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

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ABSTRACT

This research investigates the impact of social capital, corporate governance, and risk-taking on the innovation investment of Chinese A- share listed companies. Defines and operationalizes social capital across three dimensions: political capital, reputation capital, and financial capital. It further explores the mediating effect of risk- taking on the relationship between social capital and innovation investment. the study examines the boundary effect of corporate governance structure on this relationship. Utilizes panel data of Chinese A- share listed companies from 2018 to 2022. It employs PSM, Heckman two- stage evaluation model, and GMM dynamic panel generalized moment model to test the direct and indirect effects of social capital, the moderating effect of corporate governance, and the mediating effect of risk-taking.

The findings reveal that social capital, corporate governance, and risk-taking all have a significant positive impact on innovation investment. Furthermore, risk- taking plays a mediating role in the relationship between social capital and innovation investment, while corporate governance plays a moderating role. Offers theoretical and practical implications for enterprises, policymakers, and researchers. It provides valuable insights for enterprises seeking to leverage social capital and improve corporate governance to enhance innovation investment. Additionally, it offers policymakers guidance on fostering an environment conducive to innovation and entrepreneurship. Finally, the research contributes to the literature on social capital, corporate governance, risk-taking, and innovation investment.

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

INTRODUCTION

1.1 Introduction to research background

As the micro main body of China's innovation activities, there is still a big gap between the intensity of innovation investment and that of developed countries. In 2021, the R&D expenditure of Chinese enterprises accounted for 76.9% of the whole country, 0.3 percentage points higher than the previous year, and the R&D investment intensity of enterprises above designated size was only 1.3%. In 2021, the average R&D intensity of American enterprises was 3.1%, while that of German and Japanese enterprises also exceeded 3.0%. This is because the highly uncertain external environment during the economic transition period Narrows the channels for enterprises to obtain innovation resources, further increases the risk coefficient of innovation, and leads to some enterprises still relying on the large- scale and extensive growth model based on labor input, with low independent innovation ability and willingness.

In order to cope with the severe international situation, enterprises need to efficiently and reasonably obtain, utilize and integrate the innovation resources of the government, banks, other stakeholders and other aspects, build a technological innovation system with enterprises as the main body, market as the guidance, and deep integration with social capital, form a diversified, long-term and stable innovation factor investment mechanism, and promote the innovation-driven strategy. Achieve technological change. In addition, managers can also use activities across organizational boundaries to obtain innovation resources from other members of the social capital network, promote enterprises to timely adjust innovation strategies according to changes in the external environment, and disperse innovation risks through cooperation with other organizations. To sum up, the social capital of enterprises and managers can alleviate the impact of external environment uncertainty on enterprises' innovation activities, and become a key factor to enhance enterprises' risk-taking ability and managers' willingness to take risks, cultivate enterprises' innovation ability, and improve R&D investment intensity.

Therefore, discussing the driving mechanism and constraints of enterprise innovation input from the perspective of social capital and promoting domestic social capital to actively participate in the construction of innovation system have sufficient practical guiding significance for Chinese enterprises to implement innovation-driven strategy.

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.

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.

2.1.2Theory 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.

2.2.2Corporate 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

2.2.3Innovation 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.

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

3.2Theoretical 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

3.3Theoretical 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.

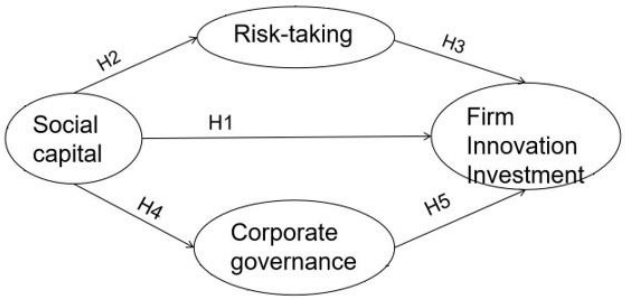
3.5 Theoretical Model of Mediating Effect of Risk-Taking

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 Theoretical Model



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 Research Design

This study employs a quantitative research design using panel data of Chinese A-share listed companies from 2018 to 2022. We use a combination of propensity score matching (PSM), Heckman two-stage evaluation model, and GMM dynamic panel generalized moment model to test our hypotheses. This research design allows us to control for selection bias, indigeneity, and other potential confounding factors. By examining the direct and indirect effects of social capital, the moderating effect of corporate governance, and the mediating effect of risk-taking, this study provides a comprehensive understanding of the factors influencing innovation investment among Chinese A-share listed companies.

