural areas. This paper selects the proportion of urban population in Jiangsu Province to measure the urbanization index. Urbanization Indicator (CI) = Urban Population/Total Population.

3.2.4 Financial Development Efficiency Index (FE)

After reading a lot of literature, the author found that the intermediation efficiency of the financial system accounts for the vast majority of non-state-owned companies' access to bank loans. China's state-owned economy dominates the entire process of social development, and there are very obvious shortcomings in this method. In this paper, the ratio of the balance of deposits and loans of financial institutions is used to express the efficiency of financial development. The value of this indicator indicates the degree to which the bank pays attention to risk management, and the higher the value, the more efficient the financial development. Financial Development Efficiency Index (FE) = Loan Balance of Financial Institutions / Deposit Balance of Financial Institutions.

3.3 Model settings

This paper selects the relevant index data from 2008 to 2017, and uses the linear regression model to empirically analyze the relationship between regional financial development and urban-rural income gap in Jiangsu Province. After reviewing the relevant literature at home and abroad, and through learning and understanding, the relationship model between financial development and urban-rural income gap was finally established as follows:

$UR_{i,t}=\alpha_1 FD_{i,t}+\alpha_2 CI_{i,t}+\alpha_3 FE_{i,t}+\varepsilon_t$

Among them: i=1, 2, and 3 represent the southern Jiangsu, central Jiangsu, and northern Jiangsu regions, respectively, T represents the time, α represents the coefficient, and ε represents the constant term.

3.4 The analysis of empirical study results

3.4.1 Descriptive statistics

The descriptive statistical results of the relevant data for southern Jiangsu, northern Jiangsu, and central Jiangsu are shown in Table 3~3-, and 3-3 below:

Table 3-1 Descriptive statistics in southern Jiangsu

	M	Maximum	Minimum	StD
UR	2.08	2.17	2.02	0.059
FD	0.76	0.81	0.74	0.022
CI	1.21	1.41	0.85	0.163
FE	0.72	0.76	0.67	0.031

Table 3-2 Descriptive statistics in central Jiangsu

	M	Maximum	Minimum	StD
UR	2.10	2.18	2.04	0.055
FD	1.46	7.36	0.62	2.077
CI	0.58	0.65	0.50	0.049
FE	1.18	6.16	0.57	1.75

Table 3-3 Descriptive statistics in northern Jiangsu

	M	Maximum	Minimum	StD
UR	1.97	2.09	1.88	0.082
FD	0.63	0.78	0.47	0.097
CI	0.54	0.62	0.43	0.063
FE	0.69	0.75	0.56	0.063

3.4.2 ADF Test

In order to guarantee the validity of the experimental results and prevent the phenomenon of pseudo-regression, a unit root test of the time series experimental data in southern Jiangsu, central Jiangsu and northern Jiangsu was carried out to check the stationarity of each.

Table 3-4 ADF test results in southern Jiangsu

V	ADF Test	CV(p=5%)	S	First Difference			
				V	ADF Test value	C(p=5%)	C
UR	-0.897694	-4.107833	NS	D(UR)	-1.630566	-1.995865	S
FD	-2.074458	-3.320969	NS	D(FD)	-5.109074	-1.995865	S
CI	-1.43901	-4.10733	NS	D(CI)	-3.503089	-2.006292	S
FE	-0.777270	-4.107833	NS	D(FE)	-2.691812	-1.995865	S

Table 3-5 ADF test results in central Jiangsu

V	ADF Test	CV(p=5%)	S	First Difference			
				V	ADF Test value	C(p=5%)	C
UR	-1.071737	-4.107833	NS	D(UR)	-1.645335	-1.995865	S
FD	-2.991414	-4.107833	NS	D(FD)	-4.595937	-1.995865	S
CI	-9.375942	-4.246503	NS	D(CI)	-0.900808	-1.995865	S
FE	-2.984320	-4.107833	NS	D(FE)	-4.580361	-1.995865	S

Table 3-6 ADF test results in northern Jiangsu

V	ADF Test	CV(p=5%)	S	First Difference			
				V	ADF Test value	C(p=5%)	C
UR	-2.095961	-4.107833	NS	D(UR)	-1.784532	-1.995865	S
FD	-2.124369	-4.246503	NS	D(FD)	-2.165936	-1.995865	S
CI	-3.857084	-3.320969	NS	D(CI)	-3.903885	-4.246503	S
FE	-0.387094	-4.246503	NS	D(FE)	-1.494001	-2.006292	S

3.4.3 Test results

Table 3-7 Empirical test statistics in southern Jiangsu

V	Coefficient	Std.Error	t-Statistic	Pro
FD	0.0765	0.0486	1.5730	0.0166
CI	-2.2813	0.2585	-8.8247	0.0001
FE	0.1259	0.1756	0.7170	0.0500
R-squared=0.9781			Adjusted R-squared=0.9672	

Write the regression equation based on the regression results:
UR=0.0765FD-2.2813CI+0.1259FE
(0.0486) (0.2585) (0.1756)

