

**UNIVERSITI TEKNOLOGI MARA**

**THE RELATIONSHIP BETWEEN  
CORPORATE GOVERNANCE,  
BUDGETARY SLACK, AND  
FIRM PERFORMANCE AMONG  
CHINESE A-SHARE LISTED  
COMPANIES**

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## ABSTRACT

Exploring how corporate governance affects firm performance has become an important research topic in China's evolving transition economy. Although corporate governance theories developed in mature Western markets have been widely applied in various countries, their applicability in emerging economies remains debated due to differences in institutional, legal, and cultural environments. At the same time, budgetary slack, as a manifestation of agency problems, refers to the intentional understatement of budget targets by budget setters and is considered a dysfunctional behavior in budget management. Budgetary slack can lead to efficiency loss, reduced managerial effort, or excessive resource consumption, which may harm firm performance. Therefore, examining the relationships between corporate governance, budgetary slack, and firm performance is essential. This study is grounded in agency theory and resource dependence theory. It constructs an analytical framework for corporate governance, budgetary slack, and firm performance. The study employs panel data from Chinese A-share companies listed on the Shanghai and Shenzhen stock exchanges, covering the period from 2014 to 2023 for empirical testing. Corporate governance is categorized into internal mechanisms (including ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives) and external mechanisms (including product market competition, political connections, external audit quality, and media attention). Budgetary slack is a mediating variable investigating its influence on the relationship between internal and external governance mechanisms and firm performance. The empirical results show that internal governance variables such as ownership concentration, board size, board independence, executive compensation incentives, and the proportion of independent directors significantly reduce budgetary slack and improve firm performance. Among external governance factors, political connections, audit quality, and media attention significantly reduce budgetary slack levels and positively affect performance. In addition, there is a significantly negative relationship between budgetary slack and firm performance. Budget slack partially mediates the path through which some governance mechanisms affect performance. These results indicate that the impact of corporate governance on firm performance is reflected in direct effects and produces indirect effects through budgetary processes. This study expands the integrated research on corporate governance, budgetary slack, and firm performance. It reveals the mechanisms through which internal and external governance operate within the Chinese institutional context and provides practical insights for enterprises seeking to optimize budget control and enhance governance efficiency.

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## LIST OF SYMBOLS

### Symbols

|               |                              |
|---------------|------------------------------|
| *             | Significant at ten per cent  |
| **            | Significant at five per cent |
| ***           | Significant at one percent   |
| $\alpha_0$    | Intercept or constant term   |
| $\beta$       | Coefficient                  |
| $\varepsilon$ | Error                        |
| i             | Firm                         |
| t             | Time                         |
| $\mu$         | Firm fixed effects           |
| $\lambda$     | Year fixed effects           |
| $\delta$      | Industry fixed effects       |

## LIST OF ABBREVIATIONS

### Abbreviations

|       |                                                              |
|-------|--------------------------------------------------------------|
| SOE   | State-owned Enterprise                                       |
| CSRC  | China Securities Regulatory Commission                       |
| CSMAR | China Stock Market and Accounting Research                   |
| CEO   | Chief Executive Officer                                      |
| ROA   | Return on Asset                                              |
| ROE   | Return on Equity                                             |
| SSE   | Shanghai Stock Exchange                                      |
| SZSE  | Shenzhen Stock Exchange                                      |
| CNRDS | China National Research Data Services                        |
| POLS  | Pooled Ordinary Least Squares                                |
| REM   | Random Effects Model                                         |
| FEM   | Fixed Effects Model                                          |
| VIF   | Variance Inflation Factor                                    |
| EPS   | Earnings Per Share                                           |
| SASAC | State-owned Assets Supervision and Administration Commission |
| CPC   | Communist Party of China                                     |

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Introduction**

This chapter outlines the study and its essential elements. Section 1.2 offers background information, providing context to comprehend the research problem discussed in Section 1.3. Section 1.4 details the primary research questions, and Section 1.5 specifies the research objectives. The significance of the study is addressed in Section 1.6. Section 1.7 delineates the study's scope, while Section 1.8 clarifies the key terms utilized throughout the research. Section 1.9 explains the structure of the thesis. The chapter wraps up with a summary in Section 1.10.

### **1.2 Background of the study**

Corporate governance is regarded as an institutional guarantee for effective operations and sustainable development. Corporate governance is “the mechanisms, systems, processes and structures that control and direct companies” (Puni & Anlesinya, 2020, p.148). It shapes a firm’s strategic direction and operational efficiency and significantly influences internal management behavior, resource allocation, and performance outcomes (Peng et al., 2021; Xiong, 2014). An effective governance system can help reduce agency problems and lower agency costs, improving firm performance (Bhakar et al., 2024; Asensio-López et al., 2019). On the other hand, weak governance structures reduce the ability of shareholders to monitor managers, increase moral hazard, and hinder the creation of firm value (Iwasaki et al., 2022; Agyemang & Castellini, 2015).

In the highly competitive modern economic environment, sustained and superior firm performance has become the key to survival, growth, and shareholder value creation. Firm performance reflects a company's competitiveness and operational efficiency, which directly impacts a company's market capitalization, shareholder returns, and relationships with other stakeholders. Improved corporate performance is frequently noted as a key benefit of implementing effective corporate governance practices within a company (Puni & Anlesinya, 2020). Corporate

governance issues have generated a lot of research concern over the years because of their potential performance implications for firms in both developed (Kyere & Ausloos, 2021; Bhagat & Bolton, 2019) and developing countries (Abang'a et al., 2022; Puni & Anlesinya, 2020; Dian, 2014).

International authorities and countries promulgate corporate governance mechanisms. These mechanisms encompass legislation or principles encouraged or mandatory for large or listed companies to adopt. Some examples of corporate governance legislation or regulations are the Sarbanes-Oxley Act, the Organization for Economic Cooperation and Development Principles of Corporate Governance, and the Chinese Principles of Corporate Governance. These governance frameworks hold international importance due to the collapses of prominent corporations like Enron and Worldcom, prompting governments to take action to reduce the occurrence of similar scandals.

In 2019, with the Kangmei Pharmaceutical financial fraud case exposure, corporate governance issues in China again drew widespread attention. The Financial Times described the case as one of the biggest accounting scandals in China in recent years (Weinland, 2019). Between 2016 and 2018, the company falsely inflated its monetary funds by RMB 88.6 billion and overstated its operating income by RMB 29.1 billion. This large-scale financial fraud severely harmed the legitimate rights of investors. It negatively impacted the development of the capital market and social stability (Luo et al., 2023). It is worth noting that as early as 2012, Zhongneng Xingye Investment Consulting Co., Ltd. conducted a months-long investigation and published a report titled *The Kangmei Lie* in Securities Market Weekly. The report questioned the authenticity of Kangmei's financial statements and pointed out that the company had overstated at least RMB 1.85 billion in assets (Li, et al., 2024). However, the related problems did not receive timely investigation or effective control because there was no mandatory accountability mechanism. It was not until the end of 2018 that the China Securities Regulatory Commission (CSRC) discovered its suspected financial fraud.

On November 12, 2021, the Guangzhou Intermediate People's Court issued the first-instance judgment of the "Kangmei Pharmaceutical case," requiring Kangmei Pharmaceutical to pay RMB 2.459 billion in compensation to investors. The judgment held the company's former chairman and senior executives jointly liable for compensation. It required independent directors to bear corresponding responsibility.

This immediately caused strong reactions in the market and academia, leading to a wave of resignations of independent directors of listed companies in the first half of 2022 (Zhang, 2025). The Kangmei case clearly shows that when corporate governance mechanisms are absent, the board fails to carry out its supervisory responsibilities, internal controls become ineffective, managerial power becomes overly concentrated, and external auditors cannot detect or disclose violations. This reflects a complete failure of governance mechanisms (Li et al., 2024). This event deeply reveals how governance mechanism defects can lead to management misconduct and information distortion, seriously damaging corporate reporting quality and decision-making foundations.

Corporate governance mechanisms are generally divided into internal and external categories (Schäuble, 2019; Aguilera et al., 2015). Internal governance includes ownership structure, board composition, and managerial incentive systems. It plays a central role in maintaining organizational checks and balances (Gillan, 2006). External governance refers to legal and regulatory frameworks, market-based mechanisms, and other stakeholder pressures (Liu et al., 2023). In China, corporate governance shows a mixed institutional structure, combining the influence of state ownership with a gradual shift toward market-oriented practices (Jiang & Kim, 2020). Therefore, it is necessary to explore how governance mechanisms function in the Chinese institutional context, especially regarding internal control and managerial incentives.

The effectiveness of corporate governance is reflected in the design of systems and in how these systems are implemented in daily management practices. Among many management practices, budget management, as a core part of internal control, directly carries the implementation effects of governance mechanisms (Dokulil et al., 2020; Xiong, 2014). Budgets are widely used in key areas such as strategy formulation, resource allocation, and performance evaluation (Dokulil et al., 2020). A budget is defined as a comprehensive plan of a company's activities in quantitative or financial form within a specific period (Haliah, 2021). Since DuPont and General Motors first introduced budgets into business management in the 1920s, budgets have become one of the pillars of modern management accounting (Namazi & Rezaei, 2023). As British management scholar Otley (1999) stated, budget management is one of the few management control methods to integrate all key organizational issues into one system. Therefore, budget management directly affects business operating

efficiency (He & Xian, 2024).

In China, along with reform and market-oriented transformation, various enterprises have gradually established and improved budgeting systems. In particular, they have been deeply integrated into State-owned Enterprises (SOEs) and large private firms (Li & Zhao, 2020). The report of the 20th National Congress of the Communist Party of China clearly emphasized the need to build a comprehensive, standardized, transparent, scientific, and constrained budgeting system, which provides direction for the further development of enterprise budget management. However, in corporate budget management practice, opportunistic behaviors represented by budgetary slack have limited the role of budgets and become a key problem that has not been effectively solved (Shu et al., 2023; Mohanna & Sponem, 2020).

Budgetary slack usually refers to the deliberate underestimation of revenues or deliberate overestimation of expenses (Shu et al., 2023; Church et al., 2019; Dunk & Nouri, 1998) and has been widely recognized as an important problem in management accounting. Due to structural problems such as separation of ownership and control, the interests and goals of owners and managers often diverge. As a result, budgeting may become a tool of strategic bargaining between the two parties (Liu, 2019). From a self-interest perspective, managers tend to use their information advantage to set lower performance targets, create slack to meet performance evaluations more easily, and even gain additional rewards by exceeding relaxed goals. Budgetary slack weakens the effectiveness of budget management, especially when such behavior deviates from corporate objectives and shareholder expectations.

The problem of budgetary slack is closely related to the effectiveness of corporate governance mechanisms. Effective governance mechanisms can reduce management opportunistic behavior and improve the transparency and accuracy of budget management through complete supervision and constraint systems (An & Ai, 2022). In contrast, weak governance mechanisms may enable slack creation, ultimately undermining firm performance. Therefore, exploring how corporate governance affects budget management practices, especially the formation mechanism of budgetary slack and its impact on corporate performance, has important theoretical and practical significance.

Based on the claims of previous studies, this study aims to empirically examine the characteristics of corporate governance mechanisms, the occurrence and

consequences of budgetary slack, and how these factors influence firm performance within the unique context of the Chinese economy. Corporate governance in China is characterized by a dual nature, involving both state intervention and market-based mechanisms. Although the literature on corporate governance is well developed in Western countries, the unique institutional features of Chinese A-share listed firms present specific challenges. China's governance practices are shaped by a distinct regulatory framework, financial system, and broader economic environment (Jiang & Kim, 2020). Exploring how these institutional characteristics influence managerial behavior is necessary, especially in budgeting practices.

The Chinese market provides a unique context for studying the relationship between corporate governance, budgetary slack, and firm performance. Its regulatory environment, market structure, and cultural norms offer a distinct setting to examine how governance mechanisms affect budgeting practices, particularly the generation of budgetary slack and its impact on performance. As financial disclosures and data availability improve for Chinese listed companies, researchers are now better positioned to conduct in-depth investigations. Studying how governance mechanisms influence budgetary slack can help firms reduce slack at the institutional level, improve the efficiency of budget management, and further clarify how governance affects budget behavior and, ultimately, firm performance.

### **1.3 Problem Statement**

With the continuous growth and international expansion of companies across advanced and developing markets, the significance of corporate governance has gained considerable attention in recent years. Despite this growing importance, theoretical perspectives on how corporate governance influences organizational performance remain mixed and inconclusive. In agency theory, both principals and agents are economic men. Out of self-interested motives, the interest objectives between the principal and the agent are not the same, but each pursues the maximization of its interests (Panda & Leepsa, 2017). The divergence between ownership and managerial control and information asymmetry often leads to conflicting interests between shareholders and executives. From an agency perspective, firm performance will be improved if corporate governance mechanisms minimize agency conflicts. However, stewardship theory suggests that managers act in perfect

alignment with the interests of shareholders because they believe that their commitment and efforts to maximize wealth will be rewarded (Löhde et al., 2021). Firm performance improves through trust and kindness between executives and shareholders.

