

Research on the Construction of Integrated Financial Service Platform for Small and Medium-sized Enterprises

-- Take Bengbu, Anhui Province as an Example

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Abstract

At present, the world is facing unprecedented major changes over the years. The international situation is unpredictable. The uncertainties in China's economic development and the instability of regional development continue to rise. The development of Bengbu is facing new opportunities, new requirements and challenges. The report of the 19th National Congress pointed out that China's economic development mode has entered a high-quality development stage. Optimizing the layout of various industries and transforming the growth engine are important strategic tasks related to the entire national economy. Digital finance can reduce the financing constraints and information asymmetry level of small and medium-sized enterprises in Bengbu, and effectively improve the R&D investment level of small and medium-sized enterprises in Bengbu. In addition, the coverage dimension of digital inclusive finance plays a major role in promoting the R&D innovation of small and medium-sized enterprises in Bengbu, easing the financing constraints of enterprises, and reducing the degree of information asymmetry, and has a huge role in promoting the R&D investment of small and medium-sized enterprises in Bengbu. This paper will conduct research and analysis on this basis and put forward relevant policy recommendations.

Keywords

Small and Medium-sized Enterprises; Digital Finance; Information Asymmetry; Financing Constraints.

1. Introduction

At present, Bengbu is accelerating the development of high-tech industries, and is committed to enhancing the innovation capacity at the scientific and technological level, improving the innovation and entrepreneurship environment, and steadily enhancing its comprehensive strength. Bengbu has now become the main intellectual support and innovation source for promoting new industrialization in northern Anhui. Bengbu plays an important role in the development driven by national scientific and technological innovation. For example, the government has formulated the "Fourteenth Five-Year Plan" of Bengbu for the Development of Scientific and Technological Innovation and the "*Development Plan of Bengbu Region of the Hewu-Bengbu National Innovation Demonstration Zone (2021-2025)*" to promote the

establishment of Bengbu Innovation Demonstration Zone and the establishment of a national innovative city. At present, Bengbu is taking reform as the driving force to accelerate the construction of central cities in the Huaihe River and northern Anhui. Build a mechanism for the transformation of scientific and technological achievements, broaden the incentive scope of the transformation policy of scientific and technological achievements, and promote the efficiency of the collection and transformation of scientific and technological achievements.

Bengbu uses social capital to guide innovative SMEs and help technology-based SMEs grow rapidly. Bengbu also proposed to build a comprehensive technology and financial service platform. Financial institutions, investment and loan linkage institutions and intermediary service institutions will work together to build a financial service platform for small and medium-sized technology-based enterprises, achieve synchronous development online and offline, and provide convenient and personalized financial services for small and medium-sized technology-based enterprises. Build an effective docking platform between enterprises, financial institutions and intermediary service institutions by means of network information release. The construction of an investment and financing service platform for small and medium-sized enterprises will give full play to the resources and professional advantages of the government, financial institutions and investment and financing institutions, and provide all-round services to small and medium-sized technology-based enterprises in the form of mortgage loans and intellectual property guarantees. In the way of online information release, enterprises, financial institutions and intermediary service institutions are effectively connected. Through the establishment of a small and medium-sized enterprise investment and loan linkage service platform, the resources and professional advantages of the government, financial institutions and investment and loan linkage institutions are fully utilized to provide credit support and intellectual property pledge for technology-based small and medium-sized enterprises. Build a financing service platform for listed technology enterprises to meet the needs of financing services for listed companies, and jointly carry out institutional reform and listing training with various technology and financial service institutions. Establish a sub-platform for credit information and financing interface of science and technology enterprises, improve the credit information system of science and technology enterprises, and encourage financial institutions to efficiently issue credit loans based on tax information.

In view of the demand and conditions for funds of technology-based small and medium-sized enterprises at different stages of development, under the leadership of the Municipal Financial Supervision Bureau, combined with Bengbu Leading Group, it provides personalized one-stop service for financing of technology-based small and medium-sized enterprises through the organic integration of banking, guarantee, insurance and other businesses, venture capital and other financial institution resources. Small and medium-sized enterprises occupy a leading position in Bengbu market and are the main driving force of innovation, accounting for more than 90% of all market participants. Their strength cannot be underestimated.