Table 3-8 Empirical test results in central Jiangsu

V	Coefficient	Std.Error	t-Statistic	Pro
FD	0.0367	0.2327	0.1576	0.0087
CI	-1.1145	0.2685	-4.1505	0.0060
FE	-0.0448	0.2765	-0.1621	0.0876
R-squared=0.9219			Adjusted R-squared=0.8828	

Write the regression equation based on the regression results:
UR=0.0367FD-1.1145CI-0.0448FE
(0.2327) (0.2685) (0.2765)

Table 3-9 Empirical test results in northern Jiangsu

V	Coefficient	Std.Error	t-Statistic	Pro
FD	-0.1592	0.3016	-0.5281	0.0616
CI	-0.6729	0.7574	-0.8884	0.0408
FE	-0.3445	0.6359	-0.5417	0.0607
R-squared=0.8931			Adjusted R-squared=0.8397	

Write the regression equation based on the regression results:
UR=-0.1592FD-0.6729CI-0.3445FE
(0.3016) (0.7574) (0.6359)

Based on the regression results, it can be concluded that that at the significance level of 0.1, the results show that the decisability coefficient of the model is not less than 0.8, and the adjusted decisability coefficient is not less than 0.8, indicating that the overall fit degree is good. From the regression equation, it can be seen that the urbanization index is negatively correlated with the urban-rural income gap, and the continuous promotion of urbanization development is conducive to narrowing the income gap between urban and rural areas. However, the financial development scale index is only negatively correlated with the urban-rural income gap in northern Jiangsu, and the financial development efficiency index is only positively correlated with the urban-rural income gap in southern Jiangsu, indicating that the influencing factors of financial development on the urban-rural income gap in different regions are different.

4 Suggestions

4.1 Improve the rural financial system and deepen institutional reform

4.1.1 Promote rural financial system

Currently, Jiangsu Province needs accelerating the building of a new agricultural-operation system based on a mix of family, collective, cooperative and enterprise operations. Land-contracting rights will be protected. Farmers should be allowed to become shareholders in the agriculture-industrialization via their land-contracting rights. Private capital is encouraged to invest in a modern planting and breeding industry, and for introducing modern production and management methods. Farmers will be given more property rights. They are encouraged to develop a shareholding system from which they can realize benefits. Meanwhile, they can also sell a share or take it as collateral or warranty. They also have the right of succession. Moreover, the homestead system in rural areas will be improved, and farmers' usufruct rights of homestead will be ensured. A pilot program will be carried out in some areas to discover other channels for improving farmers' income. A rural property-rights trading market will be established. First of all, the Agricultural Development Bank of China, as a policy bank, should make use of its own advantages to continuously broaden its financing channels, support peasants′ input into production and labor, relax the scope of loans, increase the variety of services, and strive to focus on research and development of rural science and technology and the adjustment of agricultural production methods.

4.1.2 Deepen institutional reform

The Jiangsu Provincial Government should instruct the relevant departments to effectively establish and improve the agricultural insurance service system for grassroots farmers. At present, policy-based agricultural insurance in Jiangsu Province covers agricultural and animal husbandry products such as vegetables, pork, and beef. The scope of “three rural” insurance products needs to be further expanded, and the appropriate introduction of better competition mechanism can promote the continuous innovation of insurance products, and gradually achieve the goal of improving basic agricultural insurance products. The implementation of the “three rural” insurance system can maximize the ability of farmers to resist natural disasters, reduce the uncertainty of agricultural product returns, and reduce the financial risk of agricultural loans. Second, in order to promote rural land securitization, the circulation of rural land should be accelerated.

4.2 Develop the rural economy and overcome the threshold effect

Local governments should increase the promotion of basic financial knowledge and related laws to complete the wonderful wishes of constructing a more convenient rural financial environment. Due to geographical factors, certain economically underdeveloped areas in Jiangsu Province face challenges where farmers, influenced by their educational levels and cognitive abilities, lack an understanding of investment and financial management products. On one hand, the phenomenon of information asymmetry between rural financial institutions and farmers leads to a perception among farmers that the functions of financial institutions are limited to deposits and loans, resulting in a poor understanding of correct financial management concepts and a reluctance to seek financing from these institutions. On the other hand, there exists a degree of distrust towards certain financial products among farmers, and a lack of security prevents them from choosing financial products other than bank deposits. Rural financial institutions need to enhance the promotion of financial products, actively disseminate basic financial knowledge and relevant laws and regulations, and foster a sound rural credit system. This includes improving the credit incentive and penalty systems to create a more harmonious and beautiful rural financial ecological environment.

