Proceedings of the 3rd International Conference on Management Research and Economic Development
DOI: 10.54254/2754-1169/176/2025.22116

The Role of Financial Technology in Improving Credit Inclusion for Small and Micro Enterprises in Poor Areas

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Abstract: This paper analyzes the role of financial technology in improving the credit inclusion of SMEs in poverty-stricken areas. First, the concept and characteristics of financial technology are defined, also the connotation of credit inclusion is explained. Secondly, the financing difficulties of SMEs and enterprises in poverty-stricken areas are analyzed, problems such as insufficient coverage of traditional financial institutions, high loan costs as well as imperfect credit evaluation systems are pointed out. With the help of technologies such as big data, artificial intelligence and blockchain, financial technology reduces the cost of financial services, expands the scope of credit coverage and optimizes the credit evaluation system, so that SMEs without traditional credit records can also obtain loan support and improve financing availability. Finally, combined with empirical research, a strategy of policy-driven, technology-enabled, cooperative collaboration is proposed to promote the development of credit for SMEs in poverty-stricken areas, provide theoretical support and practical guidance for regional economic growth.

Keywords: Fintech, poverty-stricken areas, small and micro enterprises, credit inclusion

1. Introduction

With the rapid development of financial technology, it has provided convenience for many enterprises and people. However, some enterprises in poor areas have not enjoyed such treatment due to geographical restrictions. For example, in poor areas, small and micro enterprises (SMEs) have short-term funding needs, information asymmetry, imperfect credit system, lack of collateral, and difficulty in obtaining loans. Traditional financial institutions have high credit risks and conservative approval, which restricts the financing and development of SMEs [1].

SMEs can drive economic development in poor areas, reduce the gap between the rich and the poor, and promote common prosperity. Financial technology is a hot topic in the current financial field. Financial technology can break regional restrictions and other problems through big data, blockchain, artificial intelligence, and cloud computing, which can help SMEs improve their credit problems. Supply chain finance is an important application of financial technology, but it focuses more on large enterprises. SMEs in poor areas are at the end of the supply chain and have weak bargaining power, so it is difficult to raise funds. Therefore, it is of great significance to study how to use blockchain and supply chain data to improve the availability of financing [2].

Although previous researchers have linked and studied financial technology and credit inclusion, there are still some omissions and deficiencies. Therefore, this study aims to explore the role of financial technology in improving the credit of small and medium-sized enterprises in poor areas and

DOI: 10.54254/2754-1169/176/2025.22116

reveal its internal logic. The study also hopes to explore the reasons why small and medium-sized enterprises in poor areas have difficulty in obtaining credit through case analysis. Finally, policy recommendations are put forward to promote the development of financial technology, improve the credit environment, and boost economic development in poor areas. The paper is structured as follows: This paper will explore the theory of SMEs financing and the impact of financial technology on credit inclusion by reviewing literature. Next, through case analysis, it will explore how financial technology can improve the credit availability of SMEs in poor areas, and finally put forward policy recommendations for improving credit inclusion.

2. Literature Review

2.1. Causes and solutions for financing difficulties faced by SMEs

SMEs have difficulty obtaining financing due to the serious adverse effects of information asymmetry, agency problems, and the difficulty of allocating residual control rights through contracts [1]. As one of the solutions, inclusive finance refers to providing accessible, affordable and sustainable financial services to all social groups, with a special focus on low-income people, SMEs and rural residents, which are difficult to be covered by the traditional financial system. Its core concept is to ensure the availability, fairness, and sustainability of financial services to promote economic growth, reduce poverty, expand the coverage of financial services, and improve social inclusion [3].

2.2. Fintech and credit inclusion

2.2.1. Definition of FinTech

FinTech refers to technology-driven financial innovation, involving the innovative application of the Internet of Things, artificial intelligence, blockchain, cloud computing, and big data in traditional financial fields such as payment, credit, and wealth management [4]. It is an emerging field that innovates and optimizes the products, services, and business processes of the traditional financial industry to provide more efficient and convenient financial services. From a narrow perspective, FinTech mainly focuses on technological innovation in financial services such as payment and clearing, lending and financing, wealth management, and insurance. From a broad perspective, FinTech covers all aspects of the integration of financial services and technology, including the upgrade of financial institutions' back-end technical systems and the use of technological means in financial supervision. For example, regulatory technology (RegTech) is a branch of FinTech, which uses technologies such as big data analysis and machine learning to help financial regulators supervise financial markets and prevent financial risks [5].

