

# How Do Financing Constraints Affect Corporate Innovation?

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## Abstract

**Financing constraints refer to a phenomenon in which enterprises are restricted by several factors when raising funds in the financial market and cannot obtain all the funds they need. Studying the impact of financing constraints on corporate innovation has always been a hot topic in academic circles. By sorting out relevant literature at home and abroad, this paper summarizes various theoretical mechanisms and empirical results that affect corporate innovation, and specifically analyzes the impact of financing constraints on corporate innovation from both macro and micro perspectives, in order to alleviate corporate financing constraints and promote corporate innovation. Innovation provides reference and prospects for possible future research directions.**

## Keywords

**Financing constraints; corporate innovation; equity financing.**

## 1. Introduction

Against the background of the global economic downturn, countries around the world are seeking new drivers of economic growth. As a "booster" for endogenous economic growth, innovation has received unprecedented attention from governments around the world. Compared with innovation led by government departments, innovation led by the corporate sector accounts for an increasing share and plays an increasingly important role in society. How to make enterprises willing to participate in innovation activities and improve the efficiency of innovation activities is a topic of great concern to governments, enterprises and academia. The activity of enterprise innovation is closely related to finance. An important channel for financial development to promote economic growth is to support the innovation activities of enterprises. Considering that in China's underdeveloped capital market, companies generally face financing constraints such as "financing is difficult and expensive"[1][2], This article mainly focuses on the theory of financing constraints, and combs the relevant literature on the impact of financing constraints on corporate innovation from both macro and micro perspectives.

Market imperfections caused by information asymmetry will cause companies to face financing constraints and give up some investment projects that can increase corporate value but have no financial support. Compared with ordinary investment projects, innovative investment projects have the characteristics of high failure rate, high risk, large capital requirements, and long cycle. They often face more severe information asymmetry, causing financing constraints to become a "stumbling block" to corporate innovation[3]. In this regard, this article combs through the relevant literature on financing constraints and corporate innovation at home and abroad and finds that the academic community has basically reached a consensus on the view that financing constraints inhibit corporate innovation: in terms of macro factors, good financial markets, appropriate industrial policies, targeted Government subsidies can effectively alleviate corporate financing constraints, thereby promoting corporate innovation; in terms of micro factors, appropriate financing structures, the state-owned background and listing status of enterprises, and the social capital and technical background of executives can all alleviate corporate financing constraints. to promote corporate innovation.

## 2. Macro Perspective

The macro institutional environment is an important external factor that affects corporate innovation. For example, my country's "innovation-driven development strategy" and "science and technology power strategy" are important macro factors that drive corporate innovation. The macro institutional environment mainly affects micro corporate financing constraints and innovation failure tolerance. degree, product market competition and other aspects to affect corporate innovation[4], This chapter is mainly based on the macro system background of China, and analyzes the impact of financing constraints on enterprise innovation from the macro perspective of financial market, industrial policy and government subsidy.

### 2.1. The advantages and disadvantages of policy support

Industrial policy is the sum of various policies of the national or local government that intervene in the formation and development of industries based on economic development needs and specific social goals. The implementation of different industrial policies at different times is the protection, promotion and support of specific industries by the Chinese government. It is an important means of development that can optimize the industrial structure and promote sustainable economic development within a certain period of time. Specifically, industrial policy can adjust the industrial structure and industrial organization form, and change the external macro environment faced by enterprises, such as bank loans, tax incentives, Resources such as government subsidies will be directed to enterprises in industries supported or encouraged by industrial policies, thus easing the financing constraints of enterprises in specific industries[5][6], To promote enterprise innovation[7]. However, it is worth noting that industrial policies may also reduce the efficiency of resource allocation, distort the motivation of enterprises to innovate, and trigger enterprises to engage in strategic innovation in order to "seek support." [8], This is not conducive to improving the level of enterprise innovation. Focusing on the financing constraint theory, Yu Mingguai and others took the opportunity to adjust the encouraged industry planning in the "Eleventh Five-Year Plan" and found that encouraged industrial policies can increase the credit resources and government subsidies of private enterprises, alleviate The tax burden on private enterprises can be reduced, thereby alleviating the financing constraints of private enterprises in innovative activities, and thus promoting technological innovation of private enterprises.

