

# Regional Differences and Research on Economic Development Effects of Inclusive Finance

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**Abstract:** *Inclusive finance is an important direction in the "14th Five-Year Plan" period and the realization of the 2035 long-term goal. It is also one of the important keynotes for the transformation and development of China's financial industry. However, while inclusive finance plays an important role in economic growth, it also contributes to the economic development of different regions. The effects produced are different. Solving the differences is an important step for countries to achieve common prosperity. Use the financial inclusion index and the per capita GDP index related to economic growth and the number of private enterprises and individual employees related to the implementation of financial inclusion as explanatory variables. Apply the least squares method to the gross product (GDP) of each region Perform regression analysis. It is concluded that the economic growth effects of inclusive finance on the eastern, central, and western regions are different through the joint significance level of the difference description, and it can be reduced by improving infrastructure construction, formulating development plans according to local conditions, and activating the investment vitality of small and medium investors difference.*

**Keywords:** *Inclusive Finance, Regional Differences in Inclusive Finance, Economic Development, Inclusive Finance Index*

## 1. Introduction

In 2005, the term "inclusive finance" was formally proposed by the United Nations to explain the concept, that is, in order to meet the needs of different social strata for financial services, the government or financial institutions will release small and medium-sized enterprises, small investors, low-security groups and other groups with less financial strength. Economic growth vitality provides effective and practical financial services through funding or supporting policies. Inclusive finance has innovated traditional financial service methods, breaking the limitations of traditional financial services in terms of providing financial services, interest rates, and both sides of financial services, and boosting the development of the country's real economy with its universality and preference. The transition from high-speed growth to high-quality growth is the most important feature of economic development in China today. The further development of inclusive finance is of great importance to reducing the poverty population and reducing the regional imbalance of economic development in my country, thereby further realizing rural revitalization and common prosperity. It effectively solves the problem of "difficult loans and expensive loans" for small investors, activates the economic growth vitality of all parties, and gradually becomes an effective tool for the country's poverty reduction and poverty alleviation, and has become the general trend of the development of the financial industry.

However, based on the influence of some conditional factors among the current regions, the development of inclusive finance has certain differences in the economic growth effects of different regions. This article first uses the GDP of each region as a vehicle to reflect economic growth to observe the differences in the effects of inclusive finance on economic growth. Through the understanding and analysis of the differences between regions, we will further formulate different policies and preferential measures for the popularization and use of inclusive finance in my country, so as to realize the efficient and high-quality use of inclusive finance and promote the development of the real economy.

In recent years, inclusive finance has increasingly become an important means of developing the economy and reducing poverty in various countries. Hannig and Jansen [1] pointed out that inclusive finance can enable low-income groups to also enjoy financial services, thereby narrowing the gap between the rich and the poor and reducing regional differences. Andrianaivo and Kpoda [2] pointed out

