

# THE IMPACT OF SOCIAL CAPITAL, RISK TAKING AND CORPORATE GOVERNANCE ON INNOVATION INVESTMENT OF CHINESE LISTED FIRMS

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## Abstract

Social capital is an important driving force for Corporate innovation investment in companies, and plays an indispensable role in enhancing their competitiveness and market position. The article explores the impact mechanism of Social capital on Corporate innovation investment through research on listed companies in Guangdong Province. Based on 311 samples and structural equation modeling (SEM) analysis, it is found that Social capital has a significant positive impact on Corporate innovation investment, with an impact coefficient of 0.224. In addition, the direct impact mechanism also finds that Social capital has a significant positive impact on Risk-taking, Risk-taking has a significant positive impact on Corporate innovation investment, Social capital has a significant positive impact on Corporate governance, and Corporate governance has a significant positive impact on Corporate innovation investment; The indirect impact mechanism is manifested as the mediating effect of Risk-taking and Corporate governance on the impact of Social capital on Corporate innovation investment. The conclusions of these quantitative analyses are still validated in subsequent qualitative analyses. By interviewing 15 employees and relevant experts of listed companies in Guangdong Province, and conducting in-depth analysis of the interview text, we can not only prove the reliability of the quantitative analysis results, but also further supplement the research results.

**Keywords:** Social Capital, Risk Taking, Corporate Governance, Innovation Investment.

## 1. INTRODUCTION TO RESEARCH BACKGROUND

The theory of social capital was first proposed by European sociologist Pierre Bourdieu. According to this theory, social capital is the sum of all kinds of resources that individuals or organizations are embedded in a certain social network and obtained from the relationship network through the ability of individuals or organization members. Social networks are not innate, but constructed through investment strategies (Bourdieu & Richardson, 1986). In recent years, social capital theory has been introduced into the research of enterprise strategic management, and has become an effective factor to explain the influence of individual and organizational network relations on enterprise strategic decision-making.

First, the existing research lacks discussion on the mechanism of social capital influencing enterprise innovation strategy. Social capital can help enterprises obtain resources such as information, capital and policy, and has a direct impact on the innovation and development of enterprises. Most of the existing research focuses on the impact of corporate social capital on financial performance in developed countries, while the research on the mechanism of social capital influencing corporate innovation and development in China is particularly necessary. Therefore, combined with the development law of China's market economy, it is urgent to

further explore the different effects of social capital on corporate innovation activities from the three dimensions of political capital, reputation capital and financial capital.

Second, corporate governance plays an important role in the financial performance of enterprises, but few studies have comprehensively analyzed the boundary role of various types of factors in the relationship between social capital and enterprise innovation investment. There is a lack of relevant research on the combination of social capital and corporate governance mechanism, which cannot guide enterprises to improve their governance structure and restricts the driving force of corporate governance efficiency in innovation and development. Therefore, it is necessary to conduct an in-depth discussion on the boundary role of corporate governance structure from the perspective of five factors: the integration of the two positions, the size of the board of directors, the shareholding ratio of the management, the degree of equity balance and the nature of property rights, so as to improve the contribution rate of corporate governance in innovation strategy.

Third, the existing literature lacks a comprehensive social capital theory, stakeholder theory and signaling theory to explore the relationship between social capital and corporate innovation investment. Enterprises build and obtain scarce resources from social capital, and internal stakeholders (such as the board of directors, senior executives, shareholders, etc.) and external stakeholders (such as governments, communities, banks, etc.) can provide technical support, financial support, and intellectual property protection for the innovation and development of enterprises. The diversity of social capital signals good development for corporate stakeholders, attracts external stakeholders to provide investment for corporate innovation, encourages internal stakeholders to improve their willingness to take risks, and enhances the ability of enterprises to bear R&D risks. Therefore, it is necessary to integrate the social capital theory, stakeholder theory and signal theory, deeply analyze the internal mechanism of corporate social capital stimulating corporate innovation power and promoting innovation investment, and provide a theoretical basis for the development of corporate innovation.

## **2. LITERATURE REVIEW**

### **2.1 Theoretical Basis**

#### **2.1.1 Theory of Firm innovation investment**

**Schumpeterian Theory:** This theory emphasizes the role of innovation in driving economic growth and emphasizes the importance of technological breakthroughs and disruptive innovations.

**Resource-Based View:** This perspective suggests that firm-specific resources and capabilities, such as knowledge, skills, and relationships, are key determinants of competitive advantage and innovation.

**Dynamic Capabilities:** This framework argues that firms must continuously develop and adapt their capabilities to stay ahead in a rapidly changing environment, emphasizing the importance of organizational agility and innovation.