At present, digital inclusive finance is in a rapid development stage. CCTV also publicizes that Bengbu digital finance helps small and medium-sized enterprises to obtain tens of billions of yuan of funds, which shows Bengbu's attention to small and medium-sized enterprises.

This article will discuss how to provide inclusive benefits for small and medium-sized enterprises, and how to encourage enterprises' research and development through this mechanism. This paper discusses the role of digital finance in promoting the R&D of small and medium-sized enterprises with the degree of information asymmetry and capital constraints as the intermediate variables.

The development of financial service centers for small and medium-sized enterprises is the driving force of Bengbu's economic transformation and modernization. The financial industry of Bengbu should start with the requirements of changing the economic and social development mode, effectively improve the development level of the financial industry and the innovation

ability of financial services, and constantly strengthen the financial characteristics and advantages of Bengbu. We will strive to build a "financial service center for small and medium-sized enterprises" with national influence, further promote the construction of "financial power", and realize the harmonious development of finance, economy and society. Building a financial service center for small and medium-sized enterprises is the only way to accelerate the development of Bengbu's financial industry. It is also to give full play to the comparative advantages of private enterprises and small and medium-sized enterprises in Bengbu and optimize the financial service function system of small and medium-sized enterprises. Accelerating the construction of the financial service center for small and medium-sized enterprises in Bengbu can further stimulate the vitality of the city's financial institutions, promote the innovation of financial products, and improve the structure of financial products. This is of great significance to further expand the breadth and depth of financial services for SMEs, reduce operational risks, and enhance the comprehensive competitiveness of SMEs.

The starting point of various enterprise service platforms is to serve the innovative development of enterprises, promote the transformation and modernization of industrial clusters, and timely provide various personalized services for enterprises. Through practice, we found that the SME service platform has a significant effect on economic development. First, improve the development capability of enterprises through comprehensive service platform. According to the main business model of "government leading+market operation+enterprise main body", adhere to the classification and positioning, and build a comprehensive financial service platform for small and medium-sized enterprises integrating technology, testing, certification and other services. Carry out vocational training and entrepreneurship incubation according to local conditions. The second is to improve the innovation ability of enterprises through science and technology service platform, so that enterprises can make continuous breakthroughs, reach higher standards and make contributions to the economic development of Bengbu.

This topic first collected and summarized a large number of domestic and foreign related documents, focused on the development status of digital finance and research on the R&D and innovation activities of small and medium-sized enterprises, and found that small and medium-sized enterprises are facing a high degree of information asymmetry and financing constraints. In view of the above problems, we take small and medium-sized enterprises in Bengbu as the research object. From the perspective of inclusive digital finance, this paper discusses the role of digital finance in promoting the R&D and innovation of small and medium-sized enterprises, and proposes to establish a complete set of financial service system, and proposes to build a comprehensive financial service platform for small and medium-sized enterprises in Bengbu.

2. Literature Review

2.1. Research Status of Inclusive Finance

Tang Song et al. (2020) said that compared with Internet finance, digital inclusive finance is broader and deeper. With the development of online finance, inclusive digital finance is going deep into people's daily life from all aspects (Chen, 2016). Therefore, "digital inclusive" and "online finance" are closely related. Li Jizun (2015) believed that online finance relies on data, and data is the carrier of information. Making data public and sharing well can effectively solve the problem of information asymmetry. Xie Ping et al. (2012) found through analysis that online finance can reduce transaction costs and information asymmetry, thus realizing impossible transactions and expanding the possibility of financial business.

2.2. Research Status of Financing Constraints of Small and Medium-Sized Enterprises

At present, China's small and medium-sized enterprises are facing financing constraints, and the financing constraints of small and medium-sized enterprises are more prominent. Saeed and Sameer (2015) found that the main reasons for SMEs' insufficient access to external funds are: information asymmetry and high transaction costs. Due to its low degree of transparency, financial institutions are difficult to determine the solvency and willingness to pay of enterprises, and in order to avoid moral hazard, SMEs' financing projects are excluded. Lin Yifu and Sun Xifang (2005) showed that due to the low information transparency of small and medium-sized enterprises, banks and other traditional financial institutions often put forward mortgage requirements when providing loans to them, while small and medium-sized enterprises generally lack collateral, resulting in the company's investment expenditure heavily dependent on internal capital. Xie Huali et al. (2018) said that due to the limited scale of small and medium-sized enterprises, the lack of operating records, and the more serious information asymmetry between them and the fund provider, there are higher transaction costs such as search, negotiation, contract, supervision, etc. in financing, which makes financing more difficult.