that there is a significant relationship between inclusive finance and regional economic development, and it is one of the vitality of economic growth. Claessens and Feijen [3] pointed out that the promotion of inclusive finance has increased the possibility of farmers and other low-income groups to obtain and benefit from financial products and services. Yang Junqi [4] mentioned that Japan's inclusive finance mainly adopts the cooperation of agricultural cooperatives. Farmers, cities, towns, villages, county levels, and the central government have adopted different coordination measures, combining policies and cooperation, coordinating the overall development of urban and rural areas, and reducing differences. Chen Lin [5] mentioned that the inclusive finance model in the United States is mainly aimed at small and micro enterprises. The operation of the Small Business Bureau, which specializes in supporting small and micro enterprises, effectively compensates for market failures, improves the efficiency of resource utilization, and achieves coordinated regional development of resources. Inclusive finance between China and other countries also has certain differences. Ma Yufei and Du Chaoyun [6] use the inclusive finance index to describe the gap in inclusive finance between China and foreign countries, through the number of commercial bank branches and the per capita number of ATMs. , The inadequacy of insurance companies for population needs is manifested. Du Li and Pan Xiaojian [7] used China's 2005-2015 inter-provincial panel data to point out that there is a clear positive correlation between inclusive finance and regional economic growth, while also showing differences in regional influence. Niu Yubin [8] used the GMM model to compare the poverty reduction effects of inclusive finance across the country and in various regions, which gradually weakened from east to west. Zheng Yaoqun and Zhang Xiaoli [9] also used the GMM model to analyze that the level of inclusive finance development in the central and western regions was significantly lower than that in the eastern regions. From the above conclusions, it can be concluded that the development level of my country's inclusive finance and the effect on the economy are different, and the main manifestations are high in the east and low in the west. Lu Fengzhi, Huang Yongxing, Xu Pengchu [10] Although the development of inclusive finance generally shows a trend of high in the west and low in the east, the development achievements of provinces in central regions such as Henan and Hunan have not increased significantly in recent years, or even have a downward trend. Inclusive finance and regional economies are increasingly showing U-shaped relationship. Li Youfeng [11] used the Dagum Gini coefficient to measure regional differences and decomposition results, and concluded that there was no significant difference after 2010, showing a relatively stable state, but it rose sharply after 2013, and reached the sample inspection period in 2016 The maximum value of 0.0652, after 2016, generally has a phased downward trend, which further concludes that the regional differences in China's inclusive financial development have a downward trend, but the differences still exist.

Due to China's vast territory, the basis and methods of economic development between regions are different due to geographical location and historical conditions. Therefore, the development of both the real economy and the financial industry is also different. Priyadarshree et al [12] pointed out that the support of the national government is an important factor in the implementation of inclusive finance, which is reflected in the support of government policies and social security projects. The Financial and Private Sector Research Team [13] of the World Bank Development Research Group pointed out that one of the reasons leading to the development of inclusive finance is the intensity of supervision to enhance consumer protection and enhance consumer confidence in the financial service industry. On the other hand, Zhang Biqiong and Wu Wanting [14] pointed out the mutual promotion and influence between income distribution and entrepreneurship and digital financial inclusion.

In recent years, the country has paid more and more attention to the development of inclusive finance. Experts and scholars have also conducted different studies on the utility of inclusive finance, but most of them are roughly the differences between the east, middle, and west. On the basis of previous studies, using 2017 data as an example, we can find out the representative provinces of the eastern, central, and western regions, which can more intuitively discover the differences in the impact of inclusive finance on economic development. In addition to using the inclusive finance index to measure the general The degree of financial inclusive development, further use the regional GDP index related to the degree of inclusive financial development and the number of private enterprises and individual employees registered in industry and commerce to further explore the difference in the degree of inclusive finance's impact on economic development in different regions. Certain policy recommendations.

## 2. Empirical research

### 2.1 Data Sources

The data in this article are mainly derived from the "2018 China Statistical Yearbook", "China Finance Yearbook" and research data from related papers. The data published on public websites are used as the basic data for formula calculation to obtain further data.

### 2.2 Data meaning

First, three provinces are randomly selected as regional representatives in the east, middle, and west parts. The GDP of each province in 2017 is used as the explained variable to represent the variables of the economic growth of each province. Value index (previous year=100), number of private enterprises and self-employed persons (unit: ten thousand people) registered in industry and commerce.

The Financial Inclusion Index (FII) is the most direct variable to measure the degree of financial inclusion. The calculation of the index takes into account the three dimensions of the penetration, availability, and utility of financial services. Among them, the penetration including the number of financial institutions per 10,000 square kilometers, the number of employees in financial institutions per 10,000 square kilometers, the number of financial institutions per 10,000 people, and the number of employees in financial institutions per 10,000 people; availability includes per capita loan balance of financial institutions, insurance Density, total assets of credit cooperatives in rural areas; use utility includes the ratio of the amount of deposits and loans of financial institutions to GDP, the ratio of agricultural loans to all loans, the ratio of small and micro enterprise loans to all loans, and the depth of insurance. The basic data used in the Inclusive Finance Index is derived from the China Statistical Yearbook and related data websites. The 2017 Inclusive Finance Index data obtained from the calculation research of Zheng Yaoqun and Zhang Xiaoli [15].