**Innovation Diffusion Theory:** This theory examines the process by which new ideas and technologies spread through a population, highlighting the role of network effects and social learning in driving innovation adoption.

### **2.1.2 Theory of Social capital**

#### **(1) The formation and development of social capital theory**

Social capital theory is a favorable factor used by organizational researchers to explain the impact of individual and organizational network relations on enterprise development. The development of social capital theory roughly goes through the following five stages: the budding stage represented by Bourdieu, the transition stage represented by Loury, the deep cultivation stage represented by Coleman, the promotion stage represented by Burt, and the expansion stage represented by Putnam.

The embryonic stage represented by Bourdieu. Pierre Bourdieu, a European sociologist, defines social capital as "the sum of actual or potential resources". The concept describes the benefits that individuals derive from participating in groups, and the social networks that are intentionally constructed in order to create such resources, and is considered the most complete definition. Social networks must be constructed through investment strategies and are a reliable source of returns (Bourdieu, 1986).

The amount of social capital depends on the size of the personal network on which an individual or organization depends and the amount and type of capital possessed by the individuals associated with it. Bourdieu's theory considers the existence of a social network and the resources held by the network, as well as the ability of individuals to use the network to obtain resources and pursue goals.

The ascension phase represented by Burt. WE Baker (1990) defined this concept as "the resources that individuals obtain from a specific social structure to pursue their own interests." Schiff (1992) defined the concept as "a set of social structural elements that affect the relationship between people, which are the parameters of the production or utility function." Burt (1992) sees them as "friends, colleagues, and more contacts through whom opportunities to use financial and human capital can be obtained."

While Coleman and Loury emphasized dense networks as a necessary condition for the emergence of social capital, two decades later Burt built on Granovetter's insights into social capital theory with the idea of "structural holes." It is argued that social capital stems from the lack of network ties rather than their density, because dense networks tend to convey redundant information, while weaker ties may be the source of new knowledge and resources.

The expansion phase represented by Putnam. Robert Putnam is the most influential social capital theorist in public health and community development. Putnam proposes that social capital is "the characteristics of social organizations, such as networks, norms, and trust, that facilitate cooperation with the goal of mutual benefit".

He points to the collective character of the concept, arguing that social capital is the property of communities and states, not individuals, and that it is both a cause and an effect. Cities can

achieve good governance and economic development because they have high social capital. Existing research relies almost entirely on Putnam's work on social capital. Social capital is the norms and networks of society that coordinate cooperative actions

### **2.1.3 Theory of Corporate Governance**

#### **(1) The formation and development of stakeholder theory**

This study used content analysis to summarize articles on Stakeholder theory in academic journals, reviewed its formation and development, and identified themes, trends and differences among different schools to provide guidance for future research. The theory has gone through three main stages: incubation stage (1984-1991), development stage (1991-1998), and expansion stage (1999-present).

The incubation stage of stakeholder theory (1984-1991). Freeman put forward the stakeholder theory in 1984, and the main ideas are as follows: first, a company is composed of a network of relationships between different stakeholders. A stakeholder is defined as "any group or individual who can influence or be influenced by an organization". Second, the key task of managers is to create co-benefits for stakeholders, not to weigh conflicting interests. Third, the key idea is integration. Business decisions should contain ethical content and should not be treated as two separate concepts, but should be regarded as the integrated effect of the value creation activities of the enterprise. Fourth, the core idea is that the company is built around a specific goal that is not based solely on profitability, but on collaboration among stakeholders.

### **2.1.4 Theory of risk taking**

Many firm behaviors are seen as indicators of risk taking, reflecting various decisions of firms that reflect strategic choices about the consequences of uncertainty, for example, R&D expenditures, diversification, acquisitions, divestitures, and race behavior. This paper reviews the literature on risk taking based on the theoretical frameworks of agency theory, behavioral theory of the firm, prospect theory, socioemotional wealth theory, and high-ladder team theory.

#### **(1) Risk-taking based on agency theory**

Agency theory solves the problem of separation of ownership and control (Dalton et al., 2007). A risk-sharing problem usually arises when a principal or owner delegates work to a manager. Managers may have agency conflicts with shareholders over risk preferences. Shareholders are entitled to the residual value of the firm and are therefore risk neutral. And managers cannot diversify their employment risk and are therefore unwilling to take risks.

If corporate managers are required to take significant residual risks, they will seek higher monetary returns or make less risky decisions, thus developing unattractive corporate strategies (Hoskisson et al., 2017). In order to overcome the problem of risk aversion, agency theory provides several mechanisms, such as ex-ante equity or performance-based compensation, to link the interests of agents and shareholders, and to formulate control mechanisms, such as supervision by the board of directors or institutional investors.

