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Research on Interlocking Directorates: A Review and Prospect

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Abstract

Interlocking directorates are prevalent in corporate systems worldwide. In recent years, the proportion of interlocking directorates in Chinese companies has been on the rise. The interlocking directorate mechanism is of great practical significance for improving corporate governance levels, promoting innovation and transformation, facilitating cross-border cooperation and resource integration, and enhancing corporate social responsibility awareness. Current research on interlocking directorates mostly focuses on demonstrating their impact on specific aspects of corporate performance, lacking a comprehensive analysis of their economic effects and a systematic examination of fundamental issues. Theoretically, this paper systematically combs relevant literature on interlocking directorates, reviews related concepts and measurement methods, summarizes and compares the basic theories of interlocking directorate research, and sorts out the influencing factors of interlocking directorates. In terms of effects, it reviews studies on the impact of interlocking directorates on corporate behavior, governance, and performance, identifies potential research directions, and provides valuable practical references for policy formulation and corporate governance decisions.

Keywords: Interlocking Directorates; Corporate Governance; Corporate Network; Corporate Performance

1 Introduction

Interlocking directorates refer to a situation where a board member of one enterprise concurrently serves as a board member in one or more other companies (Caiazza et al., 2019). Multiple interlocking directors holding cross-appointments in different companies form an interlocking directorate network. Over the past century, the phenomenon of interlocking directorates has spread widely among companies around the world; compared with enterprises in other countries, the existence of concurrent directors in Chinese listed companies has become an increasingly prominent phenomenon. Statistics based on data from Chinese A-share listed companies during 2007–2022 show that more than 80% of these companies have at least one interlocking director, forming a complex network structure covering the overwhelming majority of firms and thus indicating that the phenomenon of interlocking directorates has become increasingly common (Liao et al., 2024).

Interlocking directorates are one of the most dynamic research topics in the field of corporate governance. By sorting out the vertical evolution of research content on interlocking directorates, this paper divides it into four stages: the first stage (early 20th century) involves emerging debates focusing on the collusive nature of interlocking directorates and the impact of legal restrictions; the second stage (1970-1989) shifts to focus on the potential benefits of interlocking directorates for companies and shareholders; the third stage (1990-2009) emphasizes the organizational and individual consequences of interlocking directorates; the fourth stage (2010-2018) uses social network and institutional theories to study the impact of corporate governance systems aimed at regulating the negative effects of interlocking directorates. In recent years, due to the new challenges faced by companies in various contexts and theoretical progress in the fields of strategic management and sociology, the number of studies on interlocking directorates has increased significantly. Current research on the interlocking directorate mechanism mainly focuses on the composition and characteristics of interlocking directorates (Areneke & Tunyi, 2022), performance (Caiazza et al., 2023), and other aspects. Domestic research on interlocking directorates started relatively late. With the development of China's economy, factors such as historical and cultural factors, institutional factors, the market's pursuit of speed and flexibility, and unique interpersonal and trust networks have determined that interlocking directorates, as an informal system, have become an important influencing factor in the operation of Chinese enterprises. In recent years, research in this field has gradually increased, but the research content is fragmented, mainly focusing on specific aspects of their effects (Chen, 2023; Li & Luo, 2023), lacking a comprehensive analysis of their economic effects. For example, fundamental issues such as the key antecedents and consequences of interlocking have not been systematically explored.

In view of this, based on the current research status of interlocking directorates, this paper takes interlocking directorate research as the theme and discusses it from the perspective of comparing the theoretical foundations and research conclusions of interlocking directorate studies. Firstly, it reviews and sorts out the definitions and measurement methods of interlocking directorate concepts; then summarizes the mainstream basic theories of interlocking directorate research; on this basis, it summarizes and evaluates empirical studies on the antecedent variables and effects of interlocking directorates and outlines the current research framework; finally, it summarizes the deficiencies in this field. New regulations related to interlocking directorates are being formulated and discussed around the world. In the prospect, this paper incorporates institutional and environmental context factors into the analysis framework; pays attention to cross-border or international interlocking scenarios; explores the governance context with Chinese characteristics; enriches the diversity of theories, samples, and methods; considers gender diversity and more individual characteristics; and proposes future research directions by specifically analyzing different industries and groups.

The contributions of this paper are theoretical. While sorting out existing theories, it provides potential theoretical directions for future research; practically, it analyzes various economic effects of interlocking directorates and provides valuable references for policy formulation and corporate governance decisions.

