Digital Inclusive Finance and Local Economic Development

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Abstract: Strong development of digital inclusive finance is an essential request to promoting the revitalization of the countryside. This study aims to explore the impact of digital inclusive finance on local economic development, selecting relevant indicators in the Peking University Digital Inclusive Finance Index (2011-2020) and provincial-level economic data from 2011 to 2020, and adopting a fixed-effect model to empirically test the impact of digital inclusive finance on local economic development. The findings show that digital inclusive finance can effectively promote regional economic growth and alleviate the urban-rural income disparity. Further analysis shows that the impact of digital inclusive finance on local economic development is regionally heterogeneous in terms of regional economic growth and urban-rural income disparity. In conclusion, digital inclusive finance has been effective in promoting regional economic development, and it can be recommended to continue to promote the development of digital inclusive finance, taking into account regional heterogeneity, and to implement policies tailored to local conditions, which can help to promote balanced economic growth and alleviate the urban-rural income disparity.

***Keywords*:** digital inclusive finance, economic growth, urban-rural income disparity.

1. Introduction

After winning the battle against poverty and building a moderately prosperous society in all aspects, China is still promoting rural revitalization in a comprehensive manner in order to further consolidate and expand the results of the battle against poverty. The economic foundation determines the superstructure, and to make breakthrough progress in rural revitalization, following China's national strategy, improving rural economic development remains the key. Economic development includes economic growth and improvement of income distribution, which correspond to efficiency and fairness respectively, and the concept of "inclusive finance" was first proposed by the United Nations in 2005 during the International Year of Microcredit, calling for the establishment of an inclusive financial system on a global scale. The concept of inclusive finance also reflects the pursuit of fairness, calling on all countries to pay more attention to fairness, and to pay attention to income distribution while focusing on economic growth. At the same time, practice has also proved that inclusive finance has been effective in resolving the unbalanced and insufficient contradictions between urban and rural areas, and in cracking the urban-rural dichotomy. In 2015, China made a Chinese interpretation and definition of inclusive finance, pointing out that the essence of inclusive finance is to provide low-income groups, as well as small and micro-enterprises, etc., with financial services that can be sustained, and to reduce the cost of their financial services. In 2016, China also put forward the concept of digital inclusive finance. the concept of digital financial inclusion, advocating the use of the current rapidly developing digital information technology to promote the development of inclusive finance. Although the concept of digital financial inclusion was introduced relatively late in China, the country's digital financial inclusion business has been in the midst of development. Economic growth and income distribution have always been the concern of scholars at home and abroad, and the emergence of digital inclusive finance provides a new development opportunity for economic development and a new way to study rural revitalization. Building upon this context, the present study examines the influence of digital inclusive finance on regional economic development along two key dimensions: economic growth and the urban-rural income disparity. This analysis ultimately seeks to identify pathways through which digital inclusive finance can support rural revitalization strategies.

2. Literature Review

Some scholars believe that the scope of digital inclusive finance should not only include the factor of commercial sustainability and advocate the moderate extrapolation of the profit boundary, but should also take into account the social responsibility and obligation of the financial instrument service, expand the audience group and spread the area, and realize the inclusiveness and universality of the financial system. In terms of the impact of digital inclusive finance on rural revitalization, some scholars have pointed out that in the context of rural revitalization, entrepreneurship of farmers is a key link in promoting industrial prosperity, and regional financial development can enhance the profit expectation of farmers' entrepreneurship by alleviating financing constraints, sharing entrepreneurial risks, and reinforcing information sharing, thus contributing to the sustained development of agriculture and rural areas with a strong boost. Some scholars believe that digital inclusive finance can reasonably circumvent the shortcomings of traditional finance, expand the area of financial radiation, provide diversified financial products and services, and thus efficiently promote the integrated development of rural industries[1]. Some scholars have also profoundly elaborated the mechanism of the role of rural finance on the high-quality development of agriculture at the theoretical level, and empirically tested the correlation hypothesis through spatial econometric modeling. At the same time, there are also scholars who believe that digital inclusive finance can achieve the five specific goals of the rural revitalization strategy. Regarding the influence of digital inclusive finance on economic development, scholarly research indicates that it enhances household savings rates, thereby mobilizing greater financial resources. Furthermore, this approach simultaneously fosters increased consumption and stimulates productive investment among entrepreneurs. Consequently, these combined effects contribute significantly to broader economic growth[2-3]. Beck et al. empirically test the effect of digital finance on Kenya's economic development by constructing a general equilibrium model[4]. Some Chinese scholars believe that the development of inclusive finance helps to serve the real economy in financial services, while some scholars believe that the development of inclusive finance helps to improve the efficiency of resource allocation. In terms of income distribution, Burgess and Pande argue that inclusive financial development significantly reduces the income gap between urban and rural residents by lowering the cost of financial services, and that access to banking services for rural residents is crucial to alleviating rural poverty. Kapoor posits that digital finance not only stimulates economic expansion but also mitigates the disparities between urban and rural areas. Consequently, it addresses developmental imbalances across these regions. These combined effects foster inclusive growth within the national economy[5].

The inconsistency of the research findings may be related to the construction of the index system, in view of this, this study selects the Peking University Digital Financial Inclusion Index (2011-2020) to empirically test the impact of digital financial inclusion on regional economic growth and urban-rural income disparity, and tries to verify the following three propositional assumptions:

Propositional Assumption 1: Digital inclusive finance can effectively promote regional economic growth.

