



Innovation Fund: a Booster of Science and Technology SME Development

Yurong Chen, Liuying Xu & Weixing Wang

School of Economics and Management, Jiangsu Polytechnic University

Changzhou 213164, Jiangsu, China

E-mail: cyrpzh@126.com

Abstract

Innovation Fund, the leading special funds supported by the government, is playing a positive role in the development of the enterprises. In order to better support the science and technology SMEs rapid and healthy development, we should further promote the development of technological innovation fund of science and technology SMEs.

Keywords: Science and Technology, SME, Innovation fund, Venture capital

1. The significance of scientific and technological SMEs development

In recent years, science and technology SMEs have maintained a strong momentum of growth. They have become important forces in promoting the national economic development, constructing the subject of the market economy and promoting social stability, and they have become dynamic new economic growth points in regional economic development in China. At present, there are about 0.12 million sciences and technology SMEs and 9.6 million employees or so in China. Although accounting for only 3.3% of the total enterprises, about 66 % of the patented invention, over 74% of technological innovation and 82% of new product development have been created by science and technology SMEs, which have become major forces in technological innovation in China. There are four reasons. First, generally, the founders are the senior technical staff of research institutions or universities, having technological achievements and relatively strong technological base; Second, being no advantages of economies of scale and financial resources and the weaken strength, the enterprises have to constantly innovate and change innovation achievements into practical productive forces timely to maintain its survival in the market of fierce competition; Third, their external and internal unique characteristics can better meet the needs of technical innovation; Finally, although short of funds, they can meet market better with the advantages of the flexible mechanism and being good at innovation.

2. The bottlenecks of science and technology SMEs development

Science and technology SMEs are the enterprises in which the high-tech technology and products have been developed and produced and sold as the main business. Capital is an integral part of production factors in the process of its development. Presently, the most prominent problem of technology-based SMEs is the lack of capital and the financing channels are poor. The main reasons can be listed as follows:

2.1 The nature of the science and technology SMEs

Science and technology SME'S growth has its own unique characteristics, which can be summed up as "three-highs": (1) high-risk nature. With small-scale enterprises and uncertain operation, it is difficult to predict whether the innovation is successful or not and often has a higher mortality rate. (2) high-growth. Once the venture is successful, the revenue will increase in geometrically, maybe 10 times or 20 times a year. (3) high degree of asymmetry of information. They are the asymmetry of necessary knowledge to understand innovation achievements and the asymmetry of requirement information of innovation commercialization. Internal people have significant advantages on information than external people. The growth rule of science and technology SMEs determine its financing uniqueness. For the specific performance:(1)high input: whether in the earlier stage of research and development, or in the trial period ,or in the producing period ,or in the market development period, capital support is necessary for the enterprises.(2) external financial difficulties :enterprises often only have the technology ,or even just the concept and model of the innovation and creativity, and without collateral assets, it is impossible for them to borrow capital from the bank and it is difficulty for them to get secured financing from the security company.

2.2 The defects of the current financing system of science and technology SMEs

(1)Capital market imperfections. At present, in order to promote the reform of state-owned enterprises as the purpose

and major support the large and medium-sized state-owned enterprises listed on stock market, the direct financing market for science and technology SMEs are lack in the stock market. Although the SME board has been launched, the market is still very high threshold, emerged as by-products of the main board for minor amendments to the rules of the game of the main board. As its limited capacity for a large number of science and technology SMEs still fall short of demand, will not solve the problem.(2)“Fearless credit” of commercial banks. Science and technology SMEs generally can not get credit loan from commercial banks because of its small scale, high-risk and uncertainty. Being fear of loan risk, banks often carefully issue collateral loans other than credit loans. Most of science and technology SMEs are lack of collateral and difficult to find security. With the bank’s commercial and marketability deepening, the status of equal market transaction subject between the banks and the enterprises have been enhanced. Since banks have strengthened the mechanism of prevention, they will not provide loans for them for the prevention of the risk. (3)Smaller scale of investment risk and unsound mechanism. Risk investment plays a lifeline role in the start-up and growing period. Absorbing high-tech venture investment is an important financing channel for science and technology SMEs in foreign countries. But in China, as venture capital has just started, the overall size tends to be small, and risk investment mechanism is not yet perfect, so it is far from meeting the “incubator” demand of science and technology SMEs. (4)Lack of sound financial service intermediaries. Financial market can be regarded as surplus and shortage of capital co-exist. On the one hand, financial institutions and investment companies have large amounts of funds and have not invested direction. On the other hand, science and technology SMEs can not access to finance. As many science and technology SMEs do not have enough equity to mortgages, but can only rely on secured loans, which also need to establish the appropriate intermediary service institutions to “balance” the two sides of supply and demand. However, at present, there are few organizations specifically serving science and technology SMEs. Even if such institutions have been established in some regions, they have difficulties operating them effectively because of such problems as inadequate source of funds and with no evasion risk of the enterprises of their own.

3. The role of innovation fund for the development of science and technology SMEs

The technology innovation fund of science and technology SMEs is approved by the State Council. The special fund is set up to support technological innovation to promote the transformation of scientific and technological achievements and foster a number of science and technology SMEs with Chinese characteristics and speed up the process of high-tech industries by means of funding, loan discount and capital investment. This will make overall optimization of industrial structure and product mix to stimulate and promote the national economy to healthy, stable and rapid development. Enterprises survey results show that 91 percent of enterprises believe that the innovation fund has increased the company’s sense of innovation; 89 percent of enterprises believe that the innovation fund has raised innovation capability of enterprises; 84 percent of enterprises believe that the innovation fund has improved the competitiveness of enterprises; 64 percent of the enterprises believe that the innovation fund has played a significant role in increasing employment.

3.1 Promoting the cultivation of high-tech achievements and transformation

The enterprises that are in seeds or start-up phases would get support to enhanced technical innovation capacity by using innovation fund, resulting in more innovation fund to be changed into products. With the establishment of innovation fund, favorable conditions have been provided to change the scientific research results that are large number of high-tech technology, innovation, good market prospects upper reaches goods into products rapidly.

3.2 Creating encouraging innovation and entrepreneur atmosphere

This is the most important model role for setting up innovation fund.

Government’s initiatives often have a significant impact on society. The establishment of innovation fund by Central Government creates an atmosphere to entire society to support innovation and encourage entrepreneur and take a very important guidance for the local government to take part in. The formation of such atmosphere can not be replaced by other actors.

3.3 Broadening the financing channels of science and technology SMEs

With innovative fund guiding risk investment, financial institutions and other social funds to financing for the science and technology SMEs, the investment and financing mechanism, meeting the market economy development in the high technology industrialization, should be built to achieve independent innovation, industrial structure optimization and upgrading and promote the national economy healthy, stable and rapid development.

3.4 Strengthening the financing capacity of science and technology SMEs

With innovative fund supporting and enhancing business’s technological innovation capacity, the values of their own enterprises have been increased. Enterprises can set a good social image and attract other investors to invest and result in strength the financial capacity of science and technology SMEs.

4. Thinking of promoting the development of innovation fund of science and technology SMEs

4.1 Further clarifying the objectives and position of innovation fund

In order to match other technology plan, innovation fund should be highlighted its own characteristics and located in the technical support of laboratory results to the market, in particular, to promote the technological achievements formed by science and technology plan of government to the market. Commercialization technology should be targeted for innovation fund. At the same time of supporting technology incubation projects, enterprises are nurtured. Therefore, we should focus on financing the projects in test, development pilot phases, reducing production projects, outstanding common technology and high universality of technology transformation.

4.2 Constructing multi-level innovation fund system

At present, the investment is limited by government and investment theme of the relative is single in China, which mainly rely on central government finances. Fund-scale can not meet the capital requirements of technological innovation of science and technology SMEs. In order to better support the technology innovation of science and technology SMEs, first of all, the fund pattern should be formed, which is integration of central government finances, local government finances and social donation. Central government should continue to increase financial input to the innovation fund and give full play local advantages and enthusiasm. Investment for science and technology SMEs should be increased and local science and technology innovation fund for science and technology SMEs should be established in conditional region to absorb community funds and expand the sources of fund in various ways and promote the development of science and technology SMEs in local region. Second, with increasing loan guarantees and note endorsed, investing and setting up professional security companies for science and technology innovation, the fund and the policy, commercial finance and venture capital should be combined to further enhance the function of supporting and guiding of innovation fund. In addition, we should advocate the benefit enterprises nurturing fund when they entered the mature stage, forming a virtuous circle between fund and enterprises to support the development of science and technology SMEs.

4.3 Optimizing the environment of science and technology SMEs to make it become the main innovation subject in society

The priority project supported by innovation fund is the large projects with relatively clear technological property rights and good market potential. Special work should be conducted in technology innovation, technical property rights declaration, and fund declaration as well after getting independent property rights so as to raise the possibility of winning bidding. In order to promote science and technology enterprises in technological innovation activities, the state issued the "Contract Law" and "Patent Law" directly related to innovation and technology and a series of national laws and a variety of local technology markets laws and regulations and implementation so that the technological innovation of enterprises activities can be protected through legal means. We should encourage and support institutions of higher learning, scientific research institutes-oriented enterprises providing reliable technical support for the technological innovation of enterprises and be able to make full use of market mechanisms, co-operation with enterprises in a wide range, and expand effective way of joint production and research to promote enterprises to become the main subject of innovation and technology. All these will provide a good social environment for technology innovation of science and technology SMEs.

4.4 Structures the service system platform of science and technology SMEs

In order to promote the healthy growth of science and technology SMEs and enhance the utilization efficiency of innovation fund, the project management of innovation fund is not only supervised and inspected, but also advisory services for financing project should be strengthened. Because the regional distribution of innovation fund projects is uneven, and there exist great regional differences. The supervision and advisory services of the innovation fund projects should be implemented and special attention should be paid to management with the combination of point and face management and integration of centralized and decentralized management, the unified planning of fund management in planning, decision-making, guidance and supervision to play the role of professional intermediaries and provide quality services. Since some regional projects are more concentrated, we should set up special professional management and service agencies that learn from the experience of incubator management. For some regions with fewer projects, special institutions are not needed; the commissioned management approach should be taken, that is to say, commissioned by the relevant local government departments or agencies to act as intermediary functions of supervision and recommendation.

4.5 Strengthening intellectual property management

Innovation fund management approach should be added to the relevant intellectual property protection and management of contents. At the same time, the protection of the benefit of innovator, usage and proliferation of technology should be promoted.

4.6 Strengthening the project evaluation of the social benefits

In order to improve the social benefits of government-funded projects, we should establish specific assessment indicators of the social benefit and strengthen the project evaluation of the social benefits. The social benefits of innovation fund projects are mainly in increasing employment, the proliferation of technology (including patent, combining production and research), the leading role of the relevant industries and consumption, enhancing their credibility, and so on.

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