2 Concepts and Measurement

2.1 Relevant Concepts of Interlocking Directorates

When two or more companies share a director, that director is usually referred to as an interlocking director; the link or connection created by interlocking directors is called a director interlock (Burt, 1980; Mizruchi, 1996), which can be divided into direct interlock ties and indirect interlock ties according to differences in connection methods (Ma, 2014). The interlocking director network refers to a collection of direct or indirect network relationships formed based on the concurrent appointments of interlocking directors, providing enterprises with special channels for information transmission and exchange between them (Kilduff, 2003).

2.2 Measurement of Interlocking Directorates

Information on a company's board of directors can be found on the company's official website, annual reports, industry publications, or records of government regulatory agencies. The number of interlocks is measured by the total number of interlocking directors among companies each year. Another calculation method is the total number of board members serving as directors on the boards of other companies divided by the board size; the higher this ratio, the stronger the connectivity between the board and other companies (Fich & White, 2005).

In relevant studies, the characteristics of interlocking directorates are measured through three progressive concepts: interlocking directors, director interlocks, and director networks. Existing literature has two dimensions for measuring the structure of interlocking director networks:

(1) Network centrality:

- Degree centrality describes the number of direct connections between a single director and other directors after eliminating scale differences, to measure the communication activity of the director in the network.
- Closeness centrality describes the sum of distances from a single director to all other directors, to measure the independence or effectiveness of the director in the network.
- Betweenness centrality describes the number of times a single director is on the shortest path between two other directors, to measure the control power and initiative of the director in the network.
- Eigenvector centrality measures the quality of communication of the director in the network.

(2) Structural holes, which reflects the redundancy of the director network (Houston et al., 2018).

Considerable progress has been made in the conceptual interpretation and measurement methods of interlocking directorates. Researchers have proposed different definitions and measurement methods to better understand and analyze the role and impact of interlocking directorates in organizations. On this basis, issues such as how to select appropriate interlocking director network data and measurement methods, consistent indicator measurement, and how to consider individual characteristics according to research needs require further exploration in the research process.

3 Theoretical Foundations of Research

This paper summarizes the theoretical foundations involved in existing interlocking directorate research and divides them from two different perspectives. The first perspective focuses on the relationship between enterprises and the external environment, based on theories such as Resource Dependency Theory, Social Network Theory, and Agency Theory, studying the relationship between enterprises and external stakeholders, and then how to obtain and utilize external resources; the second perspective focuses on internal corporate decision-making and behavior, based on Class Hegemony Theory, Organizational Learning Theory, Supervisory Control Theory, Upper Echelons Theory, and Pluralist Theory, studying the internal power structure of enterprises, learning and knowledge transfer, and mechanisms for managing and controlling corporate behavior.

3.1 Enterprise and the External Environment

3.1.1 Research on Interlocking Directorates Based on Resource Dependency Theory

Resource Dependency Theory is the most influential theory in interlocking directorate research. Resource Dependency Theory holds that enterprises need external resources such as capital, technology, raw materials, and market channels to achieve their goals and maintain their operations, and none are completely independent or fully control the conditions for their existence. The success of an enterprise depends on its ability to obtain, control, and utilize these resources; the uncertainty of the external environment will increase the organization's dependence on external resources. To obtain and maintain the required resources, enterprises need to establish cooperative relationships with the outside world, survive through the process of network construction and relationship management, thereby obtaining a stable supply of resources and better information flow, and ensuring production factors and other inputs (Pfeffer & Salancik, 2015).

Rooted in the perspective of Resource Dependency Theory, the emergence of interlocking directorates is driven by the resource needs at the company level, and the purposes of interlocking include cooperation, penetration, and control mechanisms. As a cooperative mechanism, interlocking ensures the support of other companies that provide key resources, and interlocking directors are regarded as boundary spanners for enterprises to obtain resources from the outside, helping to obtain the necessary resources in uncertain times (Harker, 2020); to help companies cope with complex environments, directors put forward practical suggestions by examining the business environment and based on experience gained from other company boards (Davis et al., 2003). As a penetration mechanism, interlocking directors obtain information from partners, creating conditions for collusive behavior. As a control mechanism, interlocking is a means for enterprises to influence the policies of other enterprises to achieve specific interests. For example, companies in need of debt capital are more likely to invite bank representatives to join their boards to facilitate access to capital (Shropshire, 2010). Interlocking directors have expanded the channels for obtaining resources by increasing awareness of technological updates, finding appropriate resources to finance large-scale projects, evaluating business risks and opportunities, adopting cooperative strategies to develop new markets, and sharing good practices and useful information to effectively organize production.

