

Analysis of the Impact of Digital Inclusive Finance on Economic Growth

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Abstract: This article selects economic data from 31 provinces in China from 2012 to 2022 as the sample, aiming to explore the impact of digital HP finance on China's economic growth. The results indicate that digital HP finance has a certain positive impact on China's economic level. In order to continuously improve its positive impact, efforts should be made to strengthen the construction of digital HP finance infrastructure. To solidify the foundation and promote development.

Keywords: digital HP finance, economic growth, empirical analysis

1. Introduction

Thanks to the rapid development and popularization of Internet technology in the financial sector, the traditional financial service model has gradually developed into a new digital financial model with the support of various emerging technologies. Compared to traditional financial services, the digital HP financial model is more efficient and widely covered, which can effectively optimize China's existing financial supply and demand structure, solve a series of problems such as narrow coverage of traditional financial services and limited trading models. This study takes economic data from 31 provinces in China as the starting point, focusing on analyzing the impact of digital HP finance on economic growth. I hope to improve the accessibility of financial services in China in the context of the new era, consolidate the economic foundation for innovation, entrepreneurship, and development in various fields of society, and assist in the sustained progress of the overall national economy.

2. Empirical analysis

2.1 Measurement Model Setting

The study selected economic panel data from 31 provinces (including municipalities directly under the central government) in China and the Digital HP Finance Index to comprehensively analyze the direct impact of Digital HP Finance on modern economic growth. Combined with relevant data research, a two-way fixed effects model was constructed:

In formula (1), i represents the 31 provinces involved in the study; T represents time; <i mtid='43'>hello</i> expressed as labor input; K represents fixed asset investment; <i mtid='47'>hello</i> represented as industrial structure; <i mtid='49'>hello</i> represented as government expenditure; <i mtid='51'>hello</i> expressed as the national urbanization rate; <i mtid='53'>hello</i> controlling fixed effects on the region; <i mtid='55'>hello</i> applied to the control of instantaneous fixed effects; <i mtid='57'>hello</i> represented as the error perturbation term of the model [1].

2.2 Data and Variable Description

- 1) Dependent variable <i mtid='67'>hello</i> select per capita regional gross domestic product data from 31 provinces in China, with a unit of "yuan". GDP can directly reflect the overall production level and per capita income level of China, and therefore can be used to analyze the overall economic development level of the country;
- 2) The core explanatory variable reflects the overall level of digital HP finance development in China. The variables cited in this study are derived from the development indicators of digital HP finance provided by the Digital Finance Research Center of Peking University over the years;
- 3) Mediating variables, namely the indicators of technological innovation in China within the research time frame (<i mtid='75'>hello</i>). Considering that there are multiple categories of technological innovation indicators, this study selected the most representative values of patent application authorizations for analysis;
- 4) Control variables, which can be divided into labor input <i mtid='80'>hello</i>(The logarithm of employment in 31 provinces of China), growth rate of fixed assets investment <i mtid='82'>hello</i> industrial structure <i mtid='84'>hello</i>

i> government expenditure <i mtid='86'>hello</i> urbanization rate <i mtid='88'>hello</i> 5 indicators [2].

3. Analysis of Empirical Results

This article first analyzes the practical impact of digital HP finance and its sub indices on the overall economic growth of 31 provinces in China.

This proves that economic growth will be positively influenced by digital HP finance. In addition, the regression coefficients of the five control variables studied in this article are significant at the 1% or 5% level. This proves that the five control variables related to digital HP finance will have a positive impact on China's economic growth. Among them, the coefficient of urbanization rate is slightly higher than the other four variables, indicating that in the context of the digital economy era, urbanization has a strong impact on the overall growth level of digital finance and the economy.