(2) Risk-taking based on behavioral theory of the firm and prospect theory

The behavioral theory of the firm holds that individuals or organizations compare their performance with their desired level, and the results are shaped into risk-taking preferences. When performance is below the reference point, individuals will engage in greater risk taking (gain view), while performance is above the reference point and risk averse behavior will prevail (loss view). The hypothesis of prospect theory is based on people's loss aversion. They "find that losses are more unpleasant than gains of equal size are pleasurable." Thus, relative to a reference point, they tend to behave in a way that minimizes losses. In prospect theory, aspirations, expectations, norms and social comparisons can shape reference points (Holmes et al., 2011).

(3) Risk-taking based on socioemotional wealth theory

Family firm research has examined the effect of business or socioemotional wealth on risk taking. When family firms make major strategic decisions, the main reference point for owners and managers is to avoid the loss of family socioemotional wealth. Gomez-Mejia et al. (2007) found that family decision makers are loss averse to threats to their socioemotional wealth, even if this means accepting greater performance risks.

(4) Risk-taking based on the high-ladder team theory

The high-ladder team theory is based on the basic premise of bounded rationality proposed by Simon in 1957. The three psychological traits are values, cognitive models, and personality traits. Values, which reflect a CEO's preference for a particular state of affairs, have received less attention in academia. Scholars have conducted a lot of research on the cognitive patterns and risk-taking of CEOs, and managers' perceptions form their views on the external world and influence the choice of risk strategies.

Personality traits help to shape and reflect the values and cognitive models that affect decision-making (Helfat & Peteraf, 2015).

Risk-taking is one of the core components of enterprise strategic management research. Based on the signaling theory, social capital can obtain innovation resources for enterprises from the three dimensions of political capital, reputation capital and financial capital, convey the signal of good development of enterprises to stakeholders, enhance the ability of enterprises to gather resources, improve the level of enterprises to take risks, and increase the willingness of managers to take risks, so as to enhance the intensity of R&D investment. Promote the implementation of enterprise innovation strategy. Therefore, this study will explore the mediating role of risk-taking in the relationship between social capital and corporate innovation investment.

A survey of the relevant literature shows that the outcome of risk taking is less studied than the antecedents. Managers' risk behavior may ultimately affect organizational risk, which is mainly reflected in the variance of future income streams of enterprises. Since Bowman (1980) proposed the "paradox," the relationship between risk and return has been the subject of debate. Most acquisitions have negative performance effects. In addition, unethical behavior related to

risk taking may cause enterprises to suffer serious reputation damage, performance fluctuation or decline. However, although overconfidence is accompanied by unstable returns, it also brings more innovation (Hirshleifer et al., 2012). Related research has explored how a firm's risk-taking determines different types of managerial, corporate, and environmental outcomes, leading to a better understanding of the internal and external consequences of the level of risk-taking.

## 2.2 Variables

### Independent Variables

#### 2.2.1 Social Capital

Define social capital as the resources individuals or organizations can access through their social networks (Bourdieu & Richardson, 1986). We operationalize social capital across three dimensions:

1. Political Capital measure political capital using the number of government grants received by the company, the number of government officials on the board of directors, and the company's membership in industry associations.
2. Reputation Capital measure reputation capital using the company's media coverage, the number of awards received, and the company's ranking in industry surveys.
3. Financial Capital measure financial capital using the company's debt-to-equity ratio, the number of financial institutions providing loans, and the company's access to venture capital.

2.2.2 Corporate Governance we define corporate governance as the system of rules, practices, and processes by which a company is directed and controlled. We operationalize corporate governance using the following measures:

1. Board Size measure board size as the total number of members on the board of directors.
2. Board Independence measure board independence as the proportion of independent directors on the board of directors.
3. CEO Duality measure CEO duality as a dummy variable that takes the value of 1 if the CEO is also the chairman of the board, and 0 otherwise.
4. Ownership Concentration measure ownership concentration as the percentage of shares owned by the largest shareholder.
5. Risk-Taking define risk-taking as the willingness of a company to undertake risky projects. We operationalize risk-taking using the following measures:
6. R&D Intensity Measure R&D intensity as the ratio of R&D expenditure to total sales. Capital Expenditure Intensity: We measure capital expenditure intensity as the ratio of capital expenditure to total assets.
7. Debt Ratio measure debt ratio as the ratio of total debt to total assets.

