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Impact of Digital Inclusive Finance on Financing Constraints of Small and Medium-Sized Enterprises Review

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Abstract: This review examines the influence of digital inclusive finance (DIF) on financing constraints of small and medium-sized enterprises (SMEs). As DIF is introduced to more and more enterprises, it has brought many opportunities to enterprises along with global economic growth. The introduction and development of digital financial inclusion has eased the financing constraints of SMEs, reduced information asymmetry and costs, and improved efficiency and capital availability. Research shows that digital financial inclusion has an alleviating effect on financing constraints. This paper provides a review of current research, including an overview of digital financial inclusion, SME financing constraints, and how digital financial inclusion affects SME financing constraints. In addition, this paper states the possible solutions for how digital inclusion can be more widely promoted. Additionally, this paper finds the shortcomings of the existing research to provide a different point of view for future researchers to look at the influence of digital inclusive finance on the financing constraints of SMEs.

Keywords: Digital Inclusive Finance, Digital Financial Inclusion, Financing Constraints of SMEs.

1. Introduction

With the development of the Internet, financial services are becoming popular; more people start to require access to financial services. However, traditional financial services are generally only affordable to large enterprises. As many individuals or small businesses also need this service, the financial industry has become digital, so the emergence of DIF has altered this phenomenon. Based on equal opportunity and business sustainability criteria, financial inclusion refers to the provision of adequate and effective financial services at a reasonable cost to all socio-economic classes and groups in need of financial services. By the end of 2022, China's inclusive small business loans exceeded 23 trillion yuan, an increase of 23.8% each year, 12.7 percent higher than the growth rate of various lending institutions, and loan interest rates continued to decline [1].

2. Literature Review

2.1. Research on DIF

2.1.1. Definition and Current Situation of DIF

Through digital technologies like mobile phones, digital financial inclusion extends financial services to the poor, economically excluded, and underserved. [2]. In order to alleviate poverty, China has used the 301 model with satellite loans. The so-called 310 mode refers to an entire online payment process that involves applying for goods in minutes, releasing funds in one second, and zero manual intervention throughout the entire process. By combining satellite remote sensing technology with AI model algorithms, large-scale, reliable dynamic data is obtained and applied to digital payment to serve the planting industry. The satellite recognition system can distinguish crops such as rice, wheat, and corn. It can also identify their growth cycles and distribution plots to solve the problems of what farmers grow, how big they grow, and whether they are good at it. Banks provide credit to farmers through satellite data. Kenya uses solar credit to alleviate poverty by designing a very clever installment payment method; they provide solar panel installment payments for African customers who lack electricity. Low-income customers only need to pay a low-down payment to take away a set of solar panels. They can obtain ownership the following year by paying approximately $0.5 per day. This small and high-frequency repayment method is suitable for farmers without credit records. After one year of repaying the solar panel on time, users can establish their credit profile and use it to obtain installment payments for other appliances such as televisions, refrigerators, and mobile phones on financial platforms. India has QR code banks and Indian financial institutions have pioneered an agricultural industry chain financing approach that connects farmers, farmer producers' organizations, agricultural material distributors, and agricultural enterprises. Through virtual cards based on QR codes, farmers can apply for unsecured loans, and once approved, the payment can only be used for specific merchants. Farmers can use the money in their card accounts to purchase seeds and agricultural materials from these merchants directly, ensuring loans will not be used for other purposes.

2.1.2. Purpose of Digital Inclusive Finance

DIF combines digital technology with financial inclusion to achieve innovation, provide more digital financial services, reduce costs, and enable people to access financial services more efficiently. In addition, risk control capabilities have been improved, enabling more groups to participate in the development of digital financial inclusion. At the same time, it can also promote family entrepreneurship. Researchers Mao Fengfu, Wang Yuanfan, and Zhu Mengsi have analyzed that the desire to borrow can increase through DIF; the findings indicate that entrepreneurship increased by 0.264% for every 1% rise in digital financial inclusion. [3].

2.2. Research on Financing Constraints of SMEs

2.2.1. Information Asymmetry

Due to information asymmetry accompanied by slow digital transformation and a low degree of change, it has been difficult for SMEs to acquire loans. With low information transparency, banks and financial institutions refrain from lending to SMEs based on business risks, opportunity costs, and other factors. SMEs generally have a low credit level and high informational opacity, thus making financial institutions inclined to lend to 20% of large enterprises determined by the "80/20 Rule". The information data barriers that have formed will significantly open the gap between SMEs and large

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enterprises, making the problem of SMEs unable to obtain loans due to information asymmetry more prominent [4]. Yang's empirical analysis shows that the degree of financing constraints faced by non-state-owned SMEs is negatively correlated with the development level of digital inclusive financial services [5].