4.3 Guiding the regulated informal financial system

Due to the widespread existence of informal financial institutions in the vast areas of Jiangsu and the serious lack of relevant supervision and management, the development of informal finance is directly related to the healthy development of the rural financial market. First of all, it is necessary to take a correct view of the rationality of the current existence of informal finance in rural areas. As we all know, the formal financial institutions in the rural areas cannot meet the needs of the peasants in normal production, so it is necessary to attach importance to the attitude towards the existence of the informal financial institutions in the rural areas and correctly understand the significance of their existence. Eliminate hostile and contemptuous attitudes towards them, and fully recognize, supervise and guide rural economic development, rural households and rural informal financial institutions. Regulators and government departments at all levels should speed up the formal integration of informal finance with the system, and actively guide and regulate informal finance. Second, to explore the establishment of a "classified management system," it is necessary to distinguish between private finance, underground finance, and illegal finance, and to actively crack down on and control underground finance, illegal finance, and other institutional systems that undermine normal production, life, and finance in rural areas. The various forms of rural informal financial institutions should be classified and managed according to the level of risk. For informal financial institutions with a certain stable capital size, fixed office location and good reputation, they should follow the standards of formal financial institutions for a certain period of time and then have them properly tested and regulated. Finally, establish an information sharing platform. The lack of customer information in rural informal financial institutions often leads to them being maliciously defrauded of financing loans, and it is necessary to let rural formal financial institutions do a good job of customer information sharing platform, so that rural informal financial institutions can enter the service more quickly and reduce financing risks. While maintaining the order of the rural financial market, we should make full use of the advantages of rural informal financial institutions, so that they can complement each other's advantages with rural formal institutions and better support the development of the rural economy.

4.4 The market economy is dominant, and the policy is auxiliary to development

First, the interest rate market. Rural finance in Jiangsu Province currently coexists with both formal and informal finance. When seeking funds in the rural financial market, it is difficult for them to obtain the expected requirements due to the cumbersome channels of formal financial institutions, so they seek help from non-financial institutions, and different interest rates make it impossible to unify the financial market. Interest rate regulation is a key reason for developing countries to curb unhealthy financial development. Market interest rates can improve the efficiency of the allocation of financial resources in financial markets. Thus reducing the phenomenon of unfair credit distribution under the condition of interest rate control, and raising the income level of urban and rural residents as a whole. Of course, the liberalization of interest rates does not mean that the government has completely abandoned the management of interest rates.

The relationship between the supply and demand of funds is mainly determined by interest rates. The government still has the right to regulate the macroeconomy with a market-based benchmark interest rate. Second, the right to rural real estate is clear. While exploring the mechanism of rural land circulation, we should safeguard the peasants' rights to homestead land and strive to improve the rural real estate mortgage system, so as to improve the ability of rural residents to obtain and use financial assets. China is in an important stage of development, and continues to push forward the reform of its economic system. Therefore, the transfer and mortgage of rights to self-use real estate, such as rural homesteads and housing, will be a major issue that must be emphasized in reform. However, more flexible land and housing mortgages can facilitate the process of land transfer and financial development, while also improving the ability of rural residents to obtain credit. Third, fiscal and tax policies are scientifically supported. The government no longer adopts fiscal and tax policies to support "one-size-fits-all" measures, allowing the phenomenon of "scattered pepper" to continue to appear. The introduction and effective implementation of fiscal and taxation support policies should guide financial credit funds and increase investment in rural areas, and improve and expand the area of "three rural" services of financial institutions. Actively encourage financial institutions to support agriculture-related loan business, and continue to increase the delivery of credit funds; agricultural credit institutions, including microfinance companies, will be given certain tax and preferential tax policies to enhance their ability to cover risks and gradually achieve sustainable development on the basis of further increasing the support of agriculture-related credit.

4.5 Encourage innovation, so that finance can effectively serve the "three rural"

Relevant economic institutions should take part in innovation actively, providing service and product that are suitable for rural area development, achieving sustainable development of rural areas. Economic institutions should command producing habits of farmers and development rules of crops, practical needs o9f farmers to innovate constantly based on previous accumulation, making financial products and services more practical and specialized. In addition, governments should enforce support on local companies by increasing financial support on characterized companies. The innovative development of financial service should based on peasants' interests, enhancing cooperations with other financial institutions, promoting service sufficiency. Besides, it is necessary to enforce the application of new technologies such as online bank and e-bank. To make modern financial service more convenient, governments should combine ultimate goal with normal farmers' financial needs, introducing more stable financial products like insurance and stokes step by step.

5 Conclusion

As the modern economy is developing by leaps and bounds, position in financial resources is becoming increasingly important, financial resources has become an dispensable factor of financial advancement to both nation and region. In the long-term development, the existing urban-rural dual structure is a main obstacle to integrated development. Rural-urban income level in Jiangsu is above the average in China, but such kind of discrepancy between rural and urban areas severely destroyed coordinated development of economic development as a whole, making society become instable. Therefore, only by enforcing a more balanced allocation of public resources between urban and rural areas can achieve the ultimate goal of coordinating urban-rural regional development and eliminating rural-urban income gap.

Given the fact that the main character and data in this study focus on banks rather than securities and insurance in Jiangsu province, this study has some gaps to reality, which is not thorough enough. This paper selects the scale of financial development, financial development efficiency and urbanization indicators to measure the financial industry, which is a slightly one-sided degree of development. Therefore, in the next step of the research, we can measure the degree of financial development with a more comprehensive, scientific and realistic indicator system, and look forward to more accurate conclusions.

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