On the Impact of Financial Services on the Development and Innovation Ability of Small and Medium-sized Technological Enterprises

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Abstract: In the process of modern social and economic development, financial services play an important supporting role. In the process of enterprise development, financial support provided by financial institutions is inseparable. At present, technology-based SMEs face financial problems, which is not conducive to the sustained and steady development of enterprises. Based on this, this paper deeply analyzes the impact of financial services on the innovation ability of small and medium-sized science and technology enterprises from three aspects. It also proposes the path for enterprises to obtain financial support, such as improving the credit guarantee system, building a corporate innovation fund, and enriching financing channels.

1. Research background

1.1 Literature review

Fu Jianfeng and Deng Tianzuo studied the financing development of small and medium-sized science and technology enterprises. Taking a representative technology company as an example, an empirical investigation was carried out, and it was proposed that existing financial service institutions should provide better service and support for SME financing through mode innovation and resource integration (Fu and Deng, 2014). Dou Yaqin and other scholars used Jiangsu Province as an example to study the financing of independent innovation of SMEs. Finally, the financial support path of intermediary service support, financial leading support, and government guidance to support the Trinity is proposed (Dou et al, 2014). Chen Zhanbo and Zhu Xi'an believe that technology-based enterprises play a very important role in promoting technological innovation and promoting regional economic development. Through field visits and research, they established an enterprise innovation capability index evaluation system such as customer knowledge management ability, enterprise organization ability, technology research and development ability, strategic management ability, and team learning ability. The effectiveness of this evaluation system was evaluated empirically (Chen and Zhu, 2015). Guo Jinyu and Li Enping are based on the theory of technological innovation, combing the application technology and the latest achievements of the big data platform, and finally put forward some suggestions for improving the innovation ability of small and medium-sized science and technology enterprises (Guo and Li, 2016).

1.2 Research purposes

The technological innovation of enterprises is an endogenous driving force for a country to achieve sustained economic growth. The key factor for a company's ability to sustain development and maintain its competitive edge lies in its ability to innovate. Small and medium-sized science and technology enterprises play an important role in promoting scientific and technological progress and promoting the development of the national economy. The financial services and financial support provided by financial institutions are important guarantees for the realization of innovation and development of technology-based enterprises. Therefore, based on the definition and elaboration of related concepts, this paper makes an in-depth analysis of the mechanism of financial services' ability to innovate. Finally, it puts forward some related countermeasures and suggestions,

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in order to provide useful reference for the financing difficulties of SMEs.

2. Definition of related concepts

Technology-based SMEs. At present, the industry does not have a unified and strict concept definition for technology-based SMEs. The governments of all regions have established standards for the identification of SMEs based on the actual conditions of development in the region, and have identified SMEs according to the standards set by the region. The author defines the technology-based SMEs by studying the definition of SMEs among SMEs, high-tech companies and industry professionals. The technology-oriented SMEs specifically refer to market-oriented knowledge-intensive SMEs with research and development personnel as the mainstay, with high-tech product research and development, sales and after-sales services as the main content. The technology-based SMEs mainly have the following characteristics. The first feature is the high cost of R&D investment. The industrial fields of small and medium-sized enterprises of science and technology are mainly concentrated in high-tech fields such as new materials, marine engineering, biological sciences, new energy, and aerospace. Compared with other small and medium-sized enterprises, the investment cost of scientific and technological small and medium-sized enterprises is relatively high. The second feature is high risk and high returns. Whether the new technology of the enterprise can be successfully researched and developed will also be affected by various factors such as research and development methods, enterprise management level, technical level and macroeconomic environment. From this point of view, corporate innovation has higher risks and higher returns. The third feature is the high efficiency of innovation. SMEs are more diversified in operation, smaller in scale, and less resistant to compression (Cai and Lv, 2015). Therefore, technology-based SMEs must improve their ability to innovate in order to cope with fierce market competition. In addition, high-tech SMEs also have the characteristics of attaching importance to the transformation of scientific research results and the flexibility of innovation systems.

Enterprise innovation. The essence of enterprise competitiveness is the ability of enterprises to innovate. Enterprise innovation mainly includes two aspects of product innovation and technological innovation. From a conceptual point of view, enterprise innovation means that in order to obtain profits, business operators maintain their competitiveness and seize potential opportunities in the market to recombine production conditions and production factors. At the same time as the company innovates, the corporate system will change with it to ensure that the company's technology and product innovation can be carried out smoothly (Kou, 2015). In fact, from product production to sales, there is innovation in every aspect.