2.2.2. Lack of Adequate Financing Collateral

Lack of finance collateral drastically reduces financial institutions' willingness to extend loan support to SMEs, making it more challenging to obtain external financing [4]. Due to their small scale and weak capital, Chen and Li's study points out that SMEs often find it challenging to provide traditional collateral, such as real estate, machinery, and equipment. In contrast, new collateral, such as accounts receivable, equity, inventory, and intellectual property rights, are generally tricky to affirm, evaluate, and transfer, especially since the novel coronavirus epidemic 2020. In addition, because of the skyrocketing prices of raw materials and logistics transportation costs, small and medium-sized businesses are struggling with a lack of cash flow, which has negatively impacted their income. Not to mention, the unwillingness of financial institutions to support SMEs with credit has been dramatically reduced by the lack of collateral for SMEs and the difficulties in demonstrating their ability to resume business [6].

2.3. Research on the Impact of DIF on Financing Constraints of SMEs

2.3.1. DIF Can Reduce Costs

Based on recent research, the challenges of SME financing have become more accessible due to digital financial inclusion. Digital inclusive finance connects small and medium-sized enterprises and financial institutions through the Internet platform. It is built on the digital network platform, which can effectively integrate financial resources and significantly reduce the financing costs of small and medium-sized enterprises [7]. Transaction costs are the costs incurred to facilitate transactions, which are incurred before, during, and after the transaction is concluded. The transaction cost theory is also widely applicable in financial markets. However, from the perspective of banks, to facilitate credit transactions, banks need to collect and evaluate the borrower's information. Most importantly, small groups such as rural residents often need better credit information, and income stability could be better. Some SMEs need better financial and audit systems, which makes banks more focused on identifying information and making decisions. So, those banks providing credit transactions must pay higher costs and take higher risks. In a situation where profits are significantly compressed, the interest income earned by banks is likely to be less than transaction costs, reducing the opportunities to cooperate with small groups and dampening the enthusiasm of these borrowers. Moreover, due to geographical constraints, rural credit groups often need to pay a significant amount of time and travel costs to obtain financial services, which, to some extent, leads to the self-exclusion of vulnerable groups. Under the traditional financial service system, credit rationing and transaction costs are the main reasons vulnerable groups struggle to access financial services. However, due to the introduction of digital financial inclusion and the rapid development of the information economy, digital technology, and financial inclusion, the traditional credit evaluation methods have changed. Evidence suggests that digital financial services give enterprises more financing options, allowing SMEs to choose the option that best suits their needs concerning their actual business needs. These services can alleviate financing constraints, allowing efficient resource distribution [8]. Digital inclusive finance has transparency and digitization, which can effectively reduce information asymmetry, help financial institutions and fund demanders reduce transaction costs, and increase financial accessibility for vulnerable groups. Researchers K Ganeshappa and Sureshramana investigated India and found the challenges and suggestions for achieving financial inclusivity goals efficiently and effectively through digital means [9].

2.3.2. DIF Alleviates Financing Constraints on High-Tech SMEs

According to Yang's studies, the growth of DIF can significantly reduce the financial limitations faced by high-tech SMEs; nevertheless, it impacts the financial constraints faced by non-high-tech SMEs. Coverage breadth and utilization depth primarily reduce high-tech SMEs' financial restrictions. Furthermore, a future full of uncertainties and risks decreases the willingness of traditional financial institutions to lend to high-tech small and medium-sized enterprises. Along with the significant cash flow fluctuation and development risk of enterprises, this significantly increases the difficulty of obtaining loans. However, digital inclusive finance can control risks through digital technology [5].