Beyond theoretical discussions, empirical studies also reveal inconsistencies. Due to varying contextual factors, the empirical literature shows that researchers have not agreed on the relationship between corporate governance variables and firm performance (Bhakar et al., 2024; Guluma, 2021; Peng et al., 2021). For example, Puni and Anlesinya (2020) performed a panel regression analysis on data from 38 publicly traded companies in Ghana from 2006 to 2018. They discover a positive correlation between ownership concentration and firm performance. In contrast, Queiri et al. (2021), in their analysis of non-financial listed firms in Oman, discovered that controlling shareholders might exploit their position, which becomes a significant reason for the decline in firm performance. Khatib and Nour (2021) analyzed 188 non-financial Malaysian companies from 2019 to 2020. They found a significant positive correlation between board size and firm performance. However, Kao et al. (2019), drawing on data from Taiwanese listed firms between 1997 and 2015, reported that smaller boards are linked to better performance outcomes. Regarding CEO duality, Khan et al. (2021) identified a significant negative impact on firm performance in their study of non-financial firms in Malaysia. However, Kyere and Ausloos (2021), using a sample of 252 firms listed on the London Stock Exchange, found no significant relationship between CEO (Chief Executive Officer) duality and either Return on Asset (ROA) or Tobin's Q.

In contrast to developed nations, emerging and transitional economies typically exhibit weaker institutional frameworks, legal systems, and cultural norms that regulate corporate behavior (Peng, et al., 2021; Shao, 2019). While governance practices in these countries often draw on models and recommendations from more advanced economies, such imported frameworks may not fully align with local institutional and developmental contexts, as each country has unique characteristics (Peng et al., 2021). In China, a key feature of corporate governance is the dominance of large shareholders. Unlike in the United States and other developed markets, Chinese companies tend to have highly concentrated ownership structures (Jiang & Kim, 2020; Shao, 2019). Data from the China Stock Market and Accounting Research (CSMAR) database indicate that over 99% of publicly listed firms in China have at

least one shareholder holding more than 10% of the equity (Jiang & Kim, 2020). This concentrated ownership structure may help monitor management somewhat, but it creates serious governance risks. In particular, powerful shareholders may exploit their position to extract private benefits, often to the detriment of minority investors, generating agency conflicts among shareholders themselves (Queiri et al., 2021; Bai & An, 2021).

At the same time, agency conflicts exist between shareholders and managers in China. Due to the special ownership structure characteristics in Chinese A-share listed companies, this agency relationship also shows unique features (Bai & An, 2021). Most Chinese A-share listed companies were reformed from state SOEs. Although SOEs account for only about one-third of the listed firms, they represent approximately two-thirds of total market value (Jiang & Kim, 2020). Many studies suggest that state ownership reduces firm efficiency (Iwasaki et al., 2022; Lin et al., 2020). In SOEs, these conflicts are often more pronounced, as the government, acting as the ultimate owner, typically refrains from engaging in the day-to-day oversight of managerial activities. This lack of direct supervision can enable managers to pursue actions that undermine the interests of the state and minority shareholders. Consequently, agency issues between shareholders and managers are generally more severe in SOEs than in non-state counterparts (Beck & Brødsgaard, 2022). In addition, SOEs commonly have bureaucratic practices, and information asymmetry between management and the state is pronounced. Managers have more opportunities to seek private benefits through opportunistic behavior, and these problems may weaken corporate performance (Bai & An, 2021).

Most of the listed companies in China's A-shares were restructured from SOEs, accounting for one-third of the number of enterprises but two-thirds of the market capitalization (Jiang & Kim, 2020). Several studies have shown that state ownership reduces firm efficiency (Iwasaki et al., 2022; Sun & Tong, 2003). Since the owners of SOEs do not actively monitor daily operations, managers may engage in egoistic behavior at the expense of state shareholders and minority shareholders. This leads to a vertical agency problem that may be more pronounced in SOEs than in non-SOEs (Beck & Brødsgaard, 2022). In addition, SOEs are often plagued by bureaucracy, and information asymmetries between senior management and the state are often evident. Their managers have more incentive and opportunity to create budgetary slack to maximize their private gains. These issues can potentially undermine firm

performance.

The board of directors is expected to supervise the management on behalf of shareholders, and this is a core mechanism in corporate governance. However, there is still much debate about whether the board performs this supervisory role effectively in practice (Luo et al., 2021). In China, the largest shareholders usually control the nomination and appointment of board members. This weakens the independence and effectiveness of the board's monitoring function (Jiang & Kim, 2020). To improve governance practices, the CSRC issued a regulation as early as 2001, mandating the inclusion of independent directors on the boards of listed firms. By June 2003, the regulation required that independent directors constitute at least one-third of the board's composition (CSRC, 2001). These directors are primarily tasked with overseeing the actions of controlling shareholders and safeguarding the rights of minority investors.

Nevertheless, in actual practice, independent directors are frequently selected and appointed by those same controlling shareholders, weakening their intended role as impartial monitors. This raises concerns about their independence and limits their ability to fulfil their supervisory role effectively (Jiang & Kim, 2020). More importantly, in most listed companies, independent directors still make up a small portion of the board and lack real influence. Some companies appoint only the minimum number of independent directors to meet formal requirements, without granting them substantive power. As a result, their role in board governance remains minimal (Shao, 2019). In addition, the issue of CEO duality has also drawn attention. While some scholars argue that combining the roles of CEO and board chair weakens the board's ability to monitor management effectively (Khan et al., 2021; Kao et al., 2019), efforts to address this issue in China remain limited, and improvements in governance practices are still insufficient (Peng et al., 2021). In summary, there are still apparent weaknesses in the structure and function of boards in Chinese listed companies. It is necessary to assess further how these weaknesses affect the quality of corporate governance and firm performance.

Separating powers can aggravate principal-agent conflicts and lead to opportunistic behavior of executives, increasing agency costs. It has been shown that managerial incentives are one of the effective ways to mitigate principal-agent conflicts (Zhang et al., 2023; Cheng, 2018). There is no consensus on the impact of managerial incentives on firm performance (Zhang et al., 2023). Most enterprises in

China at this stage do not have a perfect incentive system for managers. Some listed companies are suffering from performance losses (Wang et al., 2021), while managers are still well compensated (Zhou & Yang, 2019). Currently, many companies in China still employ traditional budget management models alongside executive incentive mechanisms, linking the achievement and extent of budget targets to the compensation of executives involved in the budgeting process. Executives can participate in setting budget targets and have access to more detailed and accurate management information. Consequently, when executive compensation levels differ, their desire to use budgetary slack strategies to secure compensation varies, affecting their opportunistic behavior and the company's agency costs.

Corporate governance comprises internal and external governance (Asensio-López et al., 2019; Aguilera et al., 2015; Gillan, 2006; Denis & McConnell, 2003). Most research on corporate governance focuses on internal governance (Zhou et al., 2021; Bhagat & Bolton, 2019), such as ownership structure (Kao et al., 2019), board structure (Merendino & Melville, 2019; Kao et al., 2019), and managerial incentives (Boshnak, 2024; Bhakar et al., 2024). However, corporate governance is a holistic system (Bhagat & Bolton, 2008), and many existing studies have neglected mainly the influence of external governance mechanisms in curbing managerial behaviors that may be detrimental to shareholder interests. While internal governance has received substantial scholarly attention, research on external governance remains relatively underdeveloped. In particular, there is a lack of holistic analyses that consider the direct effects of external governance on firm performance and its indirect influence through other critical organizational capabilities (Aguilera et al., 2015). External corporate governance encompasses regulatory forces, market forces, and other stakeholders (Liu et al., 2023). External factors such as the media (Bai & Yan, 2023; Ahmad et al., 2019), product competition (Liu et al., 2022; Bharath & Hertz, 2019), and external audits (Yeung & Lento, 2020; Schäuble, 2019) can potentially curb managerial opportunism. These governance elements are instrumental in reducing agency costs, providing transparent information disclosure, and improving corporate performance.

As the world's largest transitional economy, China has undergone significant fundamental changes over the past few decades, shifting from a state-controlled economic system to a highly competitive market economy. With increasing product market competition, market forces have gradually become one of the main

determinants of economic behavior. Product market competition reduces information asymmetry, mitigating agency problems (Lee et al., 2019). Competition in the product market positively improves organizational performance (Liu et al., 2022; Sheikh, 2018). However, some scholars have drawn contrary conclusions. For example, Javeed et al. (2020) reported that product competition creates an intense competitive environment for companies, reducing pricing power and lowering profits. Thus, further investigation is needed to understand the impact of product market competition.

External auditors are considered indispensable in external governance, particularly concerning issues related to information disclosure (Aguilera et al., 2015). They contribute to more reliable financial reporting and help bridge the information gap between corporate insiders and external stakeholders. By doing so, they restrict managerial discretion in distorting disclosures and pursuing unjustified personal gains. Much of the earlier literature has heavily focused on Anglo-American firms. However, Yeung and Lento (2020) argued that the governance role of external audits should be considered in diverse regulatory and cultural environments. With the maturation of the auditing market in China, the supervisory role of independent audits in corporate governance is increasingly evident. Therefore, examining the governance role of external audits in China is essential.

The media is another crucial component of external governance. In certain instances, the media can exert oversight by monitoring the behavior of top management. The threat of negative publicity is believed to deter managers from acting selfishly, as they fear damage to their reputation (Bai & Yan, 2023). Beyond this oversight role, the media can promote effective governance by increasing transparency and reducing information asymmetry between management and stakeholders (Aguilera et al., 2015). However, research indicates media coverage can harm corporate performance (Ahern & Sosyura, 2015). Motivated by enhancing company earnings and attracting external investment, managers may conceal bad news while promoting good news. The media's role in disseminating information can significantly affect how accurately a company's situation is portrayed. If hidden negative news surfaces or contradicts the company's actions, it can hinder its development (Wang et al., 2022). Hence, further research into the impact of media on corporate development is warranted.

Additionally, in China, political connections are widely regarded as a

significant external governance factor (Liu, 2024). Within the framework of China's transitional economy, the government plays a central role as both the architect of economic policy and the allocator of key resources essential for business survival and growth, thereby maintaining a dominant influence over economic activities. Government policies profoundly influence corporate operations. At the same time, the government controls numerous key resource factors essential for the survival and sustainable development of enterprises, leading to a strong dependency of enterprises on the government (Pang & Wang, 2021). Political relationships may present advantages and risks for companies, acting as a double-edged sword. On one hand, companies can obtain scarce resources such as tax benefits, government subsidies, and industry access permits through political connections (Faccio, 2006). These political resources can help companies access policy developments and business information early, reduce financing costs, and promote faster growth (Al-Delawi et al., 2023).

On the other hand, literature has also explored the negative side of political connections. Influential stakeholders can prioritize their own interests at the expense of others, giving rise to complex agency conflicts that may adversely affect firm performance (Pang & Wang, 2021). Although political connections have been widely studied, their overall effect on corporate outcomes remains uncertain and subject to debate.

Distinct from previous literature, this study focuses on whether and how corporate governance can impact corporate budgetary slack. The reason for analyzing from the perspective of budgetary slack is that budgetary slack may be a byproduct of agency problems in corporate governance. Budgetary slack is generally regarded as a deliberate interference by budget managers who intentionally set budget targets below desired levels, and as dysfunctional in budget management (Shu et al., 2023; Church et al., 2019). Agency theory suggests that, due to information asymmetry between supervisors and subordinates, if performance appraisals are based on budgets, this mechanism will induce subordinates to act opportunistically to maximize their interests, thus causing budgetary slack. The existence of budgetary slack affects the communication and exchange of information between departments, reduces the efficiency of resource allocation and operational efficiency, generates high ineffective costs and thus fails to maximize corporate profits, and ultimately affects the business development of the enterprise (Haliah, 2021; Otalor & Oti, 2017).

In essence, budgetary slack is one of the manifestations of the opportunistic

behavior of budgetary participants in pursuit of maximizing their own interests, which can also be seen as a derivative of the agency relationship. According to proponents of agency theory, budgetary slack leads to efficiency bias in an asymmetric information environment, reduces managerial effort or leads to more resource consumption, and ultimately negatively impacts firm performance (Mohanna & Sponem, 2020). However, some scholars believe that reasonable budget slack can effectively prevent enterprises from encountering the impact of unknown risks in the process of development. This leaves enough space for managers to respond, which in turn allows enterprises to achieve better development (Bogetoft & Kerstens, 2024; Ashbaugh-Skaife et al., 2008). However, considering firms' long-term growth, budgetary slack is likely to raise operational expenses, lead to inefficient use of essential resources, and cause varying levels of slackness among managers and employees, ultimately hindering sustainable corporate development. Thus, this research aims to address the issue of budget slack effectively and enhance business performance.