### *Dependent Variable*

#### 2.2.3 Innovation Investment

Define innovation investment as the amount of money a company spends on research and development (R&D). Operationalize innovation investment using the following measures

1. R&D Expenditure Measure R&D expenditure as the total amount of money a company spends on R&D activities.
2. Number of Patents measure the number of patents a company has been granted.

### **3. RESEARCH HYPOTHESES AND THEORETICAL MODELS**

#### **3.1 Relationship between variables and research hypotheses**

Based on the literature review, we propose the following hypotheses

- H1: Social capital promotes corporate innovation investment.
- H2: Social capital promotes enterprises' risk-taking ability.
- H3: Corporate risk-taking capacity promotes corporate innovation investment.
- H4: Enterprise risk-taking ability plays a mediating role in the relationship between social capital and enterprise innovation investment.
- H5: Corporate governance plays a moderating role in the relationship between social capital and corporate innovation investment.

Theoretical Models

#### **3.2 Theoretical Model of Social Capital and Innovation Investment**

The theoretical model of social capital and innovation investment is based on the resource-based view and the social capital theory.

The resource-based view suggests that firms can gain a competitive advantage by acquiring and controlling valuable, rare, inimitable, and non-substitutable resources (Barney, 1991).

Social capital theory suggests that social capital can provide firms with access to valuable resources, such as information, knowledge, and financial support (Bourdieu & Richardson, 1986).

According to this model, social capital can promote innovation investment by providing firms with

#### **3.3 Theoretical Model of Corporate Governance and Innovation Investment**

The theoretical model of corporate governance and innovation investment is based on the agency theory and the stewardship theory. Agency theory suggests that there is a conflict of interest between managers and shareholders, and that managers may not always act in the best interests of shareholders (Jensen & Meckling, 1976).

Stewardship theory suggests that managers are motivated to act in the best interests of the firm and its stakeholders (Donaldson & Davis, 1991).

According to this model, corporate governance can promote innovation investment by:

Aligning the interests of managers and shareholders: Good corporate governance practices can help to align the interests of managers and shareholders, so that managers are more likely to make decisions that are in the best interests of the firm.

### **3.4 Theoretical Model of Risk-Taking and Innovation Investment**

The theoretical model of risk-taking and innovation investment is based on the prospect theory and the real options theory. Prospect theory suggests that individuals are more likely to take risks when they are faced with the possibility of losing something, than when they are faced with the possibility of gaining something (Kahneman & Tversky, 1979).

Real options theory suggests that firms can view innovation projects as real options, which give them the right, but not the obligation, to invest in a project at a later date (Trigeorgis, 1996).

According to this model, risk-taking can promote innovation investment by

Increasing the potential rewards: Risk-taking can lead to higher returns on innovation projects.

Reducing the potential losses: Risk-taking can also lead to lower losses on innovation projects, as firms can abandon projects that are not successful.

Providing flexibility, Risk-taking can give firms the flexibility to adjust their innovation strategies in response to changing market conditions.

### **3.5 Theoretical Model of Mediating Effect of Risk-Taking**

The theoretical model of mediating effect of risk-taking suggests that social capital can promote innovation investment by increasing firms' risk-taking ability. This is because social capital can provide firms with access to the resources they need to take risks, such as information, knowledge, and financial support.

Additionally, social capital can help firms to mitigate the risks associated with innovation, such as the risk of failure.

### **3.6 Theoretical Model of Moderating Effect of Corporate Governance**

The theoretical model of moderating effect of corporate governance suggests that the relationship between social capital and innovation investment is moderated by corporate governance.

This is because good corporate governance practices can help to ensure that social capital is used effectively to promote innovation investment. Additionally, good corporate governance practices can help to mitigate the risks associated with innovation, such as the risk of fraud or corruption.