3. Analysis of the mechanism of financial services' ability to innovate

3.1 The impact of financial services on corporate innovation investment

When enterprises invest in innovation, they mainly include two aspects, one is personnel input and the other is capital investment. Personnel and capital investment are the key factors for the success of SMEs' innovation, which will have a direct impact on the innovation efficiency of enterprises. When an enterprise conducts innovation, it can only ensure the smooth progress of innovative projects if the quality of R&D personnel meets the needs of innovation and sufficient financial support. And financial services will have a direct impact on the company's financial situation. In terms of capital investment, sufficient financial support can enhance the innovation efficiency of enterprises, and thus affect the production and sales of new products developed by enterprises.

3.2 The impact of financial services on corporate R&D capabilities

The level of research and development capabilities of enterprises will also be affected by the support of financial services. First, financial services have an impact on the internal financial situation of the company, and the capital situation will have a positive impact on the equipment that the company conducts research and development. Therefore, enterprises can only invest sufficient

funds in research and development centers, research and development equipment, etc. to meet the innovation needs of enterprises, only under the condition of ensuring sufficient funds. Moreover, the quality of the enterprise R&D center has a positive effect on the conversion rate of R&D results. The better the R&D center, the higher the conversion rate of the company's R&D results. The higher the conversion rate of innovation results, the greater the output of new products, the higher the revenue capacity of enterprises, and the higher the financial support provided by financial institutions to enterprises.

3.3 The impact of financial services on corporate system innovation

The institutional innovation of enterprises mainly includes employee training mechanism, innovation strategy, innovation culture and innovation incentive mechanism. Financial services have a positive role in promoting institutional innovation in enterprises. Sound training and incentives can enhance employees' recognition of the corporate culture and the overall quality of their employees, as well as the loyalty of their employees. A reasonable incentive mechanism can enhance employees' enthusiasm for innovation and positively promote the innovation efficiency of enterprises.

4. Relevant countermeasures and suggestions

4.1 Improve the credit guarantee system

In order to effectively solve the financing difficulties of SMEs, the credit guarantee system for SMEs should be further improved. First, we should improve the legal system of corporate credit guarantees and create a good external environment for corporate credit guarantees. First, relevant government departments should take the lead in setting up a third-party credit evaluation agency to objectively evaluate the credit rating of enterprises. At the same time, set up multi-level, mainstream credit guarantee institutions, integrate social resources and government resources, and establish third-party credit guarantee institutions. Third, encourage small and medium-sized enterprises to carry out intangible asset mortgages and promote the diversified development of corporate loans. Fourth, the introduction of insurance institutions in the credit system for financing technology-based SMEs. When companies are financing guarantees, they help companies share risks, thereby increasing the enthusiasm of enterprises to carry out innovative activities.

4.2 Improve enterprise innovation fund

When SMEs carry out innovative research and development, relevant departments should give certain support. For technology-based SMEs, financing is a universal problem facing companies. Therefore, relevant departments should establish and improve corporate innovation funds. Relevant departments should grade the funds established according to the development status of science and technology enterprises in the region, such as research and development direction, research fields, and subdivisions. At the same time, local governments should actively guide enterprises to carry out innovative activities and give them different financial support for different stages of enterprise development. Guide enterprises to build their own innovation system and tap the development potential and innovation ability of enterprises. In addition, relevant departments should conduct targeted regional innovation guidance, and different policy support should be given to regions with different levels of development. Increase investment in innovation funds in the western region, encourage enterprises in the western region to innovate in products and technologies, and reduce differences in the eastern and western regions.

4.3 Enrich financing channels

In view of the current difficulties in corporate financing, we should enrich the financing channels of enterprises. First, private lending can be carried out. Make full use of the advantages of fast information processing, comprehensive credit data, payment boundaries, and low cost, and further standardize private lending, and implement low-risk financing methods such as crowdfunding financing and P2P lending within the scope of compliance. SMEs provide convenient financing

channels. Second, improve the technology loans of commercial banks. Banks should establish a loan insurance mechanism for SMEs' technological innovation to transfer and diversify the risks of the banks themselves. Moreover, banks can open channels for IP mortgage loans to provide new ways of bank lending for SMEs' technological innovation. Finally, develop bond financing channels. The administrative examination and approval system and the issuance rules for the issuance of existing bonds should be reformed and improved. Moreover, SMEs should be encouraged to issue collective bonds, and the bonds of technology-based SMEs will be integrated into the bond market to further enrich the financing channels for SMEs.

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