3.1.2 Research on Interlocking Directorates Based on Social Network Theory

Social Network Theory holds that relationships in the network originate from the demand for resources controlled by the organization in the external environment of the enterprise. Uncertainty may come from the enterprise's own strategic actions or broader market factors, such as upcoming technological or regulatory changes. The enterprise's dependence on resources determines the degree of uncertainty, and information asymmetry further increases the degree of uncertainty. In strategic and organizational theory, the negative correlation between uncertainty and corporate performance has been well confirmed both theoretically and empirically. Established network connections respond to resource needs and the ability to obtain information and coordinate activities. Through connections with other enterprises in the network, resources are obtained from other organizations, information asymmetry is reduced, and converted into overall benefits, that is, reducing uncertainty. The diffusion of business practices is a prerequisite for applying network relationship strategies in the field of Resource Dependency Theory.

Boards rely on social networks when making corporate decisions. As company organizations form interrelated boards, they establish a social network of direct and indirect connections with each other. This network can affect the dissemination of information and corporate practices between enterprises (Chuluun et al., 2017; Barros et al., 2024). When enterprises face greater uncertainty, the benefits associated with centrality and structural holes in the interlocking network, such as information, enhanced capabilities, and learning, will be more useful. The information, communication, and coordination advantages of network centrality enhance the enterprise's ability to shape or stabilize the environment; structural holes, as well as related information, power, and control over future outcomes, reduce the scope of possible outcomes for the enterprise by shaping and stabilizing the environment, thereby reducing uncertainty.

3.1.3 Research on Interlocking Directorates Based on Agency Theory

The core view of Agency Theory is based on the basic assumption of the separation of ownership and control. Shareholders, as principals, hire managers as agents to manage the company; however, due to information asymmetry and interest conflicts, agents may pursue their own interests rather than the interests of shareholders, resulting in agency costs. Supervision and incentive coordination mechanisms are necessary to control management opportunism and moral hazards to reduce agency costs (Eisenhardt, 1989).

According to Agency Theory, interlocking directorates can be used to balance the uncertainty and increased business risks existing in environments with weak formal institutions. On the other hand, Agency Theory studies the possibility that managers form connections and ties for opportunistic reasons. Such behavior diverts attention from the optimal operation and management of the enterprise and hinders corporate performance (Zona et al., 2018); at the same time, Agency Theory identifies the risk of principal-principal conflicts. Interlocking directorates may exacerbate conflicts between major shareholders and minority shareholders, and the financial performance of the company will also be affected (Calabrò et al., 2017; Caiazza et al., 2023). The entire agency research in this field focuses on how boards of directors and directors minimize the agency problems of senior management.

3.2 Internal Corporate Decision-Making and Behavior

3.2.1 Research on Interlocking Directorates Based on Class Hegemony Theory

Class Hegemony Theory holds that the ruling class maintains its dominant position by controlling and shaping the culture and ideology of society, making its interests the dominant ideas and behavioral norms of society. The social elite with close social relations, shared business concepts, values, and interest pursuits hold several influential positions simultaneously to strengthen their personal networks, serve their careers, promote their interests in economic and social fields, and build social capital; it is easier for members within the class to obtain key information and opportunities. To maintain and increase the influence of the class, they invite each other to become corporate directors, enabling enterprises to realize the interests of the class and individuals to a greater extent (Roy & Bonacich, 1988).

According to Class Hegemony Theory, interlocking is a mechanism for collusion and cooperation, reflecting a special type of social cohesion that is only open to a limited circle of directors, so the relationships are more personal. The formation of interlocking directorates aims to maintain the social relations of the power of the upper class and can be regarded as a way for the class to use its economic and social relations to expand its influence. Early researchers found that the elite director networks in the United States and the United Kingdom are loosely integrated with the common goal of maintaining their personal and collective status in society (Useem, 1982). In recent years, Class Hegemony Theory has been mostly used to study interlocking driven by narrow interests. For example, in emerging economies such as Mexico, where formal market institutions are weak and family-owned enterprises with highly concentrated ownership dominate, the elite is more likely to exercise hegemonic power. From the perspective of Class Hegemony Theory, the positive aspect of interlocking directorates is that formulating unified business behaviors and moral guidelines is conducive to corporate cooperation; the negative aspect is that opportunistically maintaining their influence through financial hegemony will ultimately have an adverse impact on corporate performance (Drago & Aliberti, 2019; Watkins-Fassler et al., 2024).