2.2.2. Characteristics of FinTech

The core of the development of financial technology is the application of modern information technology. Big data technology can process massive amounts of financial data, and through the mining and analysis of these data, financial institutions can more accurately understand customer needs and assess risks [6]. Financial technology can also quickly assess the credit status of borrowers. Some Internet financial platforms can complete the preliminary approval of SMEs or personal loan applications in a few minutes or even seconds through automated credit assessment models, combined with big data and machine learning algorithms, greatly speeding up the loan approval process [7]. From the perspective of inclusiveness, financial technology helps to expand the coverage of financial services and enable more people to enjoy financial services. Traditional financial institutions in poor and remote areas have limited service outlets and insufficient financial services. Financial technology

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can cross geographical restrictions through mobile Internet and electronic payment and provide financial services to residents and enterprises in these areas [8]. At the same time, some financial technology companies use big data to analyze the operating data and credit status of SMEs and provide them with credit loans without traditional collateral, which not only solves the problem of financing difficulties for SMEs but also promotes inclusive finance.

2.2.3. Overview of credit inclusion

As a core component of inclusive finance, credit inclusion focuses on ensuring that all social classes, especially vulnerable groups and poor areas, can easily access credit services at a reasonable cost. In poor areas, sufficient credit can help enterprises expand their production scale, purchase advanced production equipment, and introduce cutting-edge technology and talents, thereby enhancing their market competitiveness. Secondly, credit funds can also help enterprises expand market channels and carry out marketing activities to increase the market share of products or services, and even directly drive the increase of local employment opportunities, absorb more labor, thereby reducing unemployment and increasing residents' income levels. Finally, the enhancement of credit inclusion can also help optimize the allocation of resources in poor areas, guide funds to industries and projects with greater potential and development prospects, promote the optimization and upgrading of industrial structure, promote sustainable economic growth, and inject strong impetus into poverty alleviation and rural revitalization in poor areas [9].

3. Case Analysis

3.1. Case 1: Farm in Fenghu Town, Qingzhen City, Guizhou Province

Fenghu Town Farm, Qingzhen City, Guizhou Province is busy, and many tourists come to pick grapes every day. However, in 2020, the vineyard was worried about the lack of funds, the inability to update varieties and build tourism infrastructure. After learning about it, the staff of the Agricultural Bank of China Guiyang Qingzhen Branch went to the door as soon as possible and quickly processed a "Huinong e-loan" of 300,000 yuan for him. In 2021, Liming's vineyard changed its past difficulties and welcomed a bumper harvest, and the tourism plan was also realized. The Guiyang Branch of the Agricultural Bank of China uses financial technologies such as e-loan to support the integrated development of agriculture and characteristic industries such as rural tourism, red tourism, sports tourism, and ethnic culture, and promote the upgrading of agricultural tourism industry models. This is a positive example of bringing financial technology into the development of SMEs in poverty-stricken areas, and effectively proves the role of financial technology in enhancing credit inclusiveness.

3.2. Case 2: India's small credit crisis

Since October 2010, some microfinance lenders in Andhra Pradesh, India, have suspended their loan repayment plans, leading to several suicides, which has led to the outbreak of a microfinance crisis. In Andhra Pradesh, India, the number of clients of each microfinance institution loan officer has far exceeded the normal proportion. They have hurriedly issued loans without in-depth and detailed understanding of customer needs, and the risky loan rate has naturally increased. The biggest reason for this crisis is that microfinance institutions did not do a good job of preliminary research on customers. From 2005 to 2009, India's loans rose sharply because the Reserve Bank of India required banks to provide microfinance wholesale funds to the four priority areas specified, and this part of funds must account for 40% of India's total loan balance. Such a huge amount of funds, even if not all invested in Andhra Pradesh, where the concentration of microfinance institutions is very high, is

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undoubtedly a huge capital bomb. Investors mistakenly over-valued profitable microfinance institutions, making the competition environment even more cruel. Microfinance institutions failed to consider the demand side in a timely manner, and the loan risk increased significantly, which eventually evolved into a microfinance crisis. This is the result of not using financial technology to reasonably and comprehensively assess credit risk.

4. Fintech Strategies for SMEs Credit Access in Poor Areas

4.1. Government Perspective

One the one hand, the government should introduce targeted tax incentives to significantly reduce the corporate income tax, value-added tax and other tax burdens of fintech credit companies in poor areas. This will reduce business costs and encourage more companies to participate. The government should formulate clear financial technology development policies, guide resources to SMEs in poverty-stricken areas, and encourage financial institutions to use financial technology to improve the level of credit services for SMEs. On the other hand, the government should set up special support funds to provide financial support for financial technology companies to develop credit products and services suitable for SMEs in poor areas and guide the direction of innovation. The government also needs to set up special funds for the development of financial technology to support the research and development, promotion and operation of credit projects for SMEs in poor areas and reduce the financing costs of enterprises. Financial institutions that actively participate in financial technology services for SMEs should be given tax incentives to stimulate their innovation vitality and service enthusiasm.