2.3. Research Status of Information Asymmetry

Due to information asymmetry, the financing problem of SMEs is more prominent. On this basis, there are two kinds of information asymmetries, that is, information asymmetries cause reverse selection, and in the case of information asymmetries, information asymmetries cause moral hazard. Zheng Xiaoping and Liu Shenghua (2010) believed that the fundamental reason for the insufficient financing of small and medium-sized enterprises was the information asymmetry. Asymmetric information before and after the event will cause SMEs to fall into financing constraints (Lu Qiang et al., 2019). Berger et al. (1998) believed that the personal information of SMEs is more private than that of large companies. This private nature is reflected in the information asymmetry between financial institutions and companies.

3. Theoretical Basis

3.1. Financial Development Theory

In the 1990s, a new financial development theory was formed by combining the traditional financial development and endogenous economic theory. From a macro perspective, for a long time, the role of financial development in promoting economic growth has existed. American economists Robert Morton and Z. Bodie proposed that saving to investment is a way of financial development to promote economic development. Later, King and Levine (1993) used international data to conduct experimental research on the theory of financial development promoting economic growth. Financial development also has a positive impact on micro entities. Wei Zhihua et al. (2012) found in the study of China's A-share listed companies that the bad financial ecological environment will increase the difficulty of debtors to perform debt contracts and creditors' supervision, and ultimately lead to creditors demanding higher income, increasing the debt financing costs of the entire market; The more perfect the financial ecosystem, the lower the financing cost of enterprises. Dai Xiaoyong and Cheng Liwei (2015) proved that the low R&D ratio and unstable R&D behavior of Chinese enterprises are mainly due to the low level of financial development. According to the data of industrial enterprises, financial development alleviates the financing constraints of enterprises and increases the R&D investment of enterprises. The development of inclusive digital finance has promoted the development of the entire financial market by reducing information asymmetry, expanding the

coverage of financial services, reducing transaction costs, improving the satisfaction of financial services, and improving the efficiency of resource allocation.

3.2. Financing Constraint Theory

According to MM theory, enterprises will not be in the dilemma of financing constraints in a highly mature market, because they can successfully finance at no extra cost. The investment decision of the company is different from the financing decision, that is, the company will invest more than the net present value. But in real life, the capital market does not conform to the perfect hypothesis of MM theory. At present, scholars at home and abroad have studied more on the financing constraints of SMEs, but the credit rationing theory and relationship payment theory are the most prominent. Due to the low transparency of SMEs and the poor size, income and quality of mortgages, it is difficult for SMEs to obtain financing even if they are willing to pay higher costs. At present, the existing literature classifies credit rationing into two categories: first, lenders issue loans in a way that is lower than their required amount; In the second type of credit rationing, the borrower has not made repayment request for various reasons, namely the so-called "negative potential borrower". Berger and Udell (2006) noted that the information provided by enterprises is generally divided into "hard" and "soft". "There are two types of information: hard information, namely, the financial statements of enterprises, the ability of managers, credit scores and enterprise characteristics, which is easy to obtain and disseminate; soft information is usually the information obtained by employees of specific financial institutions through long-term contact and cooperation between enterprises and financial institutions. This information is difficult to observe and disseminate (Petersen and Rajan, 1994).

3.3. Information Asymmetry and Transaction Cost Theory

Asymmetry refers to the difference of trading information between two traders, while the other side has more information. At the same time, internal information is also scarce, so only those traders who have sufficient information can get more information from it. The "lemon problem" was put forward by Aklov (1970), that is, when the information held by the buyer and seller of goods is inconsistent, the "defective goods" will prevail over the entire market. As mentioned earlier, asymmetric information will cause adverse selection and moral hazard. Because the upper part of the message will lead to the following email signature, the non-reciprocal contract will have adverse selection before signing: after signing the contract, the information subject will deliberately conceal some downstream information, engage in some high-risk activities that are inconsistent with the contract, and eventually lead to moral hazard. Serious information asymmetry leads to information rationing and financial constraints for SMEs.