3.2.2 Research on Interlocking Directorates Based on Organization Learning Theory

Organizational Learning Theory holds that when enterprises learn and adapt to environmental changes, they improve their competitiveness through the dynamic flow of knowledge (Levitt & March, 1988). From the perspective of Organizational Learning Theory, there is more information exchange between interlocking enterprises than with other enterprises, and director interlocks are important channels for strategic imitation between enterprises. For example, interlocking directors lead enterprises to adopt similar strategic decision-making processes; in addition, using panel data of large U.S. manufacturing companies, the imitation effect of external boards in R&D decisions was found (Carpenter & Westphal, 2001; Oh & Barker III, 2018).

3.2.3 Research on Interlocking Directorates Based on Supervisory Control Theory

Supervisory Control Theory holds that resource providers and recipients can send directors to supervise operations to ensure the interests of stakeholders. According to this theory, supervision and control are one of the reasons for the formation of interlocking directorate relationships, because corporate risk management is the key to monitoring. A prominent manifestation is that financial institutions often send directors or senior managers to enterprises with which they have lending relationships and business transactions to supervise the use of funds and operating conditions of these enterprises. In addition, the higher the corporate debt ratio, the more likely it is that related enterprises will form an interlocking directorate network to regulate their own risks (Agarwal et al., 2020).

3.2.4 Research on Interlocking Directorates Based on Upper Echelons Theory

Upper Echelons Theory mainly focuses on observable management characteristics, including age, organizational tenure, functional background, educational level, socioeconomic background, and financial status, and explores the impact of the characteristics of the senior management team of an enterprise on organizational performance and decision-making. Therefore, Upper Echelons Theory provides an explanation for the diversity of interlocking directors (such as gender, ethnicity, culture, and experience). Diversity can bring different perspectives and experiences to enterprises, promote innovation and adaptability, and thus have a positive impact on organizational performance (Dhingra & Dwivedi, 2022; Smith & Sarabi, 2021).

3.2.5 Research on Interlocking Directorates Based on Pluralist Theory

Pluralist Theory holds that an organization is a complex system composed of multiple stakeholders, including shareholders, directors, management, employees, customers, suppliers, and other stakeholders. Each stakeholder has its own goals, interests, and power, and they interact and influence each other in the organization (Beckman et al., 2014). Pluralist Theory is used to explain the existence and role of interlocking directorates. By holding positions on the boards of different organizations, interlocking directors represent different stakeholders, thereby playing a diverse role in organizational decision-making (Knoben & Bakker, 2019).

The above theories explain the interlocking directorate mechanism from different perspectives, forming a relatively complete theoretical system, which is the basis for understanding the nature of interlocking directorates. For the verification of theoretical foundations, one of the identification methods formed by scholars is to judge according to the reconstruction of broken connections of interlocking directorates; in practice, interlocking directorates are usually studied based on multiple theoretical foundations.

4 Antecedents: Influencing Factors

4.1 External Factors of Directors

The corporate governance environment, strategies and goals, and stakeholder pressure will affect the roles and responsibilities of interlocking directors and the extent to which they exert their effects. The main reason for the formation of interlocking directorates is that companies believe that interlocking will help establish connections with other companies, enabling them to secure the necessary resources to minimize environmental uncertainty (Forrester, 2022). For example, early studies found that when companies are heavily in debt to banks, in response to resource dependence, companies invite representatives of financial institutions to join their boards to try to cooperate with these institutions. Interlocking with banks can be a tool to increase benefits, especially in economies where enterprises face financial constraints. Such financial interlocks have been the focus of numerous studies (Sun, 2017; Braun et al., 2019). In addition, companies can also interlock with other types of organizations that control or can provide key resources; focal companies are more likely to interlock with other enterprises from industries that affect the focal company's profits; enterprises are more willing to interlock with other enterprises in the industry (Sun & Chen, 2022) because of their dependence and the benefits they can obtain from interlocking.

The introduction of supervision and the improvement of monitoring capabilities will also affect interlocking activities. For example, financial institutions will add a representative to the company's board of directors to improve the institution's ability to supervise the company's financial situation. If the company's solvency and profits are declining, financial institutions are more likely to send representatives to the company's board of directors. When a company increases its demand for funds from financial institutions, this increases the number of representatives sent by financial institutions to supervise the company (Chen, 2023).

4.2 Individual Factors of Directors

The individual characteristics of directors, the relationships and interactions between directors, and the board structure and organization affect interlocking directors. Directors may be appointed as interlocking directors because of their specific personal skills, experience, and expertise, which are considered necessary skills independent of the director's current company (Zhou et al., 2021). New directors are usually selected from a relatively small number of candidates, indicating that they can be selected based on their personal characteristics rather than the boards they currently serve; many studies have investigated the reconstruction of broken relationships (i.e., replacing departing directors) and found that vacant positions are rarely filled by directors from the departing director's company, meaning that personal relationships rather than company-level relationships are at play (Richardson, 1987). However, recent studies have found that complex companies and new directors with higher status make two-way choices. The company's board of directors can also be used to send signals to current and potential investors. In fact, by cooperating with other companies that already have the image they want, interlocking companies can also have a spillover effect on their own image (Wang et al., 2016).