Propositional Assumption 2: Digital inclusive finance can effectively alleviate the urban-rural income disparity.

Propositional Assumption 3: The impact of digital inclusive finance on local economic development is regionally heterogeneous in terms of regional economic growth and urban-rural income disparity.

3. Empirical Research on the Impact of Digital Inclusive Finance on Local Economic Development

3.1 Model Construction

This study focuses on analyzing the relationship between digital inclusive finance and local economic development from the two aspects of regional economic growth and urban-rural income disparity. Referring to previous studies and taking into account the differences in the characteristics of different provinces, by comparing the results of Hausman test, a fixed effect model is used to analyze the impact of digital financial inclusion on regional economic development, and regressions are conducted in terms of the impact of digital financial inclusion on regional economic growth and the impact of digital financial inclusion on the urban-rural income disparity.

3.2 Description of Variables

The core variables investigated in this study comprise both explanatory and explained categories. The explained variables in this study are the degree of economic development and the urban-rural income disparity. And the explanatory variables include the aggregate digital inclusive finance index, along with its specific dimensions: the breadth of coverage, the depth of usage, and the level of digitization.

3.3 Data Description

This study adopts the relevant indices from Peking University's Digital Inclusive Finance Index (2011-2020) to describe the development profile of digital inclusive finance by considering three aspects: breadth of coverage, depth of use and degree of digitization. Additional provincial-level economic indicators, including GDP, urban and rural income levels, secondary education enrollment, and total import-export volume, are sourced from the China Statistical Yearbook.

4. Analysis of Empirical Results on the Impact of Digital Inclusive Finance on Local Economic Development

4.1 Digital Inclusive Finance and Economic Growth

This study utilizes the digital inclusive finance index to empirically test the impact arising from digital inclusive finance on regional economic growth. Empirical findings indicate a significant positive effect of digital inclusive finance on regional economic growth. This outcome thereby supports the hypothesis regarding its role in fostering economic expansion, confirming the previous propositional assumption 1: Digital inclusive finance can effectively promote regional economic growth.

Considering that the development of different dimensions of digital inclusive finance may have different impacts on regional economic growth, this study further empirically examines the impacts of the breadth of digital inclusive finance coverage, the depth of digital inclusive finance use, and the degree of digital inclusive finance digitization on economic growth, and the results show that they have a promotional effect on regional economic growth, which proves the previous proposition hypothesis 1: Digital inclusive finance can effectively promote regional economic growth.

4.2 Digital Inclusive Finance and Rural-Urban Income Disparity

This study utilizes the digital inclusive finance index to empirically test the impact of digital inclusive finance on the rural-urban income gap. The results show that digital inclusive finance has a significant contribution to alleviating the urban-rural income disparity, confirming the previous propositional assumption 2: Digital inclusive finance can effectively alleviate the urban-rural income disparity.

Considering that the development of different dimensions of digital inclusive finance may have different effects on the urban-rural income disparity, this study further empirically examines the effects of the breadth of digital inclusive finance coverage, the depth of digital inclusive finance use, and the degree of digital inclusive finance digitization on the urban-rural income disparity, and the results show that the improvements of them have a contributing role in mitigating the urban-rural income disparity, which proves the propositional hypothesis 2: Digital inclusive finance can effectively alleviate the urban-rural income disparity.

4.3 Robustness Test

Given that real GDP represents a primary policy target for governments, this study substitutes it as the explained variable. This substitution enables a robustness check to re-examine the impact of digital inclusive finance on economic growth. And at the same time, with reference to the previous research on the urban-rural income disparity, this study replaces the explained variable with the Theil index to test again the impact of digital inclusive finance on the urban-rural income disparity. The estimation results are consistent with the results of the benchmark regression.

4.4 Heterogeneity Test

In order to examine whether there is regional heterogeneity in the impact of digital inclusive finance on local economic development, the model is re-estimated with three subsamples from eastern, western and central China respectively. The results show that digital inclusive finance has a significant promotional impact on economic growth in eastern, western and central China, but the impact on the center is greater than that on the east and the west, confirming the previous propositional assumption 3: The impact of digital inclusive finance on local economic development is regionally heterogeneous in terms of regional economic growth. Digital inclusive finance can effectively alleviate the urban-rural income disparity in eastern, western, and central China, but the impact on the west is greater than that on the east and the center, confirming the previous propositional assumption 3: The impact of digital inclusive finance on local economic development is regionally heterogeneous in terms of urban-rural income disparity.

5. Conclusion

This study empirically examines the relationship between digital inclusive finance, regional economic growth and urban-rural income disparity. The findings show that digital inclusive finance can effectively promote regional economic growth and alleviate the urban-rural income disparity. The impact of digital inclusive finance exhibits distinct regional heterogeneity. The growth-promoting effect is more pronounced in central regions, whereas its capacity to enhance income distribution is stronger in western areas. Based on the results of the study, the study makes the following recommendations: Regional heterogeneity should be taken into account and different programs should be adopted in different regions. In the less economically developed central and western regions, economic marketization reforms should be deepened, institutional development should be strengthened, the investment environment should be improved, and foreign trade should be emphasized. Conversely, in the more economically developed eastern region, efforts should be made to optimize the rural business environment, strengthen the rural digital infrastructure and actively develop modern agriculture.

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