### 2.2. Whether the capital market is perfect

General Secretary Xi Jinping pointed out that "finance is an important core competitiveness of the country, financial security is an important part of national security, and the financial system is an important basic system in economic and social development." Since the reform and opening up, my country's financial market has developed rapidly and experienced Through multiple reforms, on the one hand, it has developed from only one financial institution, the People's Bank of China, to today's situation where many commercial banks and non-bank financial institutions coexist; on the other hand, it has developed from the initial state of no capital market to now having the Shanghai Securities Exchange. There are many capital markets such as the main board market and the Science and Technology Innovation Board market of the Shenzhen Stock Exchange, the main board market of the Shenzhen Stock Exchange, the small and medium-sized board market and the GEM market. At present, my country's capital market is the second largest capital market in the world, although it is different from mature Western developed countries. Compared with the capital market, there are still many shortcomings[9] However, there is no doubt that my country's capital market has made a significant contribution to the survival and expansion of micro-enterprises and the rapid development of my country's economy.

A well-developed financial market can significantly reduce the financing costs of enterprises and provide low-cost financial support for enterprises, thereby easing the financing constraints faced by enterprises in innovation, and ultimately promoting enterprise innovation; distortions in financial factors will intensify corporate financing constraints, thereby inhibiting enterprise innovation. In domestic research, Xie Weimin, Fang Hongxing [10] found that the advancement of market-oriented reforms in the banking industry and regional financial development can effectively promote my country's listed companies to increase R&D investment, and the promotion effect of financial development on corporate R&D investment is greater among small-scale enterprises and non-state-owned enterprises with greater financing constraints. Obviously, this shows that a higher level of regional financial development can promote corporate innovation by easing corporate financing constraints. Li Chuntao et al [11] Taking the enterprises listed on the New OTC Market in my country as the research object, it was found that the development of regional financial technology can promote the innovation output of enterprises. This is because financial development can reduce the information asymmetry between banks and enterprises, optimize credit approval procedures, and reduce financial costs. Market financing thresholds and other methods can alleviate the inhibitory effect of financing constraints on corporate innovation. On the other hand, they can improve the effectiveness of government fiscal and tax policies in stimulating corporate innovation.

### 2.3. Gains and losses of government subsidies

Government subsidies are an important manifestation of the government's "supporting hand" and play a role that cannot be ignored in the "market failure" of innovation. Theoretical circles believe that in terms of corporate innovation, government subsidies are a double-edged sword: on the one hand, they can effectively ease corporate financing constraints [12], This will drive companies to increase investment in innovation; on the other hand, it may have a crowding-out effect on companies' independent investment in R&D [13], This is not conducive to corporate innovation. This section mainly analyzes the mechanism of government subsidies on corporate innovation based on the financing constraint theory.

Government subsidies directly provide funds to enterprises, which can directly alleviate corporate financing constraints and thereby promote corporate innovation. The resource attributes of government subsidies can alleviate the capital shortage problem of corporate R&D and help reduce the cost and risk of corporate innovation investment, thus stimulating corporate growth. Innovation investment can improve the level of enterprise innovation output; however, the existence of rent-seeking behavior will distort the purpose of enterprise managers' innovation investment, trigger strategic innovation of enterprises, and is not conducive to substantive innovation of enterprises. At the same time, enterprises face different life cycle stages Financing constraints are different, Chen Hong [14] found that the "financing effect" of government subsidies on corporate innovation is more significant among growth-stage companies with lower profitability levels.

## 3. Microscopic Perspective

### 3.1. Equity financing or debt financing?

The funding sources of enterprises are mainly divided into endogenous financing (such as retained earnings, etc.), equity financing (such as issuing stocks, etc.), and debt financing (such as bank loans, etc.), and equity financing and debt financing are collectively referred to as exogenous financing. Endogenous financing There is basically a consensus in academic circles that equity financing and equity financing can effectively promote corporate innovation. This is because the use of endogenous financing is less interfered by external stakeholders and can

effectively alleviate the financing constraints faced by corporate innovation. Therefore, it is usually It has a significant promoting effect on enterprise innovation;

