A Summary of Studies on the System of Science and Technology Investment and Financing in China

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Abstract. In recent years, Chinese scholars have paid more attention to the mechanism of science and technology investment and financing, and have also achieved a lot of relevant research results. This paper combs the research results in the field from the related concepts, current situation, existing problems and countermeasures of the technology investment and financing system mechanism, and makes a brief comment on the research status.

Introduction

At present, China is in a critical period of economic restructuring, industrial transformation and upgrading, and innovative country construction. How to deploy an innovation chain around the industrial chain, deploy a capital chain around the innovation chain, explore a new mechanism for technology and financial docking, and truly improve the science and technology of small and medium-sized enterprises. The financing conditions of enterprises and the promotion of capitalization and industrialization of scientific and technological achievements are of great value.

Science and Technology Investment and Financing System and Related Concepts

Science and technology investment and financing are sometimes expressed in China using "technical finance". Wei Shan and Huimin Xiao (2006) proposed that technology investment and financing is a special form of integration of industry and finance, which makes the "coincidence" between science and technology, innovation investment and market more closely and continuously linked[2]. Changwen Zhao (2009) believes that science and technology finance is a systematic and innovative arrangement of a series of financial instruments, financial systems, financial policies and financial services that promote the development of science and technology, the transformation of achievements and the development of high-tech industries. It is a scientific and technological innovation activity. The government, enterprises, markets, social intermediaries and other entities that provide financing resources and their activities in the process of financing technology innovation are a system that is an important part of the national science and technology innovation system and financial system[5]. Hanting Fang (2010) pointed out that technology finance is a series of financial innovations triggered by technological innovation activities[8]. Donggen Yu (2011) proposed that the investment and financing mechanism is a general term for the operating mechanism and management system of a country's investment activities. It is an important part of the economic system. It includes the establishment of investment and financing entities and their behavior, financing methods, investment methods, Investment project decision-making procedures, construction implementation management and macro-control systems[9]. Delin Mo (2016) proposed that technology investment and financing is a process of valuation or evaluation of science and technology, pre-paying the risk funds that may be needed to make scientific and technological innovations go smoothly, and on the basis of this, the process of obtaining subsequent benefits; It is the process of transforming science and technology into quantifiable assets and business activities, and realizing income through investment and financing[12].
The Status and Problems of China's Science and Technology Investment and Financing System

Jinfeng Bo (2007) believes that the reform of science and technology investment and financing system for many years has made Heilongjiang Province's technology investment and financing show the characteristics of "self-raised funds by units and individuals, supplemented by government grants and bank loans"[4]. Haiming Huang (2010) believes that since the reform and opening up, China has carried out a major reform of the science and technology investment and financing system. In terms of the investment system, the pattern of coexistence of multiple investment entities of the state, enterprises, and individuals has basically taken shape; The financing model for raising funds through financial allocations, self-raised funds, loans, and securities markets has also taken shape. However, there are still problems such as insufficient integration of scientific and technological resources, poor investment mechanism of science and technology, poor market financing channels, poor policy effects of state support for technology financing, and insufficient innovation power of large and medium-sized technology enterprises[7]. Donggen Yu (2011) analyzed the current situation of investment and financing of science and technology enterprises in Langfang City, and found that its investment and financing mechanism is not sound enough. The investment and financing of financial and financial institutions cannot meet the development of science and technology enterprises, the risk investment mechanism is not perfect, and the capital market is not perfect. problem[9]. Yufei Li (2012) and others believe that the existing technology investment and financing system in Heilongjiang lacks a new mechanism that can transform and improve the various components of the existing system and efficiently and coordinately operate, which makes it difficult for science and technology investment and financing to adapt to science and technology. The need for development[11]. Jinhou Xie (2018) found through research that Sunan region supported technological innovation through financial development and achieved good results, but financing constraints are still the most important factor restricting enterprise technology innovation[14]. Through research, Meng Chen (2011) found that in the process of establishing a new mechanism for investment and financing of science and technology in Heilongjiang Province, there is a financial technology investment structure, the supervision of the use of funds needs to be improved, the channels for investment and financing of science and technology are not smooth, the financing ability of enterprises is not strong, and the structure of science and technology investment is unreasonable. The technology investment and financing environment is not good, the investment subject is singular, the exit mechanism is imperfect, and the shortage of professional talents[10].

Suggestions on Countermeasures of Science and Technology Investment and Financing System

Yuhong Wei (2001) proposed to improve the science and technology investment and financing system of Guangxi, improve the government's technology investment mechanism, expand its guiding function, use economic leverage and policy means, promote enterprises to become the main body of technology development, and actively explore technology and finance. The combination of methods, expand the space for investment and financing of science and technology, actively carry out pilot ventures, promote the development of high-tech industries, develop international financial leasing and international scientific and technological cooperation, and expand the scale of overseas technology financing and other countermeasures[1]. Zhengping Gao (2007) put forward the following suggestions for the innovation of the investment and financing mechanism of Tianjin Binhai New Area through the combing of the experience of Pudong District: strengthening the functions of the management committee of Binhai New Area, setting up a platform for attracting investment or attracting intelligence, and broadening the capital of innovation. Source channels, training talents in venture capital management, planning the operation mechanism of the guiding fund, and exerting the capital market exit mechanism[3]. Donggen Yu (2011) put forward a strategic concept for innovating the investment and financing mechanism of Langfang City's science and technology enterprises through research: increase the financial investment in science and
technology enterprises, actively use foreign capital, and give full play to the effects of the capital market[9]. Yufei Li (2012) based on the current status of science and technology investment and financing in Heilongjiang Province, gave the establishment of its technology investment and financing mechanism: improving the financial technology investment approach, optimizing the input structure, increasing guidance and support, promoting enterprise technology investment, strengthening technology investment investment Suggestions for the establishment of financing intermediaries[11]. Jinhou Xie (2018) believes that the role of capital market is the key to Changzhou's perfect investment and financing system, in addition to continuing to coach enterprises on the main board (the first floor), the SME board and the GEM (the second floor) and the new three board (the first In addition to listing, it is necessary to establish a Changzhou regional equity trading center (fourth floor) to provide more convenience and improve corporate financing efficiency for Changzhou technology enterprise financing[14]. Xiaqin Ma et al. (2018) proposed the following suggestions for the investment and financing system of small and medium-sized science and technology enterprises in Dongguan: building a large data credit system for small and medium-sized enterprises in Dongguan, innovating the market economy value evaluation method for small and medium-sized science and technology enterprises, and establishing small and medium-sized science and technology enterprises. A new model for the evaluation of market economy value, the establishment of Dongguan small and medium-sized technology-based enterprise venture funds, the development of Dongguan small and medium-sized technology-based corporate bond market, the active implementation of bank holdings of small and medium-sized technology-based enterprises, and the market-oriented debt-to-equity swap[13].

Summary

Based on the above-mentioned domestic and international review and summary of the technology investment and financing system and mechanism, the following conclusions can be drawn.

There are relatively few research results on the institutional mechanisms of technology investment and financing. There are many definitions of the concept concepts related to the system of science, technology, investment and financing, and many problems have been found through the combing of the status quo, so that the countermeasures and suggestions are put forward; but the research results are less and the time is not consistent.

There are geographical inequalities in the research on the mechanism of science, technology, investment and financing. Although the government has started to carry out reforms in response to the actual situation in China, many scholars have also put forward relevant suggestions through research, and carried out a series of pilot work in the country, which has achieved good results in the eastern region, but few people have done to the western region. Research on the mechanism of science, technology, investment and financing.

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References