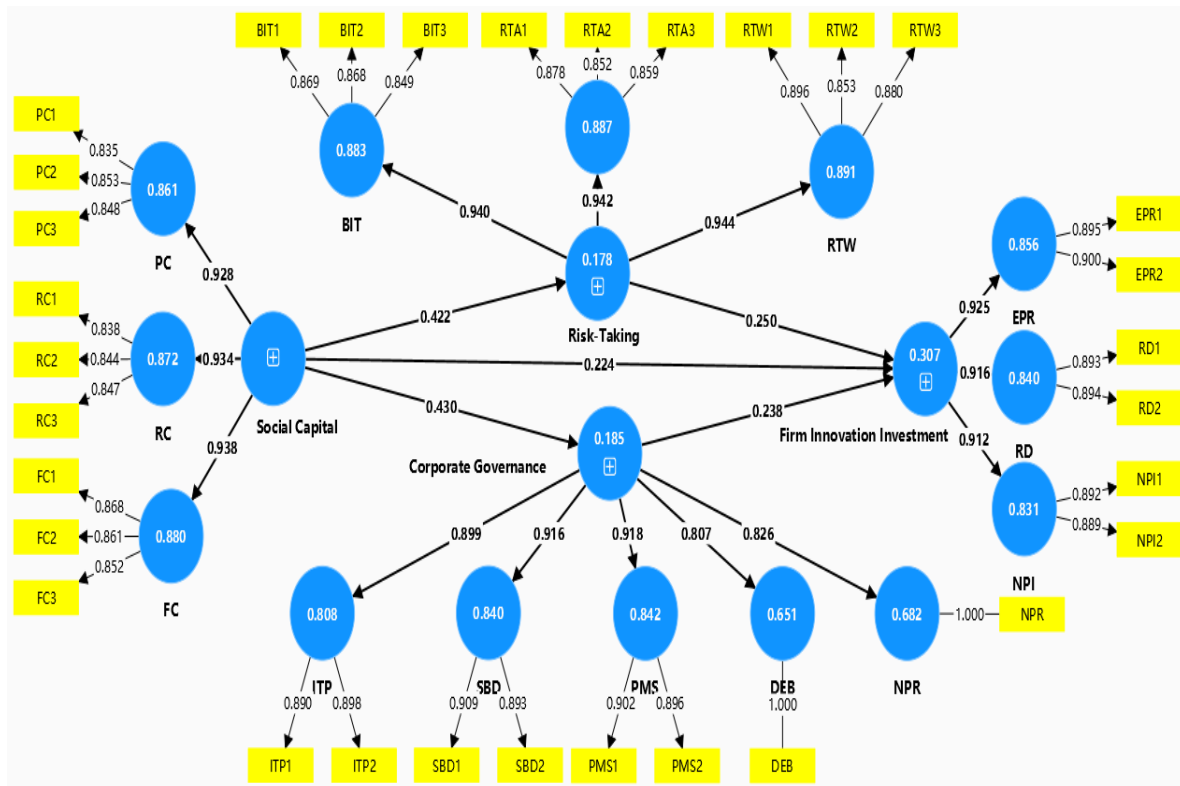


Figure 3.1 Model Model

#### 4. RESEARCH METHODOLOGY

This study employs a quantitative research approach to investigate the impact of social capital, corporate governance, and risk-taking on the innovation investment of Chinese A-share listed companies. We use panel data of Chinese A-share listed companies from 2018 to 2022 and employ PSM, Heckman two-stage evaluation model, and GMM dynamic panel generalized moment model to test our hypotheses.

##### 4.1 Testing of Structural Equation Model

In structural equation modeling (SEM) analysis, the main role of analyzing structural models is to assess the causal relationships and path coefficients between variables. Through structural modeling analysis, the researcher can determine the explanatory power of each variable for the model and the degree of interaction between them. This helps to validate the accuracy and reliability of the theoretical model and reveals the direct and indirect relationships between the variables, leading to a better understanding of the phenomenon or problem examined in the study. Structural modeling analysis can also be used to test hypotheses, validate theoretical frameworks, and provide guidance for future research. Figure 4.1 is a path diagram.

## 5. CONCLUSION

Corporate social capital is an important driving force for innovation investment in companies, and plays an indispensable role in enhancing their competitiveness and market position. The article explores the impact mechanism of corporate social capital on innovation investment through research on listed companies in Guangdong Province. Based on structural equation modeling (SEM) analysis, it is found that corporate Social capital has a significant positive impact on Innovation investment, with an impact coefficient of 0.224. In addition, the direct impact mechanism also finds that corporate Social capital has a significant positive impact on Risk-taking, Risk-taking has a significant positive impact on Innovation investment, corporate Social capital has a significant positive impact on Corporate governance, and Corporate governance has a significant positive impact on Innovation investment; The indirect impact mechanism is manifested as the mediating effect of Risk-taking and Corporate governance on the impact of corporate Social capital on Innovation investment. The conclusions of these quantitative analyses are still validated in subsequent qualitative analyses. By interviewing 15 employees and relevant experts of listed companies in Guangdong Province, and conducting in-depth analysis of the interview text, we can not only prove the reliability of the quantitative analysis results, but also further supplement the research results. The above achievements have further enriched the theoretical model of the impact mechanism between corporate social capital and corporate innovation investment, providing more foundation and reference for subsequent theoretical research; In practice, it provides methodology and policy guidance for listed companies in Guangdong Province and relevant departments of the Guangdong Provincial Government to further promote corporate innovation investment, while also responding to the needs of national high-quality development and promoting the development of new quality productivity.

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