Individuals join boards for various reasons, including obtaining higher economic rewards, more prestige, and more connections. For directors of the elite class, interlocking is an important way to strengthen cohesion among the elite. Serving on multiple boards increases directors' social attractiveness and network connections, and has a positive impact on directors' compensation, reputation, social status, and career development, so as to advance their careers and expand their connections, thereby protecting the interests of individuals belonging to this class. In addition, the class hegemony perspective explains that interlocking is formed by directors selected from a relatively small group of like-minded people who establish and maintain personal relationships through early participation in social or educational institutions. The more appointments interlocking directors obtain on boards, the more chain reactions they form, and the more connections they have between them. These connections can become the social capital of interlocking directors and may be used to further advance his or her career (Song et al., 2022).

In summary, these two key antecedent factors—external factors of directors and individual factors of directors—are not mutually exclusive. Directors may be hired because of their expertise and resource relationships with another company, and this situation may also occur when interlocking directors are in the same social group as the company's managers. In addition, although the specific factors discussed above have received the most attention as prerequisites for interlocking, there are other factors that can stimulate interlocking activities that have not been actively studied, including the company's history (Wright, 2023; Buccellato et al., 2022).

5 Effects: Impact on Corporate Governance, Behavior, and Performance

The effects of interlocking directorates have always been a widely concerned research field, mainly exploring their impact on corporate governance, corporate behavior, and corporate performance. It is worth noting that the use of empirical methods to establish a stronger causal link between interlocking boards and corporate performance has addressed the endogeneity problem often mentioned in early studies in this field.

5.1 Corporate Governance

Most scholars support that the director network positively promotes the level of corporate governance, while a few studies indicate that the director network will reduce the level of corporate governance. On the one hand, the director network can better exert the supervision mechanism. Considering reputation, career development, etc., interlocking directors have a stronger motivation to supervise, realizing the supervision and regulation of corporate governance behaviors. From the perspective of information disclosure, the director network helps reduce information asymmetry among investors and promotes the dissemination of corporate information disclosure policies and behaviors. Some studies believe that interlocking directors have a positive impact on the voluntary disclosure decision of corporate social responsibility reports (Han et al., 2015); from the perspective of earnings management, data have proved that the centrality of the independent director network is positively correlated with the quality of corporate earnings information, specifically manifested in reducing the level of earnings management and improving the predictability of current earnings (Fu & Xia, 2014). On the other hand, empirical research generally defines directors serving in three or more companies as "busy". Excessive concurrent appointments of independent directors will make it difficult for them to fulfill their duties diligently, leading to a large number of "figurehead directors" and director inaction, damaging the quality of board supervision and shareholder value, and reducing the level of corporate governance. Concurrent appointments of independent directors in multiple companies will generate busy costs and selection effects; companies with "busy" directors active in multiple boards perform worse in terms of price-to-book ratio and profitability; the instrumental variable method proves that reducing one busy director in a company can improve the company's Tobin's Q and ROA to a certain extent (Hauser, 2018).

In addition, the director network has a "double-edged sword" effect in spreading corporate practices. Due to the lack of selectivity in information dissemination, the director network may bring the spread of irregular behaviors and negative governance effects. For example, the fraudulent behavior of a company will spread along the director network. The closer the connection formed through shared interlocking directors, the greater the possibility that companies in the interlocking director network community will engage in financial fraud (Wen et al., 2023); the spillover effect of earnings management between companies sharing a director is stronger.

5.2 Corporate behavior

5.2.1 Strategic Decision-Making

Research conclusions show that the interlocking effect can promote strategic decision-making, affect the way strategic processes are formulated, strategic changes, environmental strategies, involving the process of formulating and implementing strategies in the face of uncertainty and potential risks, such as common risky strategic decisions of enterprises such as mergers and acquisitions (M&A), innovation, digitalization, alliance formation, market entry and expansion decisions.