Table 1: Inclusive financial index of selected provinces in 2017

province	2017 FII	2012-2017 average
Beijing	0.670	0.599333333
Tianjin	0.389	0.3195
Shanghai	0.802	0.7335
Shandong	0.122	0.0995
Jiangsu	0.168	0.152333333
Liaoning	0.131	0.1095
Eastern mean	0.380333333	0.335611111
Hubei	0.082	0.0635
Hunan	0.061	0.0415
Henan	0.074	0.048333333
Anhui	0.087	0.084833333
Shanxi	0.093	0.0725
Shaanxi	0.090	0.067666667
Central mean	0.081166667	0.063055556
Xinjiang	0.082	0.067
Ningxia	0.105	0.0955
Gansu	0.071	0.1415
Qinghai	0.078	0.053166667
Guizhou	0.060	0.042333333
Inner Mongolia	0.075	0.055333333
Western mean	0.0785	0.075805556

Per capita GDP index: Based on the index of the previous year of 100, it not only includes the level of regional GDP, but also takes into account the influence of the number of people in the region, and has a direct relationship with the measurement variables of regional economic growth.

The number of private enterprises and individual employees registered in business registration: The unit is 10,000. The beneficiaries of inclusive finance are mostly private enterprises and individual industrial and commercial households. The increase in the number of private enterprises and individual industrial and commercial households can also describe the degree of inclusive finance.

### 2.3 Regression result

First, the 18 provinces of Shandong, Jiangsu, Liaoning, Beijing, Tianjin, and Shanghai in the eastern region, Hubei, Hunan, Henan, Anhui, Shaanxi, and Shanxi in the central region, and Gansu, Xinjiang, Ningxia, Guizhou, Inner Mongolia, and Qinghai in the western region. The 2017 GDP is the explained variable Y, the provincial financial inclusion index is X2, the per capita GDP index in 2017 is X3, the number of private enterprises and individual employees registered in industry and commerce in 2017 is X4, and the linearity is set the regression model is:

Get the regression result:

*Table 2: Regression results of the three explanatory variables in the eastern, central and western regions on the explained variables*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-120117.6	166462.2	-0.721591	0.4824
X2	-15227.48	17460.88	-0.872091	0.3979
X3	1185.684	1568.405	0.755980	0.4622
X4	33.76893	4.732899	7.134935	0.0000
R-squared		0.807238		
Adjusted R-squared		0.765932		
F-statistic		19.54282		

From the regression results, the explanatory variables 2017 Inclusive Finance Index, 2017 Per Capita Regional Product Index, 2017 Industrial and Commercial Registered Private Enterprises and Individual Employees have higher F-test values. Three explanatory variables are available for regional economic levels. It has a joint significant impact, that is, the inclusive financial index, the per capita GDP index, the number of private enterprises and individual employees registered in industry and commerce have a significant impact on the regional economic development. That is, by testing the significance level of the joint significance of the three explanatory variables to the explained variables, we can further explore the impact of regional inclusive finance on economic growth.

The data from the six provinces of Shandong, Jiangsu, Liaoning, Beijing, Tianjin, and Shanghai are used as the representative provinces in the eastern region to perform the regression. Set the linear regression model to get regression results

*Table 3: Regression results of the three explanatory variables to the explained variables in the eastern region*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-797923.2	527904.4	-1.511492	0.2698
X2	-5031.60	17460.07	-2.885533	0.1020
X3	7926.499	5099.673	1.554315	0.2603
X4	17.70839	9.413369	1.880996	0.2007
R-squared		0.945469		
Adjusted R-squared		0.863672		
F-statistic		11.55878		

The data from the six provinces of Hubei, Hunan, Henan, Anhui, Shaanxi, and Shanxi are used as the representative provinces in the eastern region to perform the regression. Set the linear regression model to get regression results

*Table 4: Regression results of the three explanatory variables to the explained variables in the central region*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-930452.2	911984.6	-1.020250	0.4149
X2	-447337.8	238465.7	-1.875900	0.2015
X3	9143.808	8461.077	1.080691	0.3928
X4	21.50800	10.64423	2.020624	0.1807
R-squared		0.887872		
Adjusted R-squared		0.719680		
F-statistic		5.278918		