The problem of budgetary slack is very prominent in the budget management practice of Chinese enterprises (Shu et al., 2023; Gao & Guo, 2023; An & Ai, 2022; Bai & An, 2021). For example, Tang (2020) collected and organized data from the annual reports of Chinese A-share listed firms and found that at least 54% of the firms have budgetary slack. Most researchers have examined the factors influencing budgetary slack from the perspectives of budget process (Mohanna & Sponem, 2020), budget participation (Sanjiwani & Suryanawa, 2020; Otalor & Oti, 2017; De Baerdemaeker & Bruggeman, 2015), information asymmetry (Pramudiati et al., 2022; Kepramareni et al., 2019), and employee honesty (Agustina et al., 2024; Chong et al., 2021). Nonetheless, these studies focus on the setup of the budgeting system and human behavioral factors, neglecting the fundamental impact of the institutional context on budgeting. Governance of budgetary slack should be approached from the perspective of corporate institutional factors rather than merely focusing on the budget itself (Bai & An, 2021). Corporate governance is primarily introduced to provide best practice guidelines for firms. Internal and external governance mechanisms significantly influence how firms design and carry out managerial decisions, exerting a considerable effect on budgetary slack and, ultimately, organizational performance.

Budgetary slack has become a significant management accounting issue, especially in the context of Chinese firms (Shu et al., 2023; Gao & Guo, 2023; An &

Ai, 2022; Bai & An, 2021). Its prevalence is indicative of a deeper underlying problem in the area of corporate governance. Corporate governance consists of internal and external mechanisms that fundamentally affect the formulation and implementation of corporate management decisions, directly influencing the creation and management of budgetary slack (Xiong, 2014). Studies have emphasized that if effectively implemented, corporate governance mechanisms can mitigate the propensity for budgetary slack by aligning managerial incentives with shareholders' interests and increasing transparency and accountability in financial reporting (An & Ai, 2022; An et al., 2018). Despite its relevance, budgetary slack has received limited scholarly attention within the framework of corporate governance in China (Bai & An, 2021; Xiong, 2014). The Chinese governance environment, marked by state control and market-oriented reforms, introduces unique complexities that may influence how governance mechanisms relate to budgetary slack. Conventional Western governance theories may not fully capture these dynamics.

Furthermore, the effect of budgetary slack on corporate performance within China's rapidly growing economy and shifting regulatory landscape remains insufficiently examined. Measuring firm performance in the rapidly changing economic landscape of China is complex. While traditional financial metrics offer some insights (Puni & Anlesinya, 2020; Abang'a et al., 2022; Kyere & Ausloos, 2021), they may not fully capture the nuances of performance in the Chinese context. The influence of internal and external corporate governance and budgetary slack on financial and non-financial aspects of firm performance remains an under-researched area. A holistic understanding of how corporate governance structures impact budgetary slack and how this, in turn, influences firm performance is lacking. Most studies tend to focus on either corporate governance (Löhde et al., 2021; Jiang & Kim, 2020; Shao, 2019) or budgetary slack (Shu et al., 2023; Haliah, 2021; Mohanna & Sponem, 2020) in isolation without considering the interconnectedness of these factors and their cumulative impact on performance.

This study aims to delve into the unique interactions within Chinese listed companies, focusing on the influence of internal and external corporate governance mechanisms on budgetary slack and firm performance. Additionally, it explores the subsequent impact of governance-induced slack practices on corporate performance. In China's rapidly changing economic environment, the complexity of measuring firm performance further necessitates a deeper exploration of these relationships. By

investigating these dynamics, the study seeks to understand how corporate governance mechanisms can be utilized to control budgetary slack and enhance firm performance within the specific context of the Chinese market. This research contributes to a more nuanced understanding of the interplay between corporate governance, budgetary slack, and firm performance, which is particularly important given China's significant role in the global economy and the increasing prominence of Chinese companies on the international stage.

#### **1.4 Research Questions**

Based on the discussions discovered in the previous section, the study sought to address the following questions among Chinese A-share listed companies:

1. What is the relationship between internal and external corporate governance and firm performance?
2. What is the relationship between internal and external corporate governance and budgetary slack?
3. What is the relationship between budgetary slack and firm performance?
4. Does budgetary slack mediate the relationship between internal and external corporate governance mechanisms and firm performance?

#### **1.5 Research Objectives**

This research centers on A-share firms in China's Shanghai and Shenzhen Stock Exchanges. It investigates the impact of internal and external corporate governance mechanisms on budgetary slack and organizational performance, while assessing how budgetary slack affects firm outcomes. In addition, this study uses empirical analysis to examine the mediating role of budgetary slack in the relationship between corporate governance and firm performance. The aim is to provide both theoretical support and empirical evidence for using governance mechanisms to reduce budgetary slack and improve performance. Accordingly, the primary objective of this study is:

1. To examine the influence of internal and external corporate governance on firm performance.
2. To examine the influence of internal and external corporate governance on budgetary slack.
3. To examine the influence of budgetary slack on firm performance.
4. To investigate the mediating effect of budgetary slack in the relationship between internal and external corporate governance and firm performance.

## **1.6 Significance of the Study**

This study provides several contributions to the field of accounting research.

First, this study expands the scope of corporate governance theory by including external governance mechanisms to examine how governance affects firm performance. Previous studies have mainly focused on internal governance factors such as ownership structure, board characteristics, and executive incentives (Alodat et al., 2021; Al-Shaer et al., 2024; Bhagat & Bolton, 2019; Puni & Anlesinya, 2020; Shao, 2019). This research highlights the important role of external mechanisms in shaping managerial behavior and performance. This broader view helps build a more complete framework for understanding governance and performance.

Second, based on agency theory, this study provides a new perspective on the theoretical study of the factors affecting budgetary slack. Most researchers have examined the factors influencing budgetary slack from the perspectives of budget process (Mohanna & Sponem, 2020), budget participation (Sanjiwani & Suryanawa, 2020; Otalor & Oti, 2017), information asymmetry (Pramudiati et al., 2022; Kepramareni et al., 2019), and employee honesty (Agustina et al., 2024; Chong et al., 2021). In contrast, this study analyzes budgetary slack within the corporate governance framework, highlighting the systematic impact of governance structures on managerial budgeting behavior. This view enriches the theoretical foundation of budgetary slack and supports integrated research between corporate governance and management accounting fields (Bhimani, 2009; Seal, 2006).

Third, this study provides insights into how corporate governance mechanisms affect the performance of listed firms in China. Although the impact of corporate

governance on firm performance has been widely studied globally (Abang'a et al., 2022; Bhagat & Bolton, 2019), how this relationship plays out in China's unique market environment remains a relatively unknown question (Iwasaki et al., 2022). Recent studies, such as Kyere & Ausloos (2021), Puni & Anlesinya (2020), and Shao (2019), have highlighted the evolving nature of corporate governance and its diverse impacts on firm outcomes. By integrating theoretical perspectives from these studies, this research extends the knowledge on corporate governance by empirically investigating its entire structure's influence on budgetary practices and performance metrics.

Fourth, this study advances existing frameworks by building and empirically validating a mediation model linking corporate governance, budgetary slack, and firm performance. By introducing budgetary slack as an intermediate variable, the study demonstrates that corporate governance influences firm performance through a direct pathway and indirectly by shaping budgetary behavior. The integrated model proposed in this study enhances the understanding of how governance structures affect operational outcomes and highlights the essential role of budgeting behavior in this transmission path.

Fifth, this study conducts empirical tests of corporate governance mechanisms in the institutional context of emerging economies. Using Chinese A-share listed companies as research samples, this study explores how Western governance theories apply in local environments and emphasizes that research needs to be adjusted and expanded according to specific institutional contexts (Ali et al., 2018). Governance research in Western developed countries is mainly based on mature market economies and well-established legal institutional frameworks (Jiang & Kim, 2020). However, emerging market countries often have different institutional characteristics, which affect the effectiveness and functioning of governance mechanisms (Peng et al., 2021). The dataset used in this study provides valuable cross-cultural comparisons for this research field. It shows the unique characteristics of these relationships in the Chinese market. Therefore, this study provides strong empirical evidence for the contextual development of corporate governance.

## **1.7 Scope of the Study**

This study adopts a quantitative research approach to address the stated

research objectives. The sample consists of Chinese A-share listed companies traded on the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE). A-shares refer to stocks denominated in Renminbi and traded on domestic exchanges, primarily held by local investors. As China represents an emerging financial market with institutional characteristics distinct from those of developed economies, studying Chinese A-share listed companies offers valuable insights into firm behavior in such a context.

A purposive sampling method is employed in this study. The selection criterion is that firms must disclose budget data for the upcoming fiscal year in their financial reports. The research relies on secondary data from public sources to explore the links between corporate governance, budgetary slack, and firm performance.

Firm performance is the dependent variable and is assessed using accounting-based metrics—ROA and Return on Equity (ROE). Corporate governance is the key independent variable categorized into two main aspects: internal and external. Internal governance includes ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives. External governance covers product market competition, political connections, external audit quality, and media attention. Control variables include firm size, financial leverage, firm growth, and agency cost.

## **1.8 Definition of the Key Terms used in the Study**

### **1.8.1 Firm Performance**

Firm performance is a key indicator that measures a company's operational results and development status within a specific period. It typically reflects the overall performance of a firm in terms of profitability, operational efficiency, and market value (Al-Matari et al., 2014).

### **1.8.2 Corporate Governance**

Corporate governance is a system of institutional arrangements that includes internal and external governance mechanisms (Asensio-López et al., 2019; Aguilera et al., 2015; Gillan, 2006; Denis & McConnell, 2003). It aims to clarify the distribution

of rights and responsibilities among internal participants and external stakeholders, establish supervision, decision-making, and accountability mechanisms to ensure effective governance, support sustainable development, and improve long-term firm performance (Aguilera et al., 2015; Belloc, 2012; Gillan, 2006).

### **1.8.3 Budgetary Slack**

Budgetary slack is intentionally underestimating revenue or capacity and overestimating costs or resources in accomplishing budgetary tasks (Shu et al., 2023; Church et al., 2019; Dunk & Nouri, 1998).

## **1.9 Structure of the Thesis**

This thesis is composed of seven chapters. Chapter One serves as the introduction, providing an overview of the study's background, articulating the problem statement, and outlining the research questions and objectives. Additionally, it discusses the significance and scope of the research, defines essential terminology, and presents the organization of the thesis.

Chapter Two offers a comprehensive overview of the existing literature. It systematically examines the theories and practices related to corporate governance, including the development of governance mechanisms in China. It introduces both internal and external governance mechanisms. It also reviews the literature on budget management, budgetary slack, and firm performance. It identifies gaps and limitations in existing research.

Chapter Three builds the theoretical foundation. It introduces agency theory and resource dependency theory as the underpinning theories. Consequently, it develops a conceptual framework and proposes hypotheses based on the relationships between corporate governance, budgetary slack, and firm performance.

Chapter Four describes the research methodology. It explains the sample selection, data sources, and data processing procedures. It also describes the statistical methods used, including various diagnostic tests and the selection of panel data regression models. The chapter further explains how the variables are measured and presents the empirical models used to test the hypotheses.

Chapter Five outlines the outcomes of the data analysis. It encompasses

reliability assessments, descriptive statistics, correlation evaluations, and regression findings. This chapter explores how internal and external governance mechanisms influence budgetary slack and firm performance. Additionally, it investigates the mediating role of budgetary slack and performs robustness checks to validate the reliability of the results.

Chapter Six discusses the empirical results. It analyzes each hypothesis and compares the findings with the theoretical framework and existing literature.

Chapter Seven summarizes the main research findings and explains the theoretical and practical contributions of the study. It also outlines the limitations of the research and provides recommendations for future studies.

## **1.10 Summary of the Chapter**

This chapter presents the background, research problem, and research objectives of the study. It also clarifies the goals of this research, which are to examine how internal and external corporate governance affect budgetary slack and firm performance, and to test the mediating role of budgetary slack. In addition, it outlines the research questions and describes the structure of the thesis. These elements lay the foundation for the theoretical framework and empirical analysis in the following chapters.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter covers the literature review. This chapter aims to provide support, evidence, and different points of view from previous studies. Section 2.2 discusses firm performance. Section 2.3 introduces corporate governance, including its development in China, general concepts, and a detailed discussion of internal and external governance mechanisms. Section 2.4 introduces budget management. Section 2.5 focuses on budgetary slack, including its definition, influencing factors at various levels, and its relationship with corporate governance. Section 2.6 identifies gaps in the existing literature. Finally, Section 2.7 summarizes the key points of the chapter.