Mergers and acquisitions (M&A) are important means for enterprises to achieve capital expansion, including two forms: Merger and Acquisition, and have become an important means for rational allocation of resources between Chinese enterprises. On the one hand, scholars believe that the director network realizes the supervision and regulation of corporate governance behaviors by exerting the supervision mechanism and information transmission function, improving the level of corporate governance (Chan et al., 2017). Interlocking directors play a key role in providing effective information, strategic suggestions, and acquiring resources for the company, helping the acquiring company evaluate the value of the target company and the potential synergy between the acquiring and target parties, thereby making correct M&A decisions. On the other hand, board members with more director connections have a stronger motivation to imitate the transaction behaviors of related parties, and are more likely to engage in self-interested behaviors through the director network, thereby increasing personal bonuses, compensation, and control benefits. Companies with more connections with other companies through interlocking directors are more likely to conduct M&A (de Sousa Barros et al., 2021).

Innovation is an important activity for enterprises to maintain competitiveness and create competitive advantages, with characteristics such as uncertain returns, high risks, and high costs. Existing studies have explored the mechanism of the interlocking director network on corporate innovation investment, but no unified conclusion has been formed. Enterprises can realize information dissemination and resource sharing through the interlocking director network, thereby having a positive impact on corporate innovation decisions (Yu & He, 2019); the interlocking director network will strengthen managers' opportunistic tendencies, thereby having a negative impact on corporate innovation investment.

Digital technology has gradually integrated with industrial development, which has largely subverted traditional business models, transformed the original value system, and generated new economic growth poles. Interlocking directors can timely obtain key industry information and make rapid responses to make appropriate plans for digital transformation. However, differences in the characteristics of interlocking directors will be reflected in the actual process of corporate digital transformation, leading to the implementation effect of digital strategies may be constrained by solidified thinking, redundant resources, and other factors.

5.2.2 Corporate Ethics and Social Responsibility

Research results have certain differences on the impact of interlocking directors on corporate social responsibility. The participation of interlocking directors may have a positive impact on corporate ethical behaviors, but may also bring potential risks. The participation of interlocking directors is positively correlated with the level of corporate social responsibility. The professional knowledge and experience of interlocking directors may help enterprises better identify and evaluate charitable projects. The participation of interlocking directors can improve the company's financial transparency and risk management, which helps improve the company's moral standards and behavioral norms. In addition, the participation of interlocking directors can reduce agency problems, thereby promoting the development of corporate ethical behaviors. The professional knowledge and supervisory role of interlocking directors can promote enterprises to adopt more environmental protection measures and improve environmental performance. However, when the imitation degree of corporate social responsibility is too high, it may inhibit the improvement of corporate value, which is essentially the result of irrational decisions of enterprises (Liu & Lu, 2018).

5.3 Corporate Performance

Performance is an important outcome variable concerned by management scholars. Overall, studies have shown that interlocking directorates may have a positive or negative impact on the subsequent performance of the company. The relationship between interlocking directorates and corporate performance may depend on external and internal forces. Interlocking relationships drive corporate performance through their impact on corporate governance and behavior, including the impact on financial performance and non-financial performance. Enterprises can improve their performance through innovation, product development, and the adoption of best management practices; however, if enterprises converge in practices, strategies, and structures due to interlocking directorates, they will be at a similar level, which means that other advantages that endow excess profits will be eliminated.

5.3.1 Financial Performance

There is no consensus on the direction of the relationship between interlocking directorates and financial performance. Different studies use differentiated measurement standards. Some studies use accounting-based measures (such as Return on Assets and Return on Sales), while others use market-based measures (such as price-to-book ratio). Different measurement methods also affect the results. The participation of interlocking directors can improve the company's financial transparency, risk management, and decision-making quality, thereby promoting the improvement of financial performance; meta-analysis results show that there is a certain positive relationship between board size and financial performance. The separation of ownership and control may lead to agency problems, and the participation of interlocking directors can solve these problems to a certain extent. In terms of accounting performance, research based on Hong Kong found that there is a correlation between the participation of independent non-executive directors, family control, and financial disclosure; family-owned enterprises provide more or less voluntary disclosure depending on the degree of participation of interlocking directors. Companies with closer board connections show better profitability or higher stock returns (Larcker et al., 2013).

In addition, the status of directors is an important moderating factor in the impact of the interlocking effect on performance. Specifically, the interlocking effect formed by external directors improves the performance of the focal company, while the interlocking effect formed by internal directors does not. The complexity (and sometimes contradictions) of these findings indicate that more research is needed to understand the nuances of the relationship between interlocking and corporate performance.

5.3.2 Non-Financial Performance

(1) Innovation Performance

Innovation performance can be both an intermediate outcome, such as patents; or an outcome, such as the launch of new products. If an enterprise cannot obtain all the required knowledge for innovation internally, it must obtain it from external organizations that possess that knowledge. Enterprises should effectively absorb and utilize the diverse knowledge obtained from external organizations. Therefore, the search, acquisition, absorption, and integration of innovation elements are closely related to innovation performance.