The data from the six provinces of Gansu, Xinjiang, Ningxia, Guizhou, Inner Mongolia, and Qinghai are used as the representative provinces in the eastern region for regression. Set the linear regression

model to get regression results

*Table 5: Regression results of the three explanatory variables to the explained variables in the western region*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-35701.98	82360.86	-0.433482	0.7069
X2	-156605.4	109945.5	-1.424392	0.2904
X3	483.3807	751.0197	0.643633	0.5858
X4	19.17292	8.607512	2.227464	0.1558
R-squared		0.816195		
Adjusted R-squared		0.540487		
F-statistic		2.960364		

### 3. Conclusions and policy recommendations

First of all, it can be concluded from the development data of inclusive finance in 2017 that there are certain differences in the development of inclusive finance among different provinces. The provinces in the eastern region have a higher financial inclusion index. In particular, the provinces of Beijing, Tianjin, and Shanghai have a higher degree of inclusive financial development than other provinces. There is a certain gap. Through further regression analysis, it can be seen that the F-test values of the eastern, central, and western regions are 11.55878, 5.278918, and 2.960364 respectively, which are inclusive of financial index, regional GDP per capita index, industrial and commercial registered private enterprises and The significance of the three-variable combination of the individual employment index on the GDP of the three regions decreases successively. The difference in the impact of inclusive finance on regional economic growth still exists. In 2017, the impact of inclusive finance on economic development continued to decrease from east to west. However, the gap between the central and western regions is small, which confirms some scholars have proposed the current trend of inclusive finance development towards the "U" shape. In recent years, the state has strongly supported inclusive finance policies for small businesses, private enterprises, and individual industrial and commercial businesses, and the development of inclusive finance across the country has shown a growth trend.

Due to the support of relevant national policies and the development of new industries in the western region, all aspects of economic development momentum have increased, coupled with the relatively weak economic foundation, large room for growth, and more and more small and medium-sized enterprises contributing to economic growth. This has led to the western region the development of regional inclusive finance is relatively fast, and its impact on regional economic development has also increased significantly. The economic development foundation of the eastern region is relatively good, and the infrastructure such as technology and financial institutions promoted by inclusive finance is relatively complete. Therefore, the development of inclusive finance and the influence of economic growth are more obvious. The lack of certain scientific and technological support in the central region has prevented inclusive finance from achieving further breakthrough development, and the lack of small and medium-sized investors' contribution to the economy has resulted in a situation that lags behind the eastern and western regions.

Based on the above conclusions, the following three suggestions are made.

First, further improve the level of infrastructure required for the development of inclusive finance. By the end of 2020, my country has achieved all poverty alleviation, and the poverty reduction effect of inclusive finance has been realized. The most important development goal of inclusive finance at present is to become one of the powerful engines of economic growth. With the advancement of science and technology, digital financial inclusion has gradually become a new way of financial services today. Attaching importance to the role of science and technology in economic growth, improving the level of development of science and technology, and improving the modernization of the facilities and services of regional banks and other financial institutions have become a major demand for financial services today, and one of the ways to reduce regional differences.

Second, regional financial institutions need to adapt measures to local conditions when formulating inclusive financial development plans. Due to the different development foundations and regional advantages of the eastern, central, and western regions, the specific promotion and application forms of inclusive finance are also different. Therefore, different regions should adapt to local conditions to formulate inclusive finance plans that are in line with the development of the region, consider what form of inclusive finance is developed, and how inclusive finance can benefit small investors more widely,

and ultimately serve the real economy and promote the economy. Increase.

Third, activate the entrepreneurial and creative vitality of small and medium investors. Local governments and relevant departments should do a good job of guiding work, encourage small and medium investors in all regions to use inclusive financial services reasonably, and help inclusive finance better integrate with small and medium investors. It is important not to ignore every small investor's contribution to economic development. Unleash the vitality of economic growth and promote regional economic development.

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