Coase (1937) pointed out that transaction costs are the costs incurred by both parties to reach an exchange. Williamson (1976) believed that there are two types of transaction costs: the costs of research, negotiation, information and decision-making are a kind of prior costs, and the arrears and food management costs are post-event costs. Due to the existence of transaction costs, the operating efficiency of the financial market will decline. Digital Pratt & Whitney has greatly reduced the transaction costs between the two parties through the network technology.

4. Impact Mechanism

4.1. Mechanism of Digital Inclusive Finance to Promote R&D and Innovation of Small and Medium-Sized Enterprises

Inclusive digital finance is built on the basis of data carriers and uses big data, cloud computing, blockchain and other technologies to promote the diffusion and discovery of financial market risks. In addition, we can better understand the asymmetry of enterprises and financial markets by collecting the behavioral data and quick matching information of different business entities and analyzing the credit risk of enterprises. Compared with traditional inclusive finance, it has

the advantages of low cost, high efficiency, wide coverage and high satisfaction. On this basis, it can better provide better services for SMEs that cannot meet the differentiated needs of traditional financial business, thus promoting their healthy development.

4.2. Relationship between Corporate Financing Restrictions and Digital Finance

Globally, compared with large enterprises, small and micro enterprises face much greater financial constraints. China's small and medium-sized enterprises have serious problems in information asymmetry. Therefore, SMEs are faced with both high financing costs and the risk of being excluded by the traditional financial industry. The imperfection of China's financial system makes the problem more serious. Inclusive digital finance can solve many previous problems.

First, digital inclusive finance has expanded the financing channels of small and medium-sized enterprises, expanded the financing scale of enterprises, and made their financing easier. Digital finance makes use of the advantages of scenarios and services to develop and attract scattered and numerous small investors in the financial market and reduce the threshold of financial services. It also combines traditional financial products with Internet technology, expanding the breadth and depth of financial services, and easing the financing constraints of SMEs. A large number of literature studies show that new financial technology platforms such as microcredit, crowdfunding and third-party payment provide low-end, efficient and diversified financial services, which can meet the different differentiated needs of various small and medium-sized enterprises and effectively alleviate the constraints on innovative financing of small and medium-sized enterprises.

Second, the development of inclusive finance has improved the collection, collation and analysis of financial information of SMEs to a certain extent, and also alleviated the financing difficulties of SMEs. When reviewing SME loan applications, it is often a time-consuming and laborious process to comprehensively assess risks and avoid failure. Based on cloud computing, search engine, social network and other network technologies, digital finance has unique advantages in data collection and processing. It can filter information and identify risks more effectively and faster, save resources and provide more convenience.

Third, inclusive digital finance has greatly promoted the efficiency of SMEs in the financing process. By using big data and cloud technology, online finance companies can effectively collect and integrate the behaviors of various industries and companies, and build a complete credit reporting system. In this system, fund issuers can use digital technology to collect and match SME behavior data. On the one hand, we can conduct multi-dimensional credit evaluation on the target enterprises and improve the credit reporting system of small and medium-sized enterprises. On the other hand, it can simplify the enterprise certification and payment instrument approval process. At the same time, an innovation project can also be evaluated and evaluated. Through the above measures, we can effectively solve the problem of information asymmetry between the market and the company, thus promoting the financing efficiency of the financial market.

4.3. The Relationship between Digital Inclusive Finance and Information Asymmetry of SMEs

The innovation of various network financing methods is essentially to solve the problem of information asymmetry through scientific and technological means. Asymmetric information leads to the instability of financial markets, risks and the emergence of financial intermediaries. For small and medium-sized enterprises, the information is imperfect and the trust between enterprises and traditional financial departments is insufficient, which leads to the risk of information asymmetry of small and medium-sized enterprises higher than that of large companies. Internet big data, cloud computing, fast and convenient, surpassing lakes. It can

quickly collect the behavior data of small and medium-sized enterprises, establish a reliable credit investigation and risk control system, and effectively solve the problem of information acquisition of small and medium-sized enterprises in Bengbu. In addition, digital technology has also improved the transparency of transactions, making it easier for fund distributors to track and monitor the use of funds and the operation of innovative projects, thereby reducing the impact of moral hazard events.