DATA COLLECTION INSTRUMENTS

This study uses a variety of collection instruments and procedures to collect high-quality data on social capital, corporate governance, risk-taking, innovation investment, and control variables. The data is cleaned, processed, and validated to ensure its accuracy and reliability. This rigorous data collection process ensures that the results of the study are reliable and generalizable.

REFERENCES

Al-reyaysa M, PinningtonIN A H, Karatas-Ozkan M, et al. (2019). The management of corporate social responsibility through projects: a more economically developed country perspective. Business Strategy & Development, 2(4):358-371.

Albers S, Wohlgezongen F, Zajac E J. (2016). Strategic alliance structures: An organization design perspective. Journal of Management, 42 (3):582-614.

Alessandrini P, Presbitero A F, Azaria. (2009). Banks, distances and firms' financing constraints. Review of Finance, 13(2):261-307.

Amara I, KHLIF H. (2020). A review of the influence of political connections on management's decision in non-US settings. Journal of Financial Reporting and Accounting,18(4):687-705.

Apaydin M, Jiang G F, Demirbag M, et al (2021). The importance of corporate social responsibility strategic fit and times of economic hardship. British Journal of Management,32(2):399-415.

Armstrong C S, Vashishtha R (2012). Executive stock options, differential risk-taking incentives, and firm value. Journal of Financial Economics,104(1):70-88.

ARRFELT M, WISEMAN R M, HULT G T M (2013). Looking backward instead of forward: Aspiration-driven influences on the efficiency of the capital allocation process. Academy of management journal,56(4):1081-1103.

ARUNRUANGSIRILERT T, CHONGLERTTHAM S (2017). Effect of corporate governance characteristics on strategic management accounting in Thailand. Asian review of Accounting,25(1):85-105.

BALIGA B R, MOYER R C, RAO R S (1996). CEO duality and firm performance: What's the fuss. Strategic Management Journal,17(1):41-53.

DUCASSY I, GUYOT A (2017). Complex ownership structures, corporate governance and firm performance: The French context. Research in International Business and Finance,39(3):291-306.

EDMANS A, MANSO G (2011). Governance through trading and intervention: A theory of multiple blockholders. The Review of Financial Studies, 24(7):2395-2428.

EESLEY C, LENOX M J (2006). Firm responses to secondary stakeholder action. Strategic Management Journal,27(8):765-781.

Pham H S T, Tran H T (2020). CSR disclosure and firm performance: The mediating role of corporate reputation and moderating role of CEO integrity. Journal of Business Research,120(3):127-136.

Rahman M M, Saima F N (2018). Efficiency of board composition on firm performance: Empirical evidence from listed manufacturing firms of Bangladesh. The Journal of Asian Finance, Economics and Business,5(2):53-61.

Reddy C D, Hamnn R (2018). Distance makes the (committed) heart grow colder: MNEs' responses to the state logic in African variants of CSR. Business & Society,57(3):562-594.

ŠPIČKA J (2018). How does public investment support change the capital structure and productivity of small enterprises? An empirical study of the food industry. International Food and Agribusiness Management Review,21(8):1045-1059.
Srhoj S, ŠKRINJARIĆ B, Radas S (2021). Bidding against the odds? The impact evaluation of grants for young micro and small firms during the recession. Small Business Economics, 56(1):83-103.
Valente M J, Rijnhart J J, Smyth H L, et al (2020). Causal mediation programs in R, M plus, SAS, SPSS, and Stata. Structural equation modeling: a multidisciplinary journal, 27(6):975-984.
Wang Mansi, Wang Xuedong (2020). Relationship financing, relationship governance and corporate innovation: an empirical study from Shanghai and Shenzhen A-share high-tech listed companies. China Soft Science, (5) :118-129.