The regression coefficients for the three dimensions of coverage, application, and digitalization of digital HP finance in the above model are all significant at the 1% level. This indicates that all three sub indices of Digital HP Finance contribute to the improvement of economic level, which may be due to the higher effectiveness and HP nature of Digital HP Finance compared to traditional financial service models. The coverage of digital HP finance is measured by the number of electronic accounts nationwide, which can directly reflect the level of digital financial services in different provinces. The main indicator for measuring the degree of application of digital finance. It is the actual usage of digital financial services in various regions, which can reflect the satisfaction level of different financial users in corresponding financial services. The higher the satisfaction level, the better the level of economic growth. The digitalization level of HP Finance can directly reflect the cost advantage of regional digital financial services provided to various financial users such as enterprises and individuals. Under the influence of these three indicators, individual users, as well as enterprises, groups, etc., can enjoy more convenient, low-cost, efficient, and high-quality financial services, thereby promoting overall consumer spending of residents and providing support for regional economic growth.

4. Inspirations and Suggestions

Firstly, it is necessary to comprehensively improve the planning and regulations of China's digital economy, and consolidate the foundation of digital HP finance construction. Local governments should combine their own conditions and needs, continuously expand the scope of digital finance popularization, and accelerate the construction of individual infrastructure for digital HP finance. Focus on improving the coverage of communication networks in rural areas, in order to solidify the digital foundation for related businesses.

Secondly, it is necessary to plan the development of regional finance reasonably, improve the regulatory system based on actual needs, and increase regulatory efforts. We should strengthen financial risk monitoring in economically developed regions, comprehensively optimize various digital financial regulatory methods and technologies, increase corresponding talents, and break through bottlenecks. Regions with relatively backward economic development should accelerate the construction of a digital HP financial ecosystem, prioritize the development of financial businesses in key areas based on the actual characteristics and needs of different provinces, and focus on solving the problem of uneven development of digital HP finance in various regions while making comprehensive progress.

5. Innovative digital inclusive financial risk prevention and control tools

The risk prevention and control tools of digital inclusive finance should fully utilize financial technology and big data technology to establish a comprehensive and accurate risk assessment system. With the help of advanced data analysis technology, digital inclusive financial institutions can more accurately evaluate the credit risk and repayment ability of users, thereby identifying potential risk factors in a timely manner, taking corresponding risk control measures, reducing non-performing loan rates, and ensuring the healthy development of financial institutions. On this basis, artificial intelligence, machine learning and other technologies can be further introduced to achieve automatic updating and optimization of risk models, improve the accuracy and real-time performance of risk assessment, and thus more effectively prevent and control the occurrence of financial risks. Innovative digital inclusive financial risk prevention and control tools require the establishment of a multi-level and multi-dimensional risk supervision system. In addition to evaluating the credit risk of users, comprehensive supervision of market risk, operational risk, etc. is also necessary. Establishing a risk warning mechanism can timely detect and respond to potential systemic risks, reducing systemic risks in the financial system. At the same time, implementing differentiated risk management policies and taking corresponding risk control measures based on different levels of risk can more effectively reduce the losses caused by risks. In addition, strengthening market supervision, strengthening the supervision and frequency of financial institutions, preventing illegal activities such as market manipulation

and fraud, maintaining fairness, justice, and transparency in the financial market, and creating a favorable environment for the healthy development of the economy. Furthermore, innovative digital inclusive financial risk prevention and control tools should also strengthen international cooperation and experience exchange. Financial risks have global and cross-border characteristics and require joint response from governments and financial institutions of various countries.

6. Conclusion

The study, covering 31 provinces nationwide, uses empirical analysis to demonstrate the positive impact of digital HP finance on China's economic growth. It is recommended that local governments strengthen policy guidance and further improve the regulatory and service mechanisms of digital HP finance. Simultaneously, carry out relevant policy and service promotion work to strengthen residents' financial awareness and financial literacy. Only in this way can it be effective. Strengthening the positive effect of digital HP finance on China's economic growth and laying the foundation for the sustained promotion of digital HP finance.

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