2.4. Promotion of DIF

Li Weili pointed out in his research that supporting the promotion and implementation of the rural revitalization strategy is crucial for accelerating industrial structure transformation, establishing a financial system, and achieving rapid rural development through inclusive finance. However, because of the weak financial basis and dispersed financial demand in rural regions, increasing inclusive finance's service quality and efficiency is complex, and the motivation for rural revitalization is only marginally strong enough. Digital finance has organically merged with inclusive finance due to information technology advancements in big data, cloud computing, and AI. This leads to the creation of digital inclusive finance, which significantly enhances the effectiveness and efficiency of inclusive finance while also playing a crucial role in supporting rural development and revitalization. [10]. In order to promote digital inclusive finance, a series of measures should be adopted. Firstly, improve the credit reporting system and data sharing platform. As an emerging form of development in the financial industry, digital inclusive finance inevitably relies on a sound regulatory system in its development process. It can only consolidate and secure the steady development of digital inclusive finance by effectively using the essential value of the regulatory framework. To this end, attention should be paid to establishing a sound credit reporting system and data-sharing platform. Foster the formation of a financial regulatory framework for digital inclusive finance. The central and local governments need to improve further relevant laws and regulations based on the characteristics of the development of digital inclusive finance, regulate market behavior, protect consumer rights, unify management and dynamic monitoring of online platforms, and effectively improve the problem of complex online resource supervision from the perspective of individuals and multiple entities. Secondly, improving the digital inclusive financial system is critical in promoting high-quality economic development. In practical situations, the digital inclusive financial system can be improved from the perspectives of technology and informatization. It can be improved from a technological perspective. By incorporating cutting-edge technology into the system, China's rapid advancements in science and technology can help to further the development of digital inclusive finance. In particular, for private enterprises, the integration of advanced technology can drive the development of industrial clusters of private enterprises, small and micro enterprises, and successfully break through financial barriers, assisting small and micro enterprises to collaborate to promote industry integration development and gradually improve the gaps in digital inclusive finance. It can also be enhanced in terms of informatization. From the perspective of informatization, improving the digital inclusive financial system requires accelerating the pace of realizing informatization. Realizing comprehensive informatization can help narrow regional differences, strengthen long-term investment, optimize resource allocation, and manage risks. By utilizing informatization methods, we can improve the construction level of digital inclusive finance, enhance overall operational effectiveness and service level, and continuously optimize the development environment of digital inclusive finance through technology. Third, accelerate traditional financial institutions' digital development and achieve data-driven decision-making management. Traditional financial institutions should strengthen the integration of advanced technology. In the process of digital transformation and development, they should not only stay at the surface but also understand the advantages and characteristics of utilizing industry data information, information technology, and centralized data management. Big data technology, cloud computing technology, and data-driven management should be used to make relevant decision-making more efficient and scientific.

By accelerating the reshaping of operational mechanisms, the construction of operational mechanisms plays a significant role in developing the traditional financial industry. Driving development through innovation, accelerating the integration of digital technology and traditional financial services, and changing the entire system from traditional centralized to distributed management are all important in the financial industry's digital transformation process. Emphasis should be placed on constructing user-centered operation models and related mechanisms, and a more standardized and scientific financial system should be constructed. It can gather business models for intelligent re-engineering. In digital development in the traditional financial industry, gathering business models to re-engineer the entire business process and model intelligently is necessary.

3. Literature Evaluation

Due to the variety of challenges small and medium-sized enterprises may encounter when seeking funding, a large portion of the research examined in this review examines the effects of digital financial inclusion on the financial restrictions of SMEs. For example, with financing constraints or difficulties such as information asymmetry, it has always been difficult for SMEs to obtain loans. This review's primary goal is to demonstrate the benefits of digital inclusive financing for small and medium-sized businesses, which have beneficial impacts like increased financial accessibility. Similar findings are seen across the board in the research, suggesting that the financial limitations faced by SMEs have been lessened by digital financial inclusion, resulting in decreased transaction costs and increased efficiency. Overall, providing the financially excluded and underserved access to financial services has helped relieve and mitigate the financing constraints of SMEs, therefore meeting their needs.

Studies have yet to be done on the impact of digital inclusive finance on the financing needs of SMEs after a change in the global economy due to its short development period. The epidemic two years ago, with long-lasting effects, has caused changes in the financial service industry. For instance, when the COVID-19 pandemic struck, it slowed down and disrupted global economic activity through lockdowns, which was a way to contain the spread of the disease but prevented people from getting to work. Consequently, most enterprises lost capital, many individuals could not earn money, and the economic pressure was immense. Nevertheless, only some people had extra money to invest in financial services. However, digital inclusive finance benefitted many "hard-to-reach" enterprises and groups, which can lead to increased economic growth. As a result, few researchers are looking into how the COVID-19 epidemic has affected small and medium-sized businesses regarding the effects of digital inclusive finance.

4. Conclusion

A recent study on the impact of digital inclusive finance on financing restrictions for small and medium-sized enterprises has shown the benefits of providing digital financial services to individuals and groups. As this is only the beginning of inclusive growth in digital finance, there are still many

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issues that need to be addressed regarding the impact of digital inclusive finance on the financing constraints of small and medium-sized enterprises. However, many factors must be considered and thoroughly considered. Few studies can accurately describe the growth of all small and medium-sized enterprises due to rapid expansion. Additionally, it is not easy to acquire financial data of SMES since many are non-listed enterprises. As more financially underserved and excluded groups are provided access to these financial services, will these services become a “scarce resource” in the future? This question will likely be answered as digital inclusive finance develops, alleviating constraints and bringing opportunities while simultaneously introducing challenges.

Authors Contribution

All the authors contributed equally, and their names were listed in alphabetical order.

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