#### **2.2 Firm Performance**

Firm performance is a fundamental metric for evaluating a firm's operating outcomes and development progress over a defined time frame. It commonly reflects indicators such as profitability, efficiency in operations, and market valuation (Al-Matari et al., 2014). Effective corporate governance helps address agency conflicts and lowers agency-related expenses, which in turn contributes to better organizational performance (Wang, 2019). Improved financial performance is often considered one of the main advantages of implementing sound corporate governance mechanisms and structures (Puni & Anlesinya, 2020). Organizations implementing rigorous governance standards are more likely to achieve enhanced shareholder value, driven by stronger cash flows and reduced capital costs (Jensen & Meckling, 1976; Zgarni et al., 2016). Conversely, firms lacking effective governance mechanisms may struggle to sustain long-term shareholder value, primarily because they lack the systems to hold management accountable for their decisions (Fama & Jensen, 1983; Agyemang & Castellini, 2015). Without effective governance, external investors may prefer to invest in firms with stronger governance systems to protect their interests. Due to the conflicting goals between managers and shareholders, shareholders often demand the implementation of good corporate governance practices (Puni &

Anlesinya, 2020).

Firm performance refers to how well a company utilizes its limited resources to achieve business outcomes within a specific period (Liu et al., 2022). Performance is typically measured using accounting-based or market-based indicators (Al-Shaer et al., 2024; Liu et al., 2022; Al-Matari et al., 2014). Market-based indicators reflect investors' expectations of future earnings, while accounting-based indicators represent the firm's financial results (Al-Matari et al., 2014). Among the various market-based indicators, Tobin's Q is frequently utilized to measure corporate performance (Fang et al., 2023). This metric looks ahead, reflecting the market's evaluation of a company's potential profitability (Rouyer, 2016). A higher Tobin's Q ratio typically suggests superior long-term performance (Fu et al., 2016). Nonetheless, the effectiveness of China's capital market is comparatively low, with its stock market mechanisms still not fully developed. As a result, stock prices often do not accurately represent the intrinsic value of companies nor provide dependable signals for resource allocation (Bai & An, 2021; Liu et al., 2015). Consequently, numerous Chinese researchers favor accounting-based metrics like Return on Asset (ROA) and Return on Equity (ROE) for assessing company performance (Liu et al., 2022; Bai & An, 2021; Liu et al., 2015).

The literature shows that ownership structure is important in shaping firm performance. As an essential governance mechanism, ownership structure affects the extent of agency conflicts and determines how effectively managers' interests are aligned with those of shareholders (Bhakar et al., 2024; Jensen & Meckling, 1976). A well-designed ownership structure can reduce agency costs, strengthen monitoring, and thus improve long-term firm performance (Kao et al., 2019; Hartzell et al., 2014). Many empirical studies prove that ownership concentration positively influences accounting-based measures such as ROA and ROE by encouraging large shareholders to exercise effective oversight (Ali et al., 2018; Claessens & Djankov, 1999). Similarly, managerial ownership has been shown to link managers' incentives more closely to firm profitability, leading to better financial outcomes (Bhagat & Bolton, 2019; Qin & Deng, 2009). However, some research also highlights potential drawbacks. Excessive ownership concentration or managerial ownership may result in entrenchment, collusion, or tunneling, which can weaken firm performance (Jiang & Kim, 2020). In the Chinese context, where ownership concentration and state ownership are prevalent, these governance characteristics strongly influence financial

outcomes.

Another important internal governance mechanism influencing firm performance is the board of directors. Board size, independence, and leadership structure have all been shown to affect profitability and shareholder returns. Larger boards may provide access to diverse expertise and resources that support better decision-making, enhancing ROA and ROE (García-Ramos & Díaz, 2021; Puni and Anlesinya, 2020). At the same time, huge boards can suffer from coordination problems and slower decision-making, weakening performance (Jensen, 1993). Independent directors play a crucial role in monitoring management and protecting shareholder interests, which can reduce agency costs and improve financial performance (Khan et al., 2021). In contrast, low levels of independence may allow managers to dominate decision-making, increasing the risk of opportunistic behavior that harms firm performance (Fama & Jensen, 1983). Furthermore, CEO duality, where the CEO also serves as board chair, has been widely debated. While duality may bring unity of command and quicker responses, it often reduces board oversight and may lead to weaker accounting performance (Kao et al., 2019; Daily & Dalton, 1994; Peng et al., 2007). These findings suggest that board characteristics are critical determinants of ROA and ROE, reflecting how governance structures influence firm outcomes.

Managerial incentives are also closely related to firm performance. Compensation mechanisms such as executive pay and stock options are designed to align managerial interests with shareholder wealth. Prior studies argue that well-structured incentive schemes can motivate managers to improve operational efficiency and raise profitability, enhancing firm performance (Chen et al., 2023). Performance-based compensation links managerial rewards directly to firm outcomes, reducing agency problems and encouraging managers to focus on value creation (Sheng & Che, 2016). However, poorly designed incentive plans may induce excessive risk-taking or short-termism, harming sustainable performance (Abdul et al., 2015; Morck et al., 1988). In emerging markets like China, executive compensation is significant because ownership concentration and state influence often weaken traditional monitoring channels, making incentive alignment an essential driver of financial performance.

In addition to these corporate governance factors, the degree of budgetary slack also has important implications for firm performance. Budgetary slack, a

commonly observed phenomenon in enterprise budget management, has influenced both managerial efficiency and organizational outcomes. Previous studies have pointed out that budgetary slack is often seen as a dysfunctional behavior (Shu et al., 2023; Lukka, 1988), or even as unethical (Pramudiati et al., 2022; Douglas & Wier, 2000), and therefore should be limited (Fisher et al., 2000). Budgetary slack can lead to resource waste and low management efficiency (Otalor & Oti, 2017). When budget targets are set below the actual performance levels that a firm can achieve, employees may reach the expected results without making full use of available resources. The organization should not encourage such behavior (Yee, 2014). Suppose the degree of budgetary slack is too high. In that case, it may fail to motivate employees and allow them to hide mistakes, reducing operational efficiency (Islami & Nahartyo, 2019). In addition, budgetary slack can harm the rational allocation of resources. This often results in high ineffective costs and eventually weakens firm performance. Otalor and Oti (2017) surveyed 247 employees across 177 publicly traded firms on the Nigerian Stock Exchange. They identified a strong inverse association between budgetary slack and managerial performance. Similarly, Pan et al. (2008) used ROA and ROE to measure accounting performance. They confirmed that listed companies with higher budgetary slack tend to perform less. Following An et al. (2020), based on data from Chinese A-share listed companies spanning 2011 to 2017, reported a statistically significant negative linkage between budgetary slack and overall firm performance.

However, some scholars argue that in certain situations, budgetary slack can provide a buffer against uncertainty and give managers more flexibility, which may help promote organizational development (Ashbaugh-Skaife et al., 2008). An et al. (2020) observed that maintaining a certain level of budgetary slack in firms pursuing aggressive strategic approaches can provide necessary flexibility. Such slack allows companies to better respond to external uncertainties, seize emerging investment opportunities, and meet unexpected future needs. By easing the constraints of strict budget targets, this buffer can help alleviate internal pressure and, in turn, contribute to improved organizational performance. Haliah (2021) further noted that the resource protection offered by budgetary slack can reduce psychological pressure on employees and help them respond more calmly to potential challenges. In addition, Ashbaugh-Skaife et al. (2008) emphasized that proper budgetary slack may help reduce agency problems, improve managerial motivation, and enhance firm performance. However, budgetary slack may increase costs and limit sustainable

growth in the long run.

In summary, firm performance is shaped by a combination of governance mechanisms and budgetary practices. Ownership structure, board characteristics, and managerial incentives directly affect profitability and efficiency. At the same time, budgetary slack may either weaken or strengthen performance depending on its level and strategic context. Given the complex and sometimes contradictory evidence, future research is needed to understand how governance structures and budgetary choices interact to influence firm performance, especially in the institutional environment of China.

### **2.3 Corporate Governance**

The separation between ownership (shareholders) and control (management), and the impact of this separation on corporate value and decision-making, makes it necessary to establish effective management control mechanisms. Based on this reality, the concept of corporate governance emerged (Asensio-López et al., 2019). Berle and Means (1932) first explicitly proposed the separation of ownership and control in their book *“The Modern Corporation and Private Property”*, which originated the modern corporate governance. Jensen and Meckling (1976) raised the agency issue. They took the agency conflict between shareholders and managers as central to studying corporate governance. Fama and Jensen (1983) further stated that corporate governance is about managing the agency relationship between principals and agents, centered on reducing agency costs. Over the past few decades, corporate governance research has garnered widespread attention from academia and practitioners. This growing interest is primarily driven by a series of corporate misconduct cases, ranging from the scandals of US companies such as Enron and WorldCom in earlier years to more recent financial scandals in Asian countries, including China’s CITIC Pacific, Malaysia’s IMDB, and India’s Satyam. Research on corporate governance has evolved into an extensive body of knowledge encompassing multidisciplinary perspectives (Aguilera et al., 2015; Denis & McConnell, 2003). These studies, primarily grounded in agency theory and the shareholder value maximization framework, have provided significant insights into governance mechanisms, accountability systems, and their impact on corporate performance.

### **2.3.1 The Development of Corporate Governance Mechanisms in China**

Corporate governance in Chinese enterprises started relatively late. It began to develop gradually after the economic reform and opening-up policy in 1978, along with the reform of State-owned Enterprises (SOEs) and the establishment of a modern enterprise system (Jiang & Kim, 2020). The development path of corporate governance in China started by expanding enterprise autonomy and followed a combination of "gradual market-oriented reform" and "incremental reform" stage (Iwasaki et al., 2022). "Gradual market-oriented reform" refers to steadily introducing market mechanisms while maintaining economic stability and institutional continuity. "Incremental reform" is a strategy of "using the new to drive the old," which means gradually replacing and transforming traditional systems by introducing "incremental mechanisms" such as market elements and governance structures outside the original planned system (Zhang et al., 2021). Together, these two approaches form the basic path of Chinese corporate governance evolution and reflect the reform characteristics of gradual promotion through pilot exploration and driving transformation within existing structures (Cuiying & Baodong, 2022). In general, the development of corporate governance in China can be divided into three main stages (Sun & Li, 2018; Xiao, 2020; Iwasaki et al., 2022). Table 2.1 summarizes the three main stages of the development of corporate governance in China, highlighting their key measures and distinctive characteristics.

Table 2.1

## Development Stages of Corporate Governance in China

| Stage                                  | Period       | Key Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Characteristics                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First Stage:<br>Initial<br>Exploration | 1978–1992    | <ul style="list-style-type: none"> <li>• Pilot establishment of the corporate legal person system</li> <li>• Implementation of the factory director (manager) responsibility system</li> <li>• Introduction of the contracted management responsibility system</li> </ul>                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Governance remained highly administrative</li> <li>• Partial separation of ownership and management rights emerged, but a complete modern governance system had not yet formed</li> <li>• The government retained enterprise ownership and directly controlled senior management appointments</li> </ul> |
| Second Stage:<br>Framework<br>Building | 1993–2003    | <ul style="list-style-type: none"> <li>• 1993: Adoption of the Company Law of the PRC, requiring joint-stock companies to establish internal governance structures (Shareholders' Meeting, Board of Directors, Board of Supervisors, and executive management)</li> <li>• 2001: CSRC Guidelines on Independent Director System for Listed Companies, mandating at least one-third independent directors (minimum two, with at least one having an accounting background)</li> </ul> | <ul style="list-style-type: none"> <li>• Basic framework of modern corporate governance established</li> <li>• Independent directors became an essential part of the governance structure in listed companies</li> </ul>                                                                                                                          |
| Third Stage:                           | 2003–present | <ul style="list-style-type: none"> <li>• 2004: SASAC <i>Notice on Pilot Work of</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Ownership structure became more diversified</li> </ul>                                                                                                                                                                                                                                                   |

Adjustment and  
Improvement

*Establishing Boards of Directors in Wholly  
State-owned Enterprises* to clarify board  
responsibilities

- 2005: CSRC launched a comprehensive reform of non-tradable shares
- 2013: The Third Plenary Session of the 18th CPC Central Committee initiated new SOE reform, promoting a mixed-ownership economy
- 2017: The 19th CPC National Congress proposed improving the authorized operation mechanism of state-owned capital and delegating management authority

- Administrative intervention gradually weakened
- Shareholder rights strengthened, pushing governance toward a shareholder-oriented model

The First Stage (1978-1992) is the initial exploration period of corporate governance. The main task was to pilot and establish the corporate legal person system. Key measures included implementing the factory director (manager) responsibility system and the contracted management responsibility system (Sun & Li, 2018; Xiao, 2020). Before this period, China operated under a highly centralized planned economy system where the state managed all economic activities, including human resources, finance, materials, production, supply, and sales. Under this system, enterprise governance displayed highly administrative characteristics, with the government determining resource allocation and operational objectives and directly managing senior personnel appointments and dismissals. In 1978, with China's implementation of the Reform and Opening-up strategy, SOE reform began. Although this stage witnessed characteristics of modern enterprise systems such as the separation of ownership and management rights and principal-agent relationships, a complete modern corporate governance system had not yet formed. Corporate governance remained distinctly administrative, as the government retained ownership of enterprises and controlled the appointment of factory directors or managers (Xiao, 2020).