4.2. Financial Institutions Perspective

Financial institutions should invest heavily in the application of big data and artificial intelligence technologies, and use big data technologies to widely collect multi-dimensional data such as business flows, market transactions, and credit records of SMEs in poverty-stricken areas. Through in-depth mining and analysis, they can build accurate enterprise portraits and clearly understand the real needs and potential risks of enterprises. In addition, with the help of artificial intelligence algorithms, the credit approval process can be intelligent and automated, from loan application acceptance, document review to credit limit assessment, all can be completed quickly and accurately, improving the efficiency and accuracy of credit approval and reducing the cost and risk of manual intervention. In addition, blockchain distributed ledgers can be used to store key information in corporate credit business processes to ensure that data cannot be tampered with and is traceable. This can effectively enhance financial institutions' trust in corporate information, reduce the risks brought about by information asymmetry, and strive for fairer credit opportunities for SMEs, especially those with imperfect credit records.

4.3. Win-win cooperation between financial institutions and local governments

Traditional financial institutions rely on their rich experience in financial services, a large customer base, and a sound risk control system, as well as the relatively sound information connection between the government and small and medium-sized enterprises in poverty-stricken areas. Combined with the strengths of cutting-edge technology and innovative vitality of financial technology companies and jointly develop supply chain financial products, small credit loans and other credit products suitable for the characteristics of small and medium-sized enterprises in poverty-stricken areas. This can broaden financing channels and improve service quality. Furthermore, the government should organize traditional financial institutions and enterprises in poverty-stricken areas to study and inspect

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advanced regions, learn from their successful financial technology credit models and experiences. At the same time, a regional cooperation mechanism will be established to attract funds, technology and talents from developed regions to flow into poor areas. Through these measures, the local financial technology credit business will be driven to develop rapidly, regional coordination and progress will be achieved, and the credit inclusiveness of small and medium-sized enterprises in poor areas will be comprehensively improved. Finally, government, financial institutions and technology companies can establish a multi-party cooperation mechanism to jointly promote the widespread application of financial technology in the field of SMEs credit in poverty-stricken areas. Regulatory authorities should innovate regulatory methods and build flexible regulatory mechanisms such as "sandbox regulation". This will provide financial technology companies with room for innovation and trial and error and create a good policy environment on the basis of effective risk prevention and control.

5. Conclusion

This paper studies traditional financing theories, addresses the problem of financing difficulties for SMEs in poverty-stricken areas, and explores the application of financial technology in the development of credit inclusion for SMEs in poverty-stricken areas. Through case analysis, this paper effectively demonstrates the role of financial technology in the development of SMEs in poverty-stricken areas. The study illustrates that financial technology can improve the development of enterprises themselves, thereby promoting local economic development. Finally, some suggestions are put forward to improve the problems currently faced by SMEs in poverty-stricken areas.

This article specifically examines how FinTech can improve credit inclusion, but there are still shortcomings that need to be addressed. This article mainly focuses on the relationship between financial technology and SMEs in poverty-stricken areas, but does not conduct a comparative analysis of the credit situation of SMEs in poverty-stricken areas before and after the application of financial technology. It also does not compare the credit situation of SMEs in non-poverty-stricken areas with the help of financial technology. The failure to significantly highlight the unique role of financial technology in poverty-stricken areas and the special challenges it faces is not conducive to accurately grasping the development direction and focus of financial technology in poverty-stricken areas. Although the article mentions the regulatory innovation of financial institutions on SMEs in poor areas, the analysis of the risks that SMEs in the region may face in the use of financial technology credit, such as network security risks, technology dependence risks, data privacy risks, and increased credit risks, is not in-depth enough, and does not explore how to effectively prevent and resolve these risks while improving credit inclusiveness.

Micro enterprises in poor areas to improve credit inclusion can be carried out according to the shortcomings of this study. From the perspective of comparative research, so they can focus on what changes have taken place in SMEs after financial technology has improved credit inclusion, and what impact it has on the future development of poor areas and SMEs. For regulatory risks, the research can focus on whether financial institutions or the government have taken some measures to solve the risk problems faced by SMEs in poor areas and improve the trust of financial technology.

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