Companies with interlocking director relationships have more efficient knowledge transfer, information transmission, and resource sharing, thereby having a positive impact on corporate innovation performance. Enterprises that have mastered advanced technologies will consciously spread them to other companies with interlocking director relationships that have not mastered advanced technologies, realizing the sharing of knowledge and technology through attracting investment and talents (Wang & Zhang, 2018). The interlocking director network can improve new product development results through interaction with inter-enterprise networks (such as alliances); knowledge spillover and mutual imitation resulting from interlocking directors are additional drivers of the convergence of innovation performance between enterprises. Wang et al. (2023) used the Poisson model to test and found that enterprises with interlocking directors with green experience have a significant enhancement in "increasing quantity and improving quality" of green innovation. On the other hand, the loss of director independence and the reduction in commitment and participation in board tasks will generate certain innovation costs.

(2) Corporate Reputation

The participation of interlocking directors can improve the company's financial transparency and risk management. The professional knowledge and experience of interlocking directors can increase the trust of external stakeholders in the enterprise, thereby enhancing the enterprise's reputation; the participation of interlocking directors can reduce agency problems and avoid potential conflicts of interest, thereby enhancing the enterprise's credibility (Song et al., 2021); start-ups often resort to interlocking director networks to overcome their poor reputation problems. On the contrary, there is also the risk of reputation spillovers for enterprises with poor reputation due to interlocking directors.

6 Conclusions and Prospects

Based on the concepts and measurement, theoretical foundations, antecedent variables, and effects of interlocking directorates, this paper summarizes the antecedent variables, mechanisms, outcome variables, and research deficiencies, and proposes future research directions.

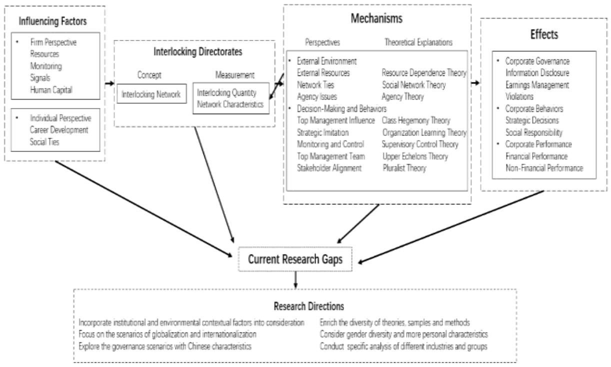

Fig. 1. ***Overall Research Framework of Interlocking Directorates***

6.1 Incorporate Institutional and Environmental Context Factors into the Analysis Framework

Most of the existing research on interlocking directorates is still based on the perspective of Anglo-American corporate governance, and most studies are conducted in the United States. However, the world has experienced the global economic recession, the Internet bubble, the emergence of social media, changes in global financial regulatory systems, and the rise of emerging economies. The institutions that define corporate governance practices and the context of interlocking directorates have undergone significant changes. The importance of institutional context for social cognitive processes is increasing, exerting different impacts on the roles and effects of interlocking directorates (Huijzer & Heemskerk, 2021). Considering the institutional environment and social cognitive system of the country where interlocking directorates are located can better understand interlocking directorates, explore the behaviors and impacts of interlocking directorates under different legal systems, pay attention to the impact of regulatory reforms on the formation and evolution of interlocking director networks, and then evaluate these impacts on corporate governance and performance. For example, the widespread use of proxy or alternate directors and nominated directors in Asian boards is relatively rare in Anglo-American contexts (Mahrool, 2019); the legislation of emerging markets such as Brazil and India both empowers and protects the reporting of unethical or illegal activities related to interlocking director governance issues. Based on the important impact of the legal system environment on the behaviors and decisions of corporate board members, research on interlocking directorates needs to pay attention to issues related to legal compliance and moral risks. By adding an institutional dimension to the analysis framework of interlocking directorate formation, the limitations of current research can be overcome. It is suggested that research on the formation and evolution of interlocking directorates should consider how the institutional environment affects director selection mechanisms, and how director selection mechanisms in turn drive the formation and operation of different types of interlocking directorates.