4.4. Impact of Financing Constraints and Information Asymmetry on R&D Innovation of SMEs

Due to high investment, high risk and long cycle, enterprises' internal capital is often insufficient to support their scientific research investment, and enterprises need to obtain financial support from external financing, so financing constraints are important factors restricting enterprises to carry out innovative research and development work. On the other hand, the privacy of enterprise technology research and development activities has brought more serious information asymmetry. A large number of empirical analyses shows that inclusive finance can provide effective financial support for enterprises, thus promoting the company's research and development. From the perspective of financial development, the development of inclusive digital finance is a supplement to the development of traditional finance, which can effectively alleviate the constraints of "tail" financing, thus prompting companies to increase investment in research and development activities. At the same time, it can also improve the effectiveness of capital allocation by screening excellent companies and projects.

The fundamental reason for the capital constraint is the lack of a perfect market. Incomplete information is very unfavorable to the financing of enterprises, that is, information asymmetry. The weaker party in the transaction will require higher returns, thus raising the external financing cost of the company. According to the existing literature, many scholars use various proxy indicators to measure the degree of information asymmetry of enterprises, and verify the direct relationship between the degree of information asymmetry and the financing costs and financing constraints of enterprises. For example, Ascoglu (2007) and Qu Wenzhou (2011) used the PI value of the probability of informed trading, Li Li et al. (2014) used the non-current ratio, and Yao Wangxin et al. (2017) used the standard deviation of securities analysts' earnings per share forecast. Due to the opacity of production and operation, the problem of information asymmetry of small and medium-sized enterprises is more serious, resulting in high-level information asymmetry and insufficient investment of enterprises.

5. Conclusion and Suggestions

5.1. Conclusion

This study believes that digital inclusive finance can reduce the financing constraints and information asymmetry level of small and medium-sized enterprises in Bengbu, and effectively improve the R&D investment level of small and medium-sized enterprises in Bengbu. In addition, the multi-dimension of digital inclusive finance plays a major role in promoting the R&D and innovation of small and medium-sized enterprises in Bengbu, easing the financing constraints of enterprises, and reducing the degree of information asymmetry. The development of small, medium-sized and micro enterprises in Bengbu is the basis for driving the rapid economic development of Bengbu. The construction of the comprehensive financial service platform for small, medium-sized and micro enterprises in Bengbu has an important impact on the economic development of Bengbu and the construction of the comprehensive financial service platform for small, medium-sized and micro enterprises in other cities in the province.

5.2. Suggestions

(1) Reform and improve the external environment of policies and systems, and optimize the incentive and restraint mechanism. In the process of building a comprehensive financial service platform for small and medium-sized enterprises in Bengbu, on the one hand, it is necessary to improve the market information intermediary mechanism and the regional credit system environment; On the other hand, we should optimize the external incentives of regulatory policies, increase the financing support for small and medium-sized enterprises, and provide more convenient and high-quality risk management services for small and medium-sized enterprises.

(2) We will accelerate the construction of the credit system for small and medium-sized enterprises in Bengbu and improve the regulatory system for digital finance. Strengthen the construction of the comprehensive credit service platform for small and medium-sized enterprises in Bengbu, promote the Bengbu Municipal Government to establish and improve the comprehensive credit service platform for financing small and medium-sized enterprises, and establish the local operation and maintenance platform for market-oriented credit reporting institutions. At the same time, it is necessary to strengthen the macro-prudential management of the regulatory authorities by means of artificial intelligence, digital technology and other scientific and technological means, and formulate forward-looking, sustainable and unexpected intervention policies.

(3) Bengbu should support the development of digital finance and coordinate the development of digital inclusive finance in all dimensions. Digital finance can promote the research and research of inclusive finance in China, alleviate the financing constraints and information asymmetry, and enhance its diversification. It will play an important role in promoting the R&D and innovation of small and medium-sized enterprises, easing the financing constraints of enterprises, reducing information asymmetry, and promoting the research and development investment of companies.

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