The impact of equity financing on corporate innovation can be positive or negative. On the one hand, listed financing can expand corporate financing channels and diversify shareholder investment risks, thereby reducing corporate capital costs, improving corporate risk-taking levels, and thus promoting corporate innovation. For example, Zhang Jinfan[15] found that IPO promotes corporate innovation by easing corporate financing constraints and promoting the construction of human capital teams; for industries with large external financing needs, corporate listings can alleviate their financing constraints and reduce their financing costs, thereby promoting the improvement of their innovation level. .But on the other hand, listing will also aggravate the agency problem of enterprises and affect the operational efficiency of enterprises after listing. There will also be a large number of individual investors after the listing of enterprises, and individual investors are often more sensitive to short-term performance, thus causing corporate managers to Facing greater short-term performance pressure, giving up investment in high-risk, high-yield innovative projects, that is, going public may inhibit corporate innovation. For example, Bernstein[16] found that although the listing of enterprises can attract new human capital and obtain external innovation, it will lead to the resignation of R&D personnel with strong technical capabilities and reduce the productivity of remaining R&D personnel, thereby reducing the quality of internal innovation of the enterprise. The academic community has not yet reached a unified opinion on whether debt financing can effectively alleviate the financing constraints faced by enterprises in innovation investment and thereby promote enterprise innovation. The sources of debt financing mainly include commercial credit, bank loans and corporate bonds. Commercial credit is an important factor in the daily production of enterprises. The credit relationship formed with suppliers or customers due to deferred payment or advance collection in business activities. The creditors of commercial credit usually have very limited restrictions on the use of the debtor's funds, so it can solve the problem of insufficient funds for corporate innovation investment to a certain extent. , thereby driving corporate innovation. For example: Zhang Jie [17] found that commercial credit can alleviate the financing constraints of private enterprises, thereby promoting private enterprises to increase investment in R&D; Xiao Hailian [18] found that commercial credit positively affects enterprise conventional innovation investment; Yuan Ling [19] It is found that commercial credit can promote enterprise innovation by easing corporate financing constraints. In countries with underdeveloped financial markets, bank loans are an important way to ease the financing constraints of enterprises. However, there is a serious ownership discrimination in the allocation of bank credit funds, that is, it is difficult for private enterprises to obtain bank loans, especially small and medium-sized non-listed private enterprises, but state-owned enterprises with national background can easily obtain low-cost bank loans [20],Therefore, bank loans often have an obvious promoting effect on the r & d investment of state-owned enterprises, but they cannot effectively alleviate the financing constraints faced by private enterprises in innovation investment. In addition, bank loans not only need to repay the principal and interest, but also its fund use is more vulnerable to the constraints of the loan contract, so its mitigation effect on the constraints of enterprise innovation financing is relatively limited, and it is difficult to significantly promote enterprise innovation.

### **3.2. Private enterprises and state-owned enterprises**

The nature of ownership affects the financing constraint and risk bearing level of enterprises by affecting the resource acquisition ability and agency cost [21], And then it affects the enterprise innovation. On the one hand, compared with private enterprises, state-owned enterprises are usually more likely to obtain government subsidies and credit resources, and

often face lower financing constraints [22], Therefore, the innovation projects of state-owned enterprises are funded; on the other hand, as the controlling shareholder of state-owned enterprises, it is usually difficult to effectively supervise the managers of state-owned enterprises, which leads to high agency cost; and the promotion and selection mechanism of senior executives of state-owned enterprises is often a diversified policy objective [23]. It is easy to lead to the lack of innovation motivation of enterprise managers, which is not conducive to enterprise innovation. In this regard, Yu Minggui, said that the complete privatization of state-owned enterprises changed the nature of the enterprise and changed the external financing environment (such as the loss of government support and guarantee, facing credit discrimination, etc.), thus aggravating the financing constraints of the innovation activities of privatization enterprises and finally inhibiting enterprise innovation; Zhang Xishan [24] found that state-owned stocks have a strong resource effect on enterprise R & D investment.

### 3.3. Manager level

Senior executives are the makers and implementers of enterprise innovation investment decisions, and they have an important impact on enterprise innovation [25]. The social capital of senior executives can obtain more resources for enterprises, which can not only alleviate the financing pressure faced by enterprise innovation and expand the financing channels of enterprises, but also form an innovation alliance of information sharing, so as to improve the probability of enterprise patent authorization. Therefore, the social capital of senior executives can promote enterprise innovation. In this regard, Shen Yu [26] found that the direct alumni relationship of senior executives can significantly improve the financing convenience and reduce the degree of enterprise information asymmetry, thus promoting enterprise innovation; He Ying [27] Believe that the CEO's rich professional experience can significantly expand its social network resources to improve the innovation level of enterprises; Chen Shuangying [28] found that the social capital of senior executives of private enterprises helps enterprises to obtain innovation resources, so as to enhance the R & D investment tendency and R & D investment intensity of private enterprises.

### 3.4. Listing status

The impact of enterprise listing on enterprise innovation can be positive or negative. On the one hand, listing can expand corporate financing channels and diversify shareholder investment risks, thereby reducing corporate capital costs, improving corporate risk-taking levels, and thus promoting corporate innovation. For example, Zhang Jinfan found that IPO promotes corporate innovation by easing corporate financing constraints and promoting the construction of human capital teams; Acharya and Xu believed that for industries with large external financing needs, corporate listings can ease their financing constraints and reduce its financing costs, thereby promoting the improvement of its innovation level. But on the other hand, listing will also aggravate the agency problem of the company and affect the operating efficiency of the company after listing. After the company is listed, there will be a large number of individual investors, and individual investors are often more sensitive to short-term performance, causing corporate managers to face Greater short-term performance pressure, abandoning investment in high-risk, high-yield innovative projects, that is, the listing of companies may inhibit corporate innovation. For example, Bernstein found that although a company's listing can attract new human capital and obtain external innovation, it will lead to the resignation of R&D personnel with strong technical capabilities and reduce the productivity of remaining R&D personnel, thereby reducing the quality of internal innovation in the enterprise.