6.2 Pay Attention to Cross-Border or International Interlocking Scenarios

International interlocks arise when directors from countries other than the company's home country are appointed to the board. With the development of globalization and internationalization, more companies operate and invest across national borders. Exploring the internationalization degree of the boards of multinational companies, the similarities and differences in multinational corporate governance practices, and the role of interlocking directorates in the decision-making and strategies of multinational companies has great research potential. Attention should be paid to the relationship between cross-cultural management and interlocking directorates, and effectively managing and utilizing cultural differences to promote corporate governance and organizational performance. Explore how international experience affects the decision-making ability, global perspective, and strategic thinking of interlocking directorates, and how to better cultivate and utilize interlocking directorates with international experience (Watkins-Fassler et al., 2024). Pay attention to the legal compliance and regulatory challenges of multinational companies, and the role of interlocking directorates in the cross-border legal and regulatory environment. Utilize the background differences across countries or regions to enrich the cooperative output between researchers from developed countries, key emerging and transition markets, African countries, and other eastern transition economies, and record and measure the relative importance of cross-national business networks.

6.3 Explore the Governance Context with Chinese Characteristics

With China's rise as a global economic power, the phenomenon of interlocking directorates is widespread in Chinese enterprises. Future research can further explore the role and impact of interlocking directorates from the perspective of Chinese characteristics. This will help better understand the characteristics and challenges of Chinese corporate governance and provide guidance for Chinese enterprises and the government on the role and practice of interlocking directorates, and provide opportunities for promoting research centered on the impact of Chinese culture on corporate behavior from the conceptual stage to the theoretical testing stage (Chen et al., 2023). In the Chinese context, the continuous importance of personal networks or "guanxi" in shaping company-level decisions also affects government policies and regulatory decisions; reveal the uniqueness of Chinese corporate governance and differences from international best practices; pay attention to the role of the government in the appointment and supervision of interlocking directorates; explore the role and function of interlocking directorates in the reform of state-owned enterprises, and how to improve the independence and professionalism of interlocking directorates, promote the reform and development of state-owned enterprises; how to balance economic benefits and social benefits in corporate decision-making (Hu et al., 2022).

6.4 Enrich the Diversity of Theories, Samples, and Methods

Theories can provide new ways for future research to understand interlocking directorates. To enrich the research perspective in the field of interlocking directorates, cross-analysis with other disciplines such as sociology and psychology is needed. The concepts and theories of social network analysis are crucial for understanding interlocking directorates. However, the answer to how these networks is formed remains to be further explored, and cross-research theme research can be attempted. With the increasing availability of detailed data on director profiles, affiliations, and corporate performance, expanding the sample scope can provide a more comprehensive understanding and insight, and increase the breadth and applicability of research. In addition, it is very important to use more diverse methods, such as narrative techniques, to reveal the implicit meanings and power relations in interlocking activities through in-depth interviews, observations, and text analysis; the estimation methods used to estimate the impact of interlocking directorates on corporate performance have also made progress. More complex econometric modeling techniques, such as logistic regression, negative binomial model, Poisson, Generalized Method of Moments (GMM), instrumental variables, and Two-Stage Least Squares Regression (2-SLSR), have been used to estimate the impact of interlocking directorates on corporate outcomes.

6.5 Consider Diversity and More Individual Characteristics

Recent studies have paid increasing attention to gender diversity, stakeholder activism, compensation, etc., reflecting the need to address new dynamics and the increasing stimulation of data sets. There is a certain correlation between gender diversity and corporate performance and decision-making quality (Løyning, 2023). Economic rationality theory holds that gender diversity can improve corporate performance; human capital theory holds that compared with traditionally male-dominated boards, female directors bring unique education, experience, and skills to the board, thereby improving corporate performance. Future research can further explore the impact of gender diversity on the formation and operation of interlocking director networks, as well as how gender diversity affects the effectiveness and outcomes of corporate governance, deeply explore the impact of gender diversity on decision-making processes and outcomes, and how gender diversity interacts with other factors to affect decision-making quality, and how gender diversity affects stakeholders' perceptions of the enterprise. In addition, it is very important to consider more individual characteristics of interlocking directors. The individual characteristics of interlocking directors include age, educational background, professional background, industrial experience, ethnic composition, family, etc., which are of great significance for their role and impact in corporate governance.

China's economy is in a stage of rapid development and transformation. Improving the level of corporate governance is crucial to ensuring healthy economic development. Introducing interlocking directorates can increase the diversity and representativeness of the board of directors, improve the quality of decision-making and the intensity of supervision, reduce conflicts of interest and prejudices, bring new ideas and innovations, guide and supervise enterprises to better adapt to market changes, and accelerate the pace of innovation. It can promote cross-border cooperation, resource integration, and enhance enterprises' sense of social responsibility and sustainable development. The participation of interlocking directorates can provide support and guidance for the internationalization process of Chinese enterprises, learn from international best practices, enhance international competitiveness, expand the global market, and promote the development of Chinese enterprises on the international stage under the new pattern.

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