The Second Stage (1993-2003) focused on building the basic framework of modern enterprise governance structures. In 1993, the *Company Law of the People's Republic of China* was adopted by the Standing Committee of the National People's Congress. This law explicitly required joint-stock companies to establish an internal governance structure comprising the Shareholders Meeting, board of directors, board of supervisors, and executive management teams. This legislation provided a legal foundation for corporate governance reform in China. Subsequently, the CSRC issued *the Guidelines for Establishing an Independent Director System for Listed Companies* in 2001. The regulation made mandatory requirements for listed companies to establish independent director systems and specified the number and proportion requirements for independent directors. At least one-third of board members should be independent directors, with no fewer than two people, and at least one should have an accounting professional background (CSRC, 2001). These institutional arrangements promoted the full implementation of the independent director system (Xu & Li, 2008). Independent directors became an important part of China's corporate governance structure.

The third stage (2003-present) has emphasized adjusting ownership structure

and building a shareholder-oriented governance system. Ownership structure forms the basis of corporate governance and directly affects the effectiveness of governance mechanisms (Ali et al., 2018). Since the opening of the Shanghai Stock Exchange in 1990, China has comprehensively advanced the reform of enterprises into joint-stock systems. However, during the reform process, the dominance of state-owned shares and the excessively high proportion of non-tradable shares resulted in a situation where state-owned shares held a controlling position. This ownership structure severely impacted the effective operation of corporate governance mechanisms: controlling shareholders often controlled the shareholders' meeting, the board of directors, and the board of supervisors simultaneously, lacking practical supervisory constraints. This led to frequent issues such as related-party transactions, illegal guarantees, and interest transfers, harming the rights of minority shareholders. Statistics show that between 1993 and 2002, approximately 200 out of 1,200 listed companies were held legally accountable for violations such as asset misappropriation, illegal guarantees, and false information disclosure (Yang, 2018). In response to these issues, there was a widespread call in the academic community to improve ownership structures, enhance internal governance mechanisms, and establish an external governance system (Xiao, 2020).

In 2004, the State-owned Assets Supervision and Administration Commission (SASAC) issued *Notice on the Pilot Work of Establishing and Improving the Board of Directors in Wholly State-owned Enterprises*. This policy explored establishing a standardized board system in wholly state-owned enterprises. It addressed problems such as unclear responsibilities between the board of directors and the management team, and the overlap between decision-making and execution levels. It further clarified the functional role of the board in corporate governance (Sun & Li, 2018). In 2005, the CSRC issued the *Notice on Issues Related to the Pilot Reform of Non-tradable Shares in Listed Companies*, the *Guiding Opinions on the Reform of Non-tradable Shares in Listed Companies*, and the *Administrative Measures for the Reform of Non-tradable Shares in Listed Companies*. These policies aimed to fully promote the reform of non-tradable shares, focusing on reducing the negative impact of a high proportion of non-tradable shares on governance efficiency.

In 2013, the Third Plenary Session of the 18th Central Committee of the Communist Party of China (CPC) officially launched a new round of state-owned enterprise reform. It emphasized reforming the mechanism of authorized state capital

management and promoted the development of a mixed-ownership economy. While maintaining the dominant position of state capital, this reform encouraged the introduction of non-state capital to diversify ownership and address inefficiencies and rigidity in governance (Cuiying & Baodong, 2022). Research shows that the participation of non-state shareholders helps improve resource allocation, investment efficiency, and dividend distribution, enhancing governance performance and preserving state asset value (Zhang et al., 2021). In 2017, the report of the 19th National Congress of the Communist Party of China proposed improving the authorized operation mechanism of state-owned capital. It advocated delegating powers such as appointing managers, performance evaluation, and compensation management to operating, holding, and investment companies. This reform promoted the withdrawal of government administrative intervention from corporate governance. It strengthened the role of capital owners' rights in governance. Overall, this stage is characterized by weakening government administrative control and strengthening shareholder rights. This shift has significantly changed China's corporate governance structure and pushed the system toward a shareholder-oriented model (Yang, 2018).

### **2.3.2 The overview of corporate governance**

Scholars have interpreted the concept of corporate governance in various ways, each emphasizing different dimensions. Shleifer and Vishny (1997) defined it as a mechanism that ensures capital providers receive adequate investment returns. From an organizational standpoint, Wu (1994) characterized corporate governance as a system of mutual oversight involving owners, boards of directors, and top executives. According to the Organisation for Economic Co-operation and Development (1999), corporate governance is the framework through which corporations are directed and controlled. This framework outlines the roles and responsibilities of key stakeholders and establishes the formal procedures for corporate decision-making. Adopting a managerial perspective, Hambrick et al. (2008) described corporate governance as a set of formal and informal structures and supervisory processes present in a corporate environment. Aoki (2001) broadened the scope by incorporating a stakeholder perspective, portraying corporate governance as a framework of rights and responsibilities among parties with interests in the firm. This view emphasizes that corporate governance aims to ensure that executives respect stakeholder interests

while taking responsibility for creating, protecting, and allocating corporate wealth (Garcia-Castro & Aguilera, 2015). Gillan (2006) offered a broader view, presenting corporate governance as a system composed of legal, regulatory, and contextual elements that shape how companies are managed. His approach incorporates the governance framework into the external environment—including political, legal, and market conditions. Likewise, Belloc (2012) emphasized the institutional and market-based mechanisms that guide corporate conduct. Both perspectives reinforce that corporate governance involves a structured allocation of authority and responsibility among internal corporate actors.

Based on these diverse perspectives, the core elements of effective corporate governance encompass four aspects. First, good governance should protect stakeholder interests through management oversight and accountability mechanisms. Second, good governance should coordinate the demands of various internal and external stakeholders. Third, good governance should provide transparent information disclosure mechanisms. Fourth, good governance should offer strategic and ethical guidance to the company. In conclusion, effective corporate governance is a crucial foundation for achieving business success, maintaining positive stakeholder relationships, and ensuring sustainable economic growth (Aguilera et al., 2015).

Existing research commonly categorizes corporate governance mechanisms into internal and external governance (Asensio-López et al., 2019; Aguilera et al., 2015; Gillan, 2006; Denis & McConnell, 2003). Gillan (2006) demonstrated the interconnection between internal and external governance mechanisms through a simplified balance sheet representation of the firm, depicted in Figure 2.1. The left side of the figure presents the basic structure of internal governance. Management, acting on behalf of shareholders, is tasked with decision-making regarding investment initiatives and funding strategies. The board of directors holds a central position in the internal control system. Its primary duties include providing guidance and oversight to management and making decisions on the appointment, dismissal, and compensation of senior executives (Jensen, 1993). The right side of the figure illustrates the external governance factors linked to the firm's necessity for outside financing. This model further emphasizes the division between capital providers and users in publicly traded companies. This separation is the reason why a corporate governance structure is necessary.

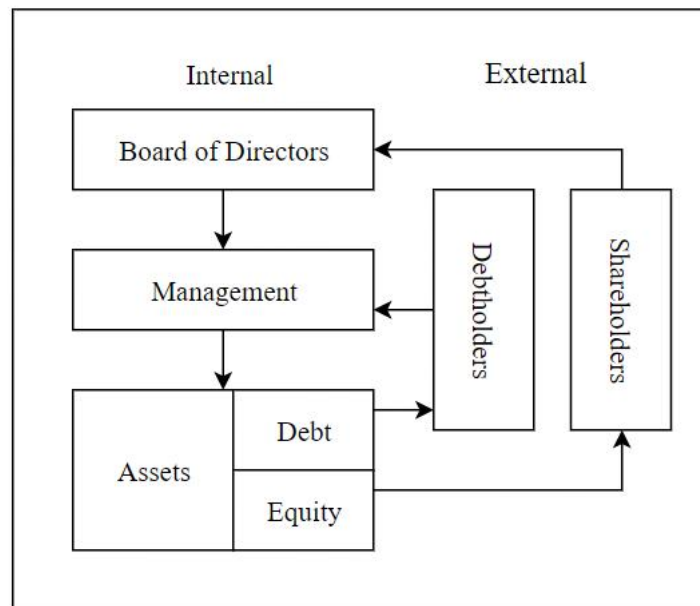


Figure 2.1 Corporate Governance and the Balance Sheet Model of the Firm  
(Gillian, 2006)

However, the boundaries between these two governance mechanisms are not strictly defined (Brown et al., 2011). The distinction primarily depends on whether the dominant forces driving the governance mechanism originate within the enterprise or from the external environment (Aguilera et al., 2015). Internal governance mechanisms refer to the organizational structures and operational processes within the control of the company's shareholders and board of directors (Brown et al., 2011). They are designed to coordinate and balance different stakeholders' roles, rights, and responsibilities. Internally, the board of directors supervises leadership appointments and sets executive incentives. At the same time, management handles the company's routine operations. Shareholders, as providers of capital, play a dual role: on the one hand, they influence major decisions made by the board and management; on the other, they share in the company's outcomes, whether gains or losses. In contrast, external governance mechanisms operate beyond the direct control of shareholders and the board of directors (Brown et al., 2011). Internal and external governance mechanisms have a complementary yet substitutive relationship (Aguilera et al., 2015). From both perspectives, external governance factors exert either direct or indirect significant influence on the effectiveness of corporate governance.

Accordingly, this study conceptualizes corporate governance as a system of institutional arrangements encompassing internal and external mechanisms. It delineates the allocation of rights and responsibilities among internal actors and

external stakeholders while establishing oversight, decision-making, and accountability frameworks. These mechanisms enhance governance effectiveness, promote sustainable development, and support long-term organizational performance. The following sections provide a detailed discussion of the internal and external governance mechanisms examined in this study.

### **2.3.3 Internal Governance Mechanism**

Most studies focus on internal governance mechanisms, particularly three key aspects: the board of directors, ownership structure, and managerial incentives (Aguilera et al., 2015). Daily et al. (2003, p.373) noted that "internal mechanisms include an effectively structured board, compensation contracts that encourage a shareholder orientation, and concentrated ownership holdings that lead to active monitoring of executives". Among these, ownership, as the first critical internal governance mechanism, particularly its concentration, has also been extensively studied. Research widely suggests that concentrated ownership gives owners the motivation and capacity to directly monitor and guide management and the board of directors (Aguilera et al., 2015). Second, the role of the board of directors, especially the impact of board independence on firm performance, has been a central topic of interest for scholars in the field of governance (Dalton et al., 2007; Kao et al., 2019; Khatib & Nour, 2021). The third internal governance mechanism that has received significant attention is management incentives, which are shown through executive compensation or performance-based incentive systems. This mechanism has also attracted wide attention. However, research results on its governance role are inconsistent, and considerable debate exists (Aguilera et al., 2015).

#### ***2.3.3.1 Ownership Structure***

Ownership structure refers to the proportion of shares held by internal managers and external investors within a firm (Bhakar et al., 2024; McCann & Vroom, 2009). This structure plays an important role in identifying the primary type of agency conflict, specifically whether the conflict occurs between large and small shareholders, or between shareholders and managers (Mang'unyi, 2011). Many scholars agree that combining ownership and control can help reduce stakeholder conflicts and improve

firm performance (Bhakar et al., 2024). A higher level of ownership concentration can lower monitoring costs and thus have a positive impact on performance (Shleifer & Vishny, 1986). Kao et al. (2019) discovered that a well-designed ownership structure can strengthen oversight of managerial decisions, and by reducing agency costs and information asymmetry, improve long-term firm performance. As early as 1976, Jensen and Meckling proposed that ownership structure can effectively control agency costs. Although differences among internal stakeholders may still exist, an appropriate ownership structure can motivate managers to act more in line with shareholder interests. This view is supported by the empirical findings of Hartzell et al. (2014), which show that ownership structure helps control agency costs by influencing how firms are managed and controlled.

Ownership structure is an important factor influencing corporate governance mechanisms (Iwasaki et al., 2022). It shapes how shareholders' meetings function and affects the composition and operation of the board of directors. In turn, the board plays a key role in appointing, incentivizing, and monitoring management. It makes major decisions that can fundamentally influence firm performance. Numerous studies have explored how different ownership patterns affect firm outcomes in emerging markets. A standard view among scholars is that when principals (owners) can effectively align the actions of their agents (managers) toward value maximization, firm performance is likely to improve (Iwasaki et al., 2022; Shleifer & Vishny, 1986). From this standpoint, ownership structure is intrinsically linked to corporate performance. Current research on ownership structure mainly examines the degree of ownership concentration and the identity of large shareholders (Asensio-López et al., 2019). Large shareholders are typically categorized as state, institutional, family, foreign, and managerial (Bhakar et al., 2024; Asensio-López et al., 2019).

Corporate governance systems vary depending on ownership structure, and large and small shareholders play different roles in governance (Shleifer & Vishny, 1986). When ownership is widely dispersed, small shareholders often lack the motivation to monitor management, as the benefits of doing so may not outweigh the costs. As a result, they may free ride by relying on the monitoring efforts of larger shareholders instead of actively participating in governance (Ma et al., 2010). In cases of highly dispersed ownership, even large shareholders may find that the monitoring costs exceed the benefits, creating a monitoring vacuum and intensifying agency conflicts between shareholders and managers (Ali et al., 2018). As the shareholding of

large shareholders increases, their incentives to monitor management also rise, since the expected gains can cover the costs. However, once large shareholders gain controlling power, they may monitor managers and collude with them to extract private benefits at the expense of minority shareholders, a problem known as the "tunneling effect" (Jiang & Kim, 2020).

Concentrated ownership means powerful major shareholders hold a high proportion of a company's shares, so they can influence or control the decision-making process, often affecting minority shareholders (Bhakar et al., 2024; Abdulsamad & Yusoff, 2016). Ownership concentration, typically measured by the shareholding percentage of large shareholders (Kao et al., 2019), is considered the most influential and widely studied element of ownership structure (Bhakar et al., 2024). In China, corporate governance is fundamentally shaped by the dominance of large shareholders. Compared to developed economies such as the United States, Chinese firms tend to exhibit a much higher ownership concentration (Jiang & Kim, 2020). Among all types of ownership structures, concentrated ownership exerts a powerful influence on the performance of Chinese listed companies (Ma et al., 2010). According to agency theory, large shareholders hold a greater share of profits and thus have more substantial incentives to monitor managers. This helps reduce agency problems and improve firm efficiency (Alkurdi et al., 2021). In addition, strong oversight can prevent asset misappropriation or managerial abuse of company resources, which indirectly protects the interests of minority shareholders (Bhakar et al., 2024). The academic exploration of how ownership influences firm performance dates back to Berle and Means (1932), who argued that the separation between ownership and control could lead to misaligned interests in firms with dispersed ownership. A relatively concentrated ownership structure helps address problems of weak incentives and poor monitoring. Therefore, they suggested a positive relationship between ownership concentration and accounting profitability. Many empirical studies have supported this view. For example, Claessens and Djankov (1999) found that increased ownership concentration improved profitability among 706 Czech firms. In Australia, Welch (2003) demonstrated a significant impact of ownership structure on firm outcomes. Mak and Kusnadi (2005) found a positive relationship between significant shareholder ownership and firm performance in Malaysia and Singapore. Haniffa and Hudaib (2006) also showed that large shareholder ownership positively influenced accounting performance in Malaysian

listed companies. Similar results were reported by Cho and Kim (2007) in Korea and by Young et al. (2008) in Taiwan. In the context of China, Zhang et al. (2014) reported a notable positive association between concentrated ownership and business performance within the IT sector. According to Puni and Anlesinya (2020), using panel data from 38 listed firms in Ghana from 2006 to 2018, confirmed a similar pattern. Ali et al. (2018) found a significant positive link between the shareholding of the top ten shareholders and return on equity in Chinese A-share firms. Kao et al. (2019), analyzing data from Taiwanese listed enterprises spanning 1997 to 2015, demonstrated that higher ownership concentration was linked to enhanced firm value. Alkurdi et al. (2021) highlighted ownership concentration as a key factor in improving firm performance in Jordan. Paniagua et al. (2018) used data from 1,207 firms in 59 countries and found that concentrated ownership had a more substantial positive effect on performance than dispersed ownership. Mugobo et al. (2016) further pointed out that ownership concentration helps strengthen monitoring mechanisms and improve overall firm performance.

Although many studies support the positive effects of ownership concentration, some researchers argue that excessive ownership concentration may lead to governance risks and harm firm performance. Fama and Jensen (1983) pointed out that when large shareholders hold too much equity, it may strengthen managerial power and reduce the threat of external takeovers, which can weaken the motivation to improve performance. When large shareholders and managers vote together and share common interests, their willingness to monitor may decline, resulting in weak oversight and increased risk exposure, ultimately harming firm performance (Brickley et al., 1988). Empirical studies have also found adverse effects. For example, Lefort and Urzúa (2008) established a negative relationship between ownership concentration and performance using panel data from Chilean firms. Villalonga and Amit (2006), in a study of Fortune 500 firms, reported that higher ownership concentration was associated with poorer performance. Ducassy and Montandrou (2015) also found that large shareholders might abuse their control rights, harm the interests of minority shareholders, and reduce firm performance. Similar conclusions were drawn by Ongore (2011) and Queiri et al. (2021), who stated that expropriation by large shareholders was a primary reason for performance decline.

Apart from positive and negative views, some studies show that ownership concentration does not significantly impact firm performance, or the results are

uncertain. For example, Demsetz and Villalonga (2001), in their analysis of 223 American firms, reported that the ownership stakes held by the top five shareholders were not significantly related to performance metrics such as Tobin's Q. Tsegba and Achua (2011), Mrad (2015), Laporšek et al. (2021) and others also found in their respective studies that ownership concentration did not show statistical significance in explaining firm performance. McConnell and Servaes (1990) found through empirical research based on companies listed on the New York Stock Exchange that ownership concentration and company performance do not show a simple linear relationship, but rather an inverted U-shaped nonlinear relationship. Chen et al. (2007) also believed there may be a nonlinear relationship between the largest shareholder's shareholding and firm performance, indicating that the relationship between ownership concentration and performance may change direction in different ranges. Ali et al. (2018) and Abdullah et al. (2019) both pointed out that differences in corporate governance systems and regulatory environments across countries make research results not universally applicable. Therefore, the impact of ownership concentration on firm performance remains controversial and requires detailed analysis combined with specific institutional backgrounds.

In the Chinese context, state-controlled enterprises have historically been dominant among listed firms. During the early development of China's stock market, virtually all public companies were state-owned. Although the proportion of SOEs has declined, they still represent roughly one-third of all listed firms, accounting for around two-thirds of the total market capitalization (Jiang & Kim, 2020). Although the Chinese government has tried to promote the development of modern enterprises by implementing various policies and deregulation, China has always placed state ownership at the core of the economy (Iwasaki et al., 2022). Many studies show that state ownership reduces enterprise efficiency (Lin et al., 2020; Sun & Tong, 2003). When making enterprise development strategies, the government often places political goals above commercial interests, which causes SOEs to deviate from the business direction of profit maximization (Iwasaki et al., 2022). In this context, the government may pursue social welfare maximization (Shirley and Walsh, 2001) or ignore the private interest demands of political figures (Shleifer and Vishny, 1998). This approach increases agency costs and creates additional political costs, such as providing subsidies or other incentives to enterprise managers to ensure the achievement of political goals (Qian, 1996). When large shareholders exist, agency

problems are already common. However, this issue tends to be more severe in SOEs, primarily due to conflicting objectives between government stakeholders and private investors and the government's limited capacity to effectively monitor managerial behavior. The state may have conflicts of interest with minority shareholders and managers, worsening serious agency problems (Lin et al., 2020). Additionally, SOEs frequently face bureaucratic inefficiencies, and a pronounced information gap between senior executives and state authorities is commonly observed (Bai & An, 2021). As a result, these enterprises are more likely to face governance problems, such as unclear decision-making processes, weak accountability of managers, and higher monitoring costs, all of which may together reduce firm performance (Huang et al., 2017). Similarly, some empirical studies have found a negative correlation between state ownership and enterprise performance. Lin et al. (2009) found that state ownership has the most significant negative impact on enterprise efficiency. Ongore (2011) believed that government shareholding harms performance. Based on a comprehensive meta-analysis of China, Russia, and Eastern European EU countries, Iwasaki et al. (2022) concluded that state ownership is generally associated with weaker enterprise performance.

However, some scholars disagree with this view and support the positive role of state ownership. Chhibber and Majumdar (1998) pointed out in institutional theory that state ownership in the ownership structure plays a role in reducing agency costs. State ownership can effectively solve the information asymmetry problem caused by stakeholders' insufficient understanding of enterprise value information (Queiri et al., 2021). In addition, state ownership often has reliable funding sources, which helps reduce various financial risks enterprises face (Bhakar et al., 2024). Therefore, the government's presence in the ownership structure may improve company performance. Some empirical studies have confirmed this view. For example, Mugobo et al. (2016) used multiple regression analysis on data from 80 South African firms spanning 2001 to 2010, using ROA as a measure, and confirmed a significant positive association between state ownership and firm performance. Al-Matari et al. (2016) based their research on Omani non-financial enterprises and found that state ownership positively impacts performance. In addition, some studies show mixed results. As per Yang (2014), drawing on panel data from Chinese publicly listed firms, the relationship between government ownership and company performance is not linear. Instead, it follows an inverted U-shaped pattern, suggesting that a moderate level of state

participation within China's institutional context can enhance firm performance. However, excessively high state ownership is unfavorable to enterprise performance, and this unfavorable impact increases as the proportion of state ownership rises. Abdulsamad and Yusoff (2016) used quantitative analysis methods based on annual report data from 369 Malaysian listed companies from 2003 to 2013. They found that in most years during the study period, there was no significant association between government ownership and company performance. Ali et al. (2018) analyzed listed companies in different regions of mainland China. They found that state ownership generally has a negative impact on firm market valuation. However, it does not have a significant effect on ROE.

Managerial ownership is viewed as another mechanism that may enhance the effectiveness of corporate governance. Managerial ownership refers to the company shares held by internal members, such as managers or board members (Boshnak, 2024; Bhakar et al., 2024). Under the agency theory framework, Jensen and Meckling (1976) believed that managers, as one of the enterprise shareholders, closely link their own interests with overall company performance, which helps motivate them to adopt behaviors that benefit shareholders, thus reducing agency conflicts. Cho (1992) further pointed out that managers holding shares helps their job stability and reduces their risk-averse behavior, thus committing more to decisions that maximize shareholder profits. This ownership structure can improve enterprise performance by limiting management's on-the-job consumption, suppressing predatory behavior, and increasing their focus on long-term enterprise development (Asensio-López et al., 2019). A large number of empirical studies provide support for this view. Lauterbach and Vaninsky (1999) studied 280 Israeli companies and found that managerial ownership is important in improving enterprise performance. Subsequent research further confirmed this conclusion. Bhagat and Bolton (2019) found through empirical analysis that there is the most stable positive correlation between managerial ownership and future company performance, so they suggested using managerial ownership as an important indicator for evaluating corporate governance levels. Ongore (2011) also reached similar conclusions, believing that managerial ownership and dispersed ownership structure play core roles in determining enterprise value. Studies in different regions have all verified this pattern. Yammesri et al. (2006) studied Thai enterprises. They found that family ownership, especially managerial family ownership, significantly impacts enterprise performance. In the Jordanian

market, Alabdullah (2018) showed that managerial ownership can effectively improve non-financial enterprises' market performance and financial performance. Similarly, Sa'eed and Amin (2018), through their analysis of manufacturing companies listed on the Amman Stock Exchange, reached comparable conclusions. Related research in the Chinese market has also reached consistent conclusions. Qin and Deng (2009) used Chinese enterprises as research samples. They confirmed that managerial equity holdings exert a notable beneficial influence on corporate performance. Ali et al. (2018) observed that managerial ownership contributes positively to improving firm outcomes in the context of Chinese A-share listed firms.

However, Shleifer and Vishny (1986) pointed out that when managerial ownership is too high, it may weaken the board's constraints on management, which can cause management entrenchment problems and is not beneficial to improving corporate governance efficiency. Higher managerial ownership may also weaken external supervision and increase space for self-interested behavior, thus worsening agency problems within enterprises (Fama & Jensen, 1983). Morck et al. (1988) found that managers with high ownership may damage enterprise performance due to overconfidence or a lack of motivation to continue pursuing company profit maximization. Mugobo et al. (2016) used multiple regression analysis on data from 80 South African firms covering 2001 to 2010, using ROA as the performance indicator. Their results indicated that managerial equity holdings were significantly and negatively associated with firm outcomes. Mrad (2015) examined the ownership structure of French companies after privatization and found that managerial ownership negatively correlated with corporate results. Abdul et al. (2015) pointed out that when studying Indonesian enterprises, managerial ownership is negatively correlated with performance. It may stem from the "managerial entrenchment" phenomenon, where managers prioritize their interests over shareholder value. Additionally, several studies have revealed no statistically meaningful connection between managerial shareholding and firm-level outcomes, or have presented conflicting and inconclusive findings. For instance, Al-Matari et al. (2016) found no significant correlation between managerial ownership and firm performance in an empirical study of 243 non-financial firms in Oman. According to Alkurdi et al. (2021), in their analysis of Jordanian firms, reported a negative relationship between managerial ownership and ROA, but found no correlation with Tobin's Q. The empirical results of Alkurdi et al. (2021) further highlight the context-dependent nature of this relationship, suggesting that the impact

of managerial ownership on firm performance may vary across institutional settings and economic environments.

In summary, ownership structure plays a critical role in corporate governance. It has both direct and indirect effects on firm performance. Although many scholars have studied the governance mechanisms of ownership structure, the research findings are inconsistent. This is mainly because of differences in research perspectives, samples, and institutional backgrounds. Therefore, there is still much debate, and further research is needed. Besides ownership concentration, state ownership, and managerial ownership discussed earlier, research on ownership structure also includes institutional ownership (Alkurdi et al., 2021; Queiri et al., 2021), foreign ownership (Rashid, 2020; Kao et al., 2019), and family ownership (Bhakar et al., 2024; Kao et al., 2019). However, these types of ownership have limited effects in China. Studies show that family ownership in China is a low-value governance mechanism and does not provide adequate control (Qin & Deng, 2009). At the same time, the proportion of professional institutional investors in China's capital market is relatively low, and their governance role is not yet clear (Xiang & Luo, 2023). In addition, the number of foreign-invested enterprises is modest, and their contribution to firm performance remains marginal. As a result, it does not have the same governance effect as in other countries (Iwasaki et al., 2022). Based on the above analysis, this study mainly focuses on three forms of ownership structure: ownership concentration, state ownership, and managerial ownership.

#### ***2.3.3.2 Board of directors***

The board of directors acts as a bridge between equity holders and the executive team. It represents a fundamental component of the governance structure. It serves as the primary channel through which investors oversee the chief executive and ensure that managerial actions align with shareholder interests (Fernández-Temprano & Tejerina-Gaite, 2020). According to Fama and Jensen (1983), the board is the core decision-making body within a company. Its primary responsibilities are setting strategic goals and supervising and controlling business operations. The board mainly performs monitoring and advising (Merendino & Melville, 2019). The monitoring role includes hiring, promoting, evaluating, and, when necessary, removing top executives (Coles et al., 2008) to protect shareholder value. The advising role means that board

members use their work experience and professional knowledge to provide suggestions or guidance to management or the CEO on strategic decisions and how to carry them out (Faleye et al., 2011). More specifically, the board monitors the company by making decisions on CEO appointments, incentive policies, and control over key projects (Merendino & Melville, 2019). The board's ability to act in the best interest of all shareholders directly influences corporate performance. Board size, board independence, and whether the chairman also serves as CEO are all key factors that affect the quality of corporate governance (Merendino & Melville, 2019).

The board of directors is widely acknowledged as a key component of a firm's internal governance system. Among its various characteristics, board size is often viewed as a significant element in the study of corporate governance (Peng et al., 2021). Most studies agree that there is no standard rule for the optimal board size (Queiri et al., 2021). The association between board composition and company performance has attracted considerable academic interest. Nevertheless, existing studies have not reached a consensus on its precise impact. Drawing on resource dependence theory, it is suggested that a larger board may enable firms to access valuable external resources. They can bring more experience, knowledge, and skills, and offer helpful advice and ideas to improve firm performance (Pfeffer & Salancik, 1978). From this perspective, the board functions as a key channel for resource acquisition. New members often contribute additional human and relational capital, strengthening the board's capacity to obtain information and develop a deeper understanding of firm-specific dynamics. This can raise the quality of strategic decisions and enhance performance (García-Ramos & Díaz, 2021; Hillman & Dalziel, 2003). Klein (1998) pointed out that as companies grow and become more complex, the CEO needs more advice in both type and amount. Firms with diversified businesses and operations in many areas often need more professional input and discussion (Hermalin & Weisbach, 2001). These firms may be better suited to having a larger board.

At the same time, agency theory suggests that when shareholders cannot monitor managers effectively, a larger board may help strengthen oversight and improve firm performance (Abor, 2007). Many empirical studies support the positive role of larger boards. Khatib and Nour (2021) studied 188 non-financial enterprises in Malaysia during 2019–2020. They found that board size was positively related to firm performance. Puni and Anlesinya (2020) used panel data from 38 publicly traded

companies in Ghana. They identified a favorable relationship between board size and firm outcomes. Zhou et al. (2018) also reached consistent conclusions using information from companies listed on the Athens Stock Exchange covering 2008 to 2012, revealing that larger boards were linked to better performance. Likewise, Gaur et al. (2015) observed similar findings in their research based on companies listed on the New Zealand Stock Exchange.

However, another view suggests that smaller boards are better and more efficient than larger ones. This is because some directors may "free-ride" by relying on the efforts of others instead of performing their duties actively (Ahmed Sheikh et al., 2013; Lipton & Lorsch, 1992). Also, larger boards may face problems in communication and coordination (Cheng, 2008). Inefficient interaction among directors can slow decision-making processes, delay information flow, and reduce operational efficiency (Goodstein et al., 1994). Many empirical studies have identified a negative association between board size and financial outcomes. Haniffa and Hudaib (2006) found a negative link between board size and firm performance in the Malaysian stock market. Arora and Sharma (2016) reported an inverse correlation between board size and ROA within Indian manufacturing firms. Kao et al. (2019), using panel data from publicly listed firms in Taiwan between 1997 and 2015, observed that smaller boards were more often associated with stronger performance. Wang et al. (2019) analyzed 1,974 A-share listed firms in China from 2010 to 2016, and concluded that there was a negative relationship between board size and corporate performance. Merendino and Melville (2019) found comparable findings from their study on Italian-listed firms between 2003 and 2015. In contrast, other researchers have found that board size has no statistically meaningful effect. Al-Matari et al. (2014) reported no significant relationship between board size and ROA, while Peng et al. (2021), examining listed tourism companies in China, similarly observed no notable influence of board size on organizational performance. In summary, due to differences in business environments and governance structures across countries, most corporate governance codes do not set a fixed rule for board size. The effect of board size on firm performance remains a debated issue in academic research. It needs to be analyzed and determined based on specific situations.

Since large shareholders often control board nominations and appointments in China, directors may face some limits when performing their oversight duties (Jiang & Kim, 2020). To mitigate possible conflicts of interest between executives and

investors, appointing independent directors is widely considered an effective governance tool (Merendino & Melville, 2019). Empirical evidence from Western economies suggests that independent board members often play a critical role in supervising corporate behavior (Fernández-Temprano & Tejerina-Gaite, 2020; Melville & Merendino, 2019; Dahya et al., 2002; Weisbach, 1988). In 2001, the CSRC issued *the Guidelines for Establishing an Independent Director System for Listed Companies*, which mandated that all publicly traded firms ensure that independent directors constitute at least one-third of the board by June 30, 2003. Since then, independent directors have become vital to China's corporate governance framework (Liu et al., 2015). The function of independent directors and their actual contribution have also become key topics in corporate governance research. From the agency theory view, independent directors are expected to improve firm performance.

According to agency theory, the board's core responsibility is to oversee executive behavior and safeguard shareholder interests. When ownership and control are separated, conflicts of interest between shareholders and managers often occur (Jensen & Meckling, 1976). Board independence can help reduce these conflicts, lower agency costs, and decrease the chance that managers misuse company resources. This improves oversight and control, leading to better financial performance (Fama & Jensen, 1983; Alodat et al., 2021). Borokhovich et al. (1996) further confirmed the positive link between independent directors and firm performance. They pointed out that reputation concerns may push independent directors to take their duties more seriously, and firm performance becomes an important signal of how well they perform their roles. Besides agency theory, resource dependence theory also supports the value of independent directors. It argues that outside directors help firms connect with key external resources and strengthen the board's role as a provider of resources (García-Ramos & Díaz, 2021; Hillman & Dalziel, 2003). With their educational backgrounds and outside work experience, independent directors bring diverse knowledge and views that can support managers in setting and carrying out business strategies (Alodat et al., 2021). Many empirical studies support the positive effect of independent directors. For example, Cho and Kim (2007) used data from 347 Korean firms in 1999 and concluded that the involvement of external directors had a direct and favorable influence on firm outcomes following governance reforms. Kao et al. (2019), drawing on data from Taiwanese companies listed between 1997 and 2015, found that a greater share of independent directors was positively associated with

improved performance. Puni and Anlesinya (2020) examined panel data from 38 publicly traded firms in Ghana spanning 2006 to 2018 and identified a similar positive linkage. They argued that independent directors often bring valuable knowledge, experience, and skills that help improve board decisions, increase transparency and accountability, and raise firm performance. Khan et al. (2021) studied non-financial enterprises in Malaysia. They reported that independent directors improved performance through better oversight and offering valuable external resources. In China, similar findings have been reported. Liu et al. (2015), using data from firms listed on the Shanghai and Shenzhen Stock Exchanges between 1999 and 2012, demonstrated that stronger board independence improved operating performance. Wang et al. (2019) further confirmed the positive impact of independent directors on firm performance in their study of 1,974 A-share listed firms in China from 2010 to 2016.

However, some studies question the role of independent directors. They may lack the necessary experience and knowledge about the firm and its stakeholders, and it is often difficult for them to obtain this important information quickly. As a result, their contribution to firm performance may not be significant (Queiri et al., 2021). Bhagat and Black (2001) argued that independent directors are often busy with other duties and may not spend enough time to make informed decisions, so they do not impact firm performance. Zhou et al. (2018) assessed firms listed on the Athens Stock Exchange between 2008 and 2012, and reported a negative association between board independence and firm performance. Queiri et al. (2021), in their study of non-financial listed enterprises in Oman, observed that a higher proportion of independent directors was linked to weaker performance. As per Peng et al. (2021), using data from Chinese listed tourism companies, they reported similar negative results. In addition to positive and negative findings, some studies show no significant link or relationship between board independence and firm performance. These inconsistent findings highlight the nuanced and context-dependent nature of the independent director's role (Melville & Merendino, 2019). Overall, there remains a lack of consensus regarding their impact. On the one hand, some theories and empirical studies supported their positive role. On the other hand, some studies suggested they may have an adverse effect or no apparent effect. These differences may come from variations in market environments, institutional settings, and how the independent director system fits and works within different governance structures.

CEO duality describes a governance arrangement in which the chief executive officer simultaneously holds the position of board chair (Khan et al., 2021). In the corporate governance structure, the CEO is mainly responsible for implementing policies and managing daily operations to improve the firm's performance. On the other hand, the board's chairman is responsible for monitoring and evaluating the firm's activities to ensure effective governance (García-Ramos & Díaz, 2021). According to agency theory, power may become too concentrated when the same person holds both roles. This can allow the CEO to act in their own interests, weaken the monitoring process, and harm firm performance (Fama & Jensen, 1983; Jensen & Meckling, 1976). In this case, the independence of the board may be reduced. It becomes harder to remove the CEO, and board decision-making may become less effective (Khan et al., 2021). CEO duality may also lead to a lack of balance in governance. The board may perform poorly in fulfilling its duties, further damaging firm performance (Kao et al., 2019). Many empirical studies support the arguments made by agency theory. Kao et al. (2019), based on data from publicly listed firms in Taiwan between 1997 and 2015, found that companies performed better when the roles of CEO and board chair were separated. Khan et al. (2021), in their study of non-financial companies in Malaysia, concluded that combining the roles of CEO and board chair had a significantly adverse impact on firm performance, mainly due to the concentration of authority, which undermines the board's monitoring capacity and governance effectiveness.

However, some scholars have raised concerns about the criticism of CEO duality. Drawing on resource dependence theory, merging the responsibilities of CEO and board chair may facilitate the integration of resources and exchange of information (Hillman & Dalziel, 2003). It can also improve the board's ability to provide support. Adams and Ferreira (2007) contended that if the CEO also acts as the board chair, their expertise and insights are likely to be shared with board members, thereby improving board functioning. On the other hand, separating the two roles may increase information asymmetry (Krause et al., 2017). Guillet et al. (2013) demonstrated that CEO duality could help lower agency costs, enhance communication, and accelerate responses to external dynamics, potentially resulting in improved organizational performance. Sheikh and Kareem (2015) also reported a favorable association between CEO duality and firm outcomes. They pointed out that when the roles are separated, decision-making may be slower and less responsive to

shareholders' needs. Dian (2014) noted that combining the roles in the Chinese institutional setting may reduce internal conflicts and improve the firm's ability to adapt, especially during periods of rapid growth and transformation. Other research, however, did not identify a clear connection between CEO duality and corporate performance. Merendino and Melville (2019), using data from Italian listed firms between 2003 and 2015, reported no significant effect. According to Puni and Anlesinya (2020), who employed a panel dataset covering 38 listed firms in Ghana from 2006 to 2018, CEO duality was not found to exert a meaningful influence on several primary metrics of financial results. In sum, the relationship between CEO duality and firm performance is complex and depends on the context (García-Ramos & Díaz, 2021).

In summary, the board of directors is crucial to corporate governance and directly and indirectly influences firm performance. Despite numerous studies investigating board governance, the results often vary, reflecting differing research viewpoints, sample choices, and institutional contexts. This issue continues to be a subject of debate and necessitates additional research.

### ***2.3.3.3 Managerial Incentives***

Managerial Incentives are one of the key mechanisms of corporate governance (Aguilera et al., 2015). Agency theory focuses on resolving the conflict of interest between shareholders and managers (Jensen & Meckling, 1976). Based on this theory, companies should establish a sound incentive system for managers to reduce moral hazard after a contract is signed. Executive compensation incentives are the most important (Sheng & Che, 2016). Executive compensation can effectively reduce agency costs and is the best way to solve principal-agent problems (Chulkov & Barron, 2023; Morgan & Poulsen, 2001). Executives are rational economic people who balance their benefits with their costs and choose actions that maximize their interests (Kayani & Gan, 2022). A well-designed compensation system can align the interests of the owners and the management, which can encourage managers to make decisions that support the firm's long-term development (Chen et al., 2023). Cao et al. (2019) pointed out that executive compensation incentives can reduce the adverse effects of information problems through interest coordination, improving overall company performance.

Many studies support the positive relationship between executive compensation incentives and firm performance. Early research mainly focused on developed countries in Europe and America. Conyon and Schwalbach (2000) studied companies in the UK and Germany. They found that although the two countries had different executive compensation structures, executive compensation was positively related to company performance. Aggarwal and Samwick (1999) examined a sample of 1,500 large public firms in the United States. They discovered a positive correlation between the top five executives' overall compensation and the firm's performance. Similarly, Sapp (2008) investigated data from 416 Canadian companies from 2000 to 2005, reinforcing the positive association between executive pay and corporate performance. As research progressed, studies in emerging markets yielded comparable findings. Al Farooque et al. (2019) analyzed data from 432 publicly traded Thai companies from 2000 to 2011, concluding that executive compensation significantly positively impacted firm performance. Raithatha and Komera (2016) focused on Indian listed companies from 2002 to 2012, demonstrating a notable positive relationship between executive pay and firm performance in larger firms. Findings in the Chinese market further corroborate this trend. Zhang et al. (2014) researched listed companies within the Chinese IT sector. They identified a significant positive relationship between executive compensation and corporate performance. Additionally, Sheng and Che (2016) explored A-share listed companies in China from 2008 to 2014, using regression analysis to show that management incentivized by compensation could enhance firm performance more effectively. Lastly, Chen et al. (2023) utilized data from Chinese listed companies between 2007 and 2019, finding a significant positive link between management compensation and the performance of listed companies.

However, some studies show a more complex relationship between executive compensation and firm performance. Xiong and Meng (2019) argued that when equity incentives are at low levels, they can help managers use funds reasonably and increase firm value. However, when equity incentives are at high levels, the link between manager benefits and company profits increases, leading to problems like overinvestment and reduced firm value. Zhou and Yang (2019) used data from Chinese A-share high-tech companies. They identified a nonlinear (inverted U-shaped) correlation between equity incentives and corporate performance. Also, some studies found that the relationship between executive compensation and firm performance is

insignificant. Canyons and Sadler (2001) examined a sample of 532 senior managers from 100 major UK-listed firms. They concluded that a modest association existed between pay and organizational outcomes. Jensen and Murphy (1990) surveyed 2,213 American CEOs from 1,400 companies and found no clear link between compensation and performance. Banghøj et al. (2010) also reported similar weak relationships.

Although agency theory predicts a positive relationship between executive pay and firm performance (Kayani & Gan, 2022), empirical studies have shown mixed results. These differences may be due to variations in research samples, time periods, measurement methods, and institutional settings. Most studies support a positive correlation, but some have found nonlinear or insignificant relationships. This suggests that the link between executive compensation and firm performance is more complex than theory predicts and still requires further research.

#### **2.3.4 External Governance Mechanism**

External corporate governance refers to those operating outside the company's core (Aguilera et al., 2015). In examining how internal and external corporate control systems operate effectively, Walsh and Seward (1990) were among the earliest scholars to differentiate internal governance from its external counterpart. They proposed that external control mechanisms are often activated when internal controls fail. Notably, they identified the market for corporate control as a critical external governance mechanism. However, although the market for corporate control has received significant attention in financial economics and legal studies, it is neither the only nor the most dominant type of external governance mechanism (Aguilera et al., 2015). In fact, multiple governance mechanisms from outside the company work together. These mechanisms help ensure executives respect stakeholder rights, promote practical cooperation among stakeholders, improve financial transparency, and provide strategic guidance for companies (Aguilera et al., 2015). For instance, Gillan (2006) proposed a framework of external corporate governance categorizing it into five types: (1) Legal and regulatory mechanisms; (2) Market 1, encompassing capital markets, corporate control markets and product markets; (3) Market 2, emphasizing information providers in capital markets; (4) Market 3, focusing on accounting, financial, and legal services from external parties; and (5) Private sources of external supervision, representing media focus. Aguilera et al. (2015) conducted an

in-depth analysis of six external governance mechanisms: the legal environment, the market for corporate control, external auditors, stakeholder activism, rating agencies, and the media. They found that these mechanisms can function independently or synergize with internal governance mechanisms to improve governance outcomes. Additionally, Yang et al. (2015) emphasized that a robust external governance system complements internal governance, effectively mitigating agency conflicts and enhancing corporate performance.

External corporate governance refers to institutional and environmental constraints outside the firm, including regulatory forces, market forces, and other stakeholders (Liu et al., 2023). These external factors help restrict managers' behavior, protect shareholders' rights, and can also guide corporate strategic decisions. Specifically, the legal and institutional environment (Perotti & Von Thadden, 2006), media (Bai and Yan, 2023; Ahmad et al., 2019), product market competition (Liu et al., 2022; Bharath and Hertz, 2019), and external auditing (Yeung and Lento, 2020; Schäuble, 2019) are important parts of external governance. These mechanisms are believed to limit managerial opportunism, reduce agency costs, improve operational efficiency, and enhance financial performance (Liu et al., 2023).

This study primarily focuses on the Chinese context. In this study, external governance highlights four key factors: product market competition, political connections, external auditing, and media. In recent decades, China has experienced profound economic reforms, shifting from a centrally planned system toward a market-driven economy (Liu et al., 2018). As market entry restrictions have gradually relaxed and product market competition has intensified, companies face greater pressure to survive. This pressure directly affects corporate resource allocation and drives companies to improve management efficiency through market selection mechanisms. In this context, market competition has become one of the important factors influencing Chinese business behavior (Liu et al., 2022). Michas (2011) pointed out that in emerging economies, where strong legal and financial institutions to protect the interests of shareholders and creditors are often lacking, external auditors play a key role in corporate governance by improving the credibility of financial disclosures and strengthening internal control systems. In China's current stage of development, the capital market is still not fully mature, and investor protection remains weak. As a result, external auditing, as an independent monitoring mechanism, is significant (Yeung & Lento, 2020). Meanwhile, the media has emerged

as a new external governance mechanism with growing influence in China's economic environment (Bai & Yan, 2023). With the development of internet technology and changes in information dissemination methods, the media has gradually become an important channel for exposing corporate misconduct and transmitting market information. In China's relatively weak formal institutional constraints, media supervision has significantly affected corporate behavior through reputation mechanisms (Cui et al., 2023). The Chinese government maintains a strong leading role in resource allocation and industrial policy compared to developed market economies. Under these circumstances, political connections serve as an important means for companies to address institutional constraints and as an effective pathway to obtaining key resources and policy support (Liu, 2024). Many Chinese listed companies maintain political connections through their executives or board members, reflecting the unique characteristics of Chinese corporate governance (Jiang & Kim, 2020).

In contrast, other external governance mechanisms demonstrate relatively limited influence in China's institutional environment. For instance, the market for corporate control struggles to exercise effective governance due to the high proportion of state-owned shares and insufficient development of the merger and acquisition market (Jiang & Kim, 2020; Liu et al., 2018). Additionally, since all companies operate under the same legal framework, there is limited variation in legal impacts across firms (Tian & Ran, 2020). Furthermore, external governance mechanisms common in Western markets, such as institutional investor oversight and analyst coverage, are still developing in China. While these mechanisms gradually evolve, their governance effects remain modest and show limited regional variation (Xiang & Luo, 2023). Therefore, focusing research on the four external governance factors, such as product market competition, political connections, external auditing, and media, reflects the characteristics of China's transitional economy and provides a more targeted analytical framework for studying corporate management and operational performance.

#### ***2.3.4.1 Product Market Competition***

Product market competition is considered a significant external governance mechanism that motivates managers to enhance the firm's value (Bharath and Hertzfel,

2019; Babar and Habib, 2021). It refers to the competitive relationship formed through the market's supply and demand of products and services (Giroud & Mueller, 2011). This competition can motivate managers and employees to use their abilities fully and create value for the firm (Wang et al., 2022). As an external governance tool, product market competition helps control manager behavior and makes them focus on improving firm performance (Hart, 1983).

Agency theory illustrates that conflicts of interest consistently arise between the owners of a firm and its managers (Fama & Jensen, 1983; Jensen & Meckling, 1976). The division between ownership and management leads to information asymmetry. As a result, managers might take advantage of their superior information to pursue actions that undermine the interests of outside shareholders (Jensen and Meckling, 1976). To reduce such behavior, scholars have found that market mechanisms like product market competition play an important role (Babar and Habib, 2021). Product market competition can reduce information asymmetry and help lower agency conflicts (Lee et al., 2019). In highly competitive industries, firms have limited pricing power and face greater financial constraints. They need to obtain funds from capital markets at a lower cost, which requires disclosing more information to capital providers and thus reduces information asymmetry (Lee et al., 2019). As competitive pressure increases, managers must show their ability by achieving better performance to prove their value (Liu et al., 2018). As a result, agency problems are reduced, and the goals of managers and owners become more aligned. Both work together to improve firm performance (Hart, 1983).

Many empirical studies support the idea that product market competition improves firm performance. Obembe and Soetan (2015), through an analysis of 76 publicly listed non-financial companies in Nigeria, observed that the combined effect of external market forces and corporate governance mechanisms significantly enhanced productivity growth. Similarly, Sheikh (2018) found evidence suggesting that competitive pressure in product markets positively influences corporate performance. Liu et al. (2022), drawing on panel data from Chinese publicly traded firms between 2016 and 2020, reported that market competition exerts a strong and favorable impact on firm-level performance, and further emphasized its essential role in promoting the healthy development of firm performance in China.

However, other studies found that product market competition can negatively affect firm performance. Porter (1990) pointed out that intense product market

competition is characterized by more firms entering the market, larger market shares for competitors, and a general drop in product prices. Schmidt (1997) argued that increased competition raises the chance that high-cost firms will see reduced profitability, which may hurt performance. Javeed et al. (2020) reported that intense product competition creates a competitive environment for firms, leading to weaker pricing power, lower profit margins, and eventually poorer performance. Liu et al. (2018), drawing on empirical evidence from A-share companies in China spanning the years 2001 to 2016, found that although product market competition puts pressure on managers to improve performance, it may also increase operating costs. Their results showed that high product market competition is linked to lower firm performance. In summary, existing research offers different views on the effect of product market competition on firm performance. Whether product market competition promotes or hinders firm efficiency needs to be tested through empirical research (Babar & Habib, 2021).

#### ***2.3.4.2 Political connections***

The role played by political connections has been widely recognized as a significant external governance factor (Liu, 2024). In China's transitional economy, political connections are a helpful supplement and alternative mechanism to formal institutions (He et al., 2019). Firms actively seek and establish political connections to survive and develop, which has become an important strategic choice (Ling et al., 2016). Political connections typically describe the presence of direct associations between enterprises and government authorities, usually established via influential individuals. Specifically, a firm is considered politically