### 3.5. Analyst attention

Financing constraints caused by lower information transparency and higher information asymmetry have become important factors inhibiting corporate innovation. As an important information intermediary in the capital market, analysts can visit listed companies, collect relevant information about listed companies through surveys and other methods, and use their own professional knowledge to process and interpret the information, and then pass the information to investors and other stakeholders, which makes the company's information more transparent and disseminated faster. Thereby alleviating the information asymmetry problem of enterprises, reducing the financing costs of enterprises, and thus promoting enterprise innovation. Specifically, Chen Qinyuan found that analyst attention can alleviate information asymmetry and agency problems in the corporate innovation process, thereby promoting corporate innovation; similarly, Yu Minggui also found that analysts focus on promoting corporate innovation by easing corporate financing constraints. However, it is worth noting that analysts' focus on accounting earnings may also bring too much short-term performance pressure to management, leading to management giving up investment in order to achieve short-term goals. The investment cycle is long and the risk is high, but the returns after success are also high. of innovation projects, that is, analyst attention hinders corporate innovation. In addition to the above factors, relevant research shows that micro factors such as corporate earnings information quality, accounting information comparability, and stock price plunge risk will also affect corporate innovation by affecting corporate financing constraints. Due to space limitations, this article will not discuss it further.

## 4. Summary and Enlightenment

### 4.1. Summarize

The academic community has basically reached a consensus on the view that financing constraints inhibit corporate innovation. Therefore, under the current background of my country's implementation of the "innovation-driven development strategy" and the "science and technology power strategy", how to alleviate the challenges faced by corporate innovation activities by changing macro and micro factors? The issue of financing constraints has clear practical significance for promoting enterprise innovation, improving national scientific and technological innovation strength, and realizing scientific and technological independence and self-reliance. By sorting out relevant literature, this article found that: in terms of macro factors, a good financial market, appropriate industrial policies, Targeted government subsidies can effectively alleviate corporate financing constraints, thereby promoting corporate innovation; in terms of micro factors, appropriate financing structures, the state-owned background and listing status of enterprises, and the social capital and technical background of executives can all alleviate corporate Financing constraints to promote corporate innovation.

In this regard, this article makes the following suggestions: First, further develop my country's financial market and encourage small and medium-sized high-tech enterprises to register and list on stock capital markets such as GEM and Science and Technology Innovation Board to cope with the shortage of innovation funds for high-tech enterprises, thereby enhancing the country's Second, in view of the core technology bottlenecks currently faced by our country and the future development direction of science and technology, relevant industrial policies, government subsidies and tax preferential policies should be targeted to drive enterprise innovation and enhance the country's technological competitiveness. Third, prevent the negative impact of the privatization of state-owned enterprises on corporate innovation investment, and use the government's "supportive hand" to help private enterprises solve the problem of "difficult and expensive financing", such as including support for the development of private enterprises in the performance evaluation of state-owned banks. , in order to reduce

the credit discrimination faced by private enterprises, thereby easing the financing constraints faced by private enterprises in innovative investment, and giving full play to the important role of private enterprises in promoting my country's "Strategy of Strengthening the Nation through Science and Technology."

## 4.2. Research prospects

Although a large amount of literature has analyzed the impact of various macro and micro factors on corporate innovation from the perspective of financing constraints, in view of the importance of innovation to the survival and development of enterprises and the country's acquisition of international competitive advantages, this article believes that in the future, scholars can also innovate and develop related research on financing constraints and corporate innovation at the following levels: At the macro factor level, focus on the impact of macro institutional reform and policy implementation on micro corporate financing constraints and innovation behaviors under my country's new normal economy, such as the establishment of How will macro factors such as the implementation of the IPO registration system on the Science and Technology Innovation Board, the change from the approval system to the registration system for GEM IPOs, and new asset management regulations affect corporate innovation by affecting corporate financing constraints? At the level of micro factors, the focus is on the impact of the characteristics or behaviors of internal stakeholders such as the company's actual controllers and senior executives, and external stakeholders such as the media on corporate financing constraints and corporate innovation, such as the overseas status of the company's actual controllers or senior executives. How will the right of residence, the attention of investors and other stakeholders to corporate innovation activities, and the media's positive or negative reports on corporate actual controllers or executives affect corporate financing constraints and thus affect corporate innovation?

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