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Digital Inclusive Finance and Financing Constraints of Small and Medium-sized Enterprises

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Abstract: Digital financial inclusion provides financial services through digital platforms, aiming to improve the ability of MSMEs and low-income groups to access financial resources, thereby easing their financing constraints and promoting economic growth and inclusive development. As an innovative financial model, digital financial inclusion utilizes modern technological means to significantly improve the accessibility and convenience of financial services, especially in areas where traditional banking services are under-covered. Digital finance has promoted the popularization of financial services such as micro-credit, micro-savings, and micro-insurance, and helped improve the financing environment of low-income groups and small and micro enterprises. At the same time, digital financial inclusion promotes financial literacy education and digital inclusion construction, and enhances the acceptance and use of digital financial instruments by the general public, which is the key to achieving sustainable development of digital financial inclusion. Therefore, digital financial inclusion can better ease the financing constraints of small and medium-sized enterprises and promote economic development.

Keywords: Digital inclusive finance; Small and medium-sized enterprises; Financing constraints

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1. Introduction

One of the core mechanisms of digital financial inclusion is to reduce the information asymmetry faced by MSMEs in accessing credit by easing financing constraints. With the help of advanced technology, digital platforms have improved transparency, streamlined lending processes, and provided alternative data sources for credit assessment, significantly enhancing SMEs' financing capabilities. Digital financial inclusion not only promotes corporate innovation and growth but also stimulates consumer demand, which in turn creates a positive feedback loop that benefits the overall economy. Despite the huge potential of digital financial inclusion, there are still many challenges in its implementation. For example, high investment costs, inadequate digital infrastructure, and cultural resistance may limit the widespread adoption of digital financial instruments by SMEs. Policymakers therefore need to address these issues and promote financial literacy and digital inclusion initiatives to ensure that digital financial inclusion can more effectively support MSMEs and thus enable economic growth [1–2].

In conclusion, digital financial inclusion is not only an important tool to ease financing constraints for MSMEs, but also a key factor to drive innovation and economic development. By overcoming existing challenges and maximizing the potential of digital finance, it will bring long-term positive impacts to businesses and society.

2. Overview of digital financial inclusion

Digital financial inclusion marks a fundamental shift in the way financial services are delivered, expanding the reach of financial services through technological innovation and significantly reducing the cost of services [3]. This shift has profound implications for groups that have traditionally struggled to access banking services, especially small and medium-sized enterprises. The rapid development of digital financial services over the past decade, with the spread of mobile technology and the Internet, has driven the construction of a more inclusive financial services system and created new financial opportunities for more people and businesses.

3. Mechanisms for digital financial inclusion

Digital financial inclusion works effectively through several key mechanisms, the core elements of which are as follows:

3.1. Technology integration

By integrating advanced technologies such as mobile payments, blockchain, and artificial intelligence, digital platforms are able to efficiently assess credit risk and automate financial transactions. Such technological integration not only improves service efficiency, but also significantly reduces operating costs, making it more economically viable to provide services for small accounts.

3.2. Make data-driven decisions

Financial institutions are able to leverage alternative data sources (such as payment history, social media activity, and e-commerce transactions, among others) to assess the creditworthiness of borrowers. This approach is particularly useful for groups that lack a traditional credit history, especially small and medium-sized enterprises. With this data-driven approach to credit assessment, financial institutions can gain a more comprehensive understanding of borrowers' credit risks and provide more personalized financial services.

3.3. Reduce transaction costs

Digitization has significantly reduced the cost of providing financial services. By reducing reliance on traditional physical infrastructure, financial institutions are able to extend services to areas that were previously inaccessible due to high costs. This cost advantage has made financial services more accessible, especially to small and medium-sized enterprises and low-income groups, driving greater financial inclusion.

4. The current situation of financing for SMEs

At the beginning of 2020, the global spread of the novel pneumonia epidemic has severely impacted China's real economy, especially small and medium-sized enterprises. The resumption of business operations, disruption of cash flow and supply chains, and a sharp drop in foreign orders have caused concern. Small and medium-sized enterprises are the main force driving China's economic development. By the end of 2018, small and medium-sized enterprises accounted for 97.6 percent of all industrial enterprises above designated size, and their main business income and profit accounted for 56.7 percent and 51.6 percent, respectively, according to the Statistical Yearbook of China Small and Medium-sized Enterprises.

However, in terms of obtaining financial support, it is difficult to match their contribution to social and economic development. The financing constraint of small and medium-sized enterprises is not only a chronic disease that hinders their own development, but also one of the important bottlenecks restricting China's economic transformation and upgrading. At present, the Chinese economy is in a critical period of changing the growth model, improving the structure, and changing the driving force. The gear shift of economic growth is obvious. At the same time, the unpredictable external economic environment has posed a major test to China's economic development. Therefore, it is particularly important to study how to alleviate the financing difficulties of small and medium-sized enterprises.

SMEs play a vital role in the global economy as they are the main drivers of job creation and economic growth. However, access to adequate financing remains one of the most significant challenges for these enterprises. Studies have shown that about 70 percent of SMEs globally face financing gaps of varying degrees, severely constraining their growth potential [4].

4.1. Sources of financing

The main sources of financing for SMEs include:

(1) Traditional bank loans: Still the most important external financing channel, but the application process is often complicated, and the approval rate is low.

(2) Equity financing: Includes venture capital and angel investment, but these options are usually only available for certain types of businesses with high growth potential [5].

(3) Supply chain finance: Obtaining financing support through business relationships with large enterprises.

(4) Alternative financing platforms: Including emerging financing channels such as crowdfunding and P2P lending.

4.2. Difficult and expensive financing

SMEs face multiple obstacles in accessing financing, starting with asymmetric information. As lower-middle enterprises lack complete financial records and credit history, it is difficult to fully demonstrate their business potential to financial institutions, so assessment costs are relatively high. Secondly, SMEs lack the necessary evaluation mechanism due to their low collateral value content and fewer tangible assets. At the same time, the operation scale of SMEs is limited, so the transaction cost of SMEs is relatively high, the scale economy effect is insufficient, and the risk diversification ability is limited. These reasons all lead to the financing of SMEs is very difficult.

5. The role of digital financial inclusion in easing financing constraints

Digital inclusive finance plays an important role in alleviating financial constraints by leveraging digital technologies to improve the availability and affordability of financial services, particularly in areas not covered by the traditional financial system. The goal of digital inclusive finance is to increase the accessibility of financial services through scientific and technological innovation, so that more people, especially low-income groups, small and medium-sized enterprises, and residents in remote areas, can access convenient and low-cost financial services. The following are the main roles of digital financial inclusion in easing financing constraints [6]:

5.1. Reducing financing costs

Digital financial inclusion has lowered the operating costs of traditional banks and financial institutions through mobile payments, online lending platforms, and other means. Applying artificial intelligence (AI), machine learning, and big data technologies, digital financial inclusion is able to automate loan application, risk assessment, and approval processes. This not only improves the efficiency of loan approval, but also reduces labor costs, thereby reducing the overall cost of obtaining financing for borrowers [7].

5.2. Broaden financing channels

Small and medium-sized enterprises (SMEs) are one of the groups facing the most severe financing constraints. Traditional banks tend to be more cautious in approving loans to SMEs due to a lack of guarantee and insufficient credit history. However, with the help of big data analysis, blockchain technology, and credit scoring models, digital inclusive finance can comprehensively assess the credit status of enterprises, reduce risks, and provide loan services [8]. This enables more SMEs to access financing support, especially with no collateral or low collateral. In the traditional financial system, many low-income people, farmers, young people, and those without fixed assets have difficulty getting loans from financial institutions. Digital financial inclusion provides loans to these groups through non-traditional means such as credit scoring and consumer behavior analysis.

5.3. Improving access to finance

Traditional financial institutions tend to be concentrated in urban and economically developed areas, while residents in remote and rural areas often lack access to basic financial services. Digital financial inclusion has broken through geographical restrictions through means such as the Internet and mobile payment, enabling residents in remote areas to also enjoy financial services such as bank loans, insurance, and payments [9]. No matter farmers, low-income families, or small businesses in remote areas can access digital financial platforms through mobile phones or computers to apply for loans and buy insurance. With the popularity of smartphones and the Internet, more people can access digital financial services via mobile devices. Functions such as digital payment, online lending, and balance management allow those without bank accounts to carry out basic financial activities, thus gaining wider financial support and reducing financing barriers [10].

5.4. Optimizing financial products and services

Digital financial inclusion platforms can provide more personalized financial products to different user groups through big data analysis, behavior prediction, and AI technology. For example, based on a user's consumption record, credit data, repayment history, etc., the financial platform can customize the appropriate loan amount, interest rate, and repayment term for the borrower. Compared with the "one-size-fits-all" policy of traditional banks, such customized services can better meet the needs of different customers. Digital inclusive financial platforms usually provide more flexible repayment options, such as regular installments, early repayment, and late repayment, which helps to ease the financial pressure of borrowers and increase the feasibility of repayment, thereby improving the repayment rate of loans and further reducing financing risks.

5.5. Improving credit assessment and risk control

While traditional bank credit relies on a fixed credit history and collateral, many low-income groups and small and medium-sized enterprises do not have a well-established credit history. By integrating multi-dimensional data sources, such as social network data, mobile payment records, and e-commerce transaction data, digital inclusive finance provides a dynamic and comprehensive credit assessment of users. This assessment is not limited to financial status, but can also be combined with consumers' payment behaviors, living habits, social relationships, etc., to provide more information for credit decisions. By monitoring users' financial activities in real time, digital financial platforms can quickly discover potential risks or signs of default, and conduct timely warning and risk control. For example, by analyzing the transaction data and consumption habits of borrowers, the platform can detect abnormal behaviors and take measures to reduce default risks in advance [11].

5.6. Enhancing financial transparency and trust

Blockchain technology provides a more transparent and secure record of transactions and credit management for digital financial inclusion. Through blockchain, financial transactions can be recorded on the ledger in real time and are immutable, increasing the transparency of transactions, reducing the problem of information asymmetry, helping credit institutions to better assess the credit of borrowers, and reducing the occurrence of fraud. By establishing an information sharing mechanism, many digital inclusive financial platforms allow different financial institutions and credit platforms to share borrowers' credit information, transaction history, etc., thus helping borrowers establish a sound credit history, reducing obstacles to financing, and enhancing the overall transparency and efficiency of the financial market.

5.7. Promoting financial education and knowledge

Digital financial inclusion is not just about providing financing services, it is often accompanied by universal access to financial education. For example, many digital platforms will provide users with knowledge related to financial management, credit, and insurance through channels such as apps and WeChat to improve their financial literacy. Through these educational activities, users can better understand financing products, loan processes, repayment arrangements, and other content, to make more informed financial decisions and reduce financing difficulties caused by information asymmetry [12].

5.8. Dealing with sudden financial crisis

When emergencies such as epidemics and natural disasters occur, traditional banks are often unable to provide emergency financing support to the majority of the population in a timely manner due to network limitations and inadequate services. Digital inclusive finance, by means of mobile platforms and online lending, can respond quickly to market demand and provide short-term loans, consumer loans, and other products to enterprises and individuals in need of emergency funds to help them tide over difficulties [13].

By introducing digital technologies and innovative financial models, digital financial inclusion has eased financing constraints at multiple levels. It not only broadens financing channels and reduces financing costs, but also enhances the availability and personalization of financial services through more precise risk assessment and flexible product design [14]. In addition, digital financial inclusion has enhanced the efficiency and fairness of the financing market through innovations in information transparency, credit assessment, and risk management. With the continuous progress of digital financial technology, inclusive finance will further boost economic development, promote the fair distribution of social wealth, and provide financing support to more small and medium-sized enterprises and individuals [15].

Disclosure statement

The authors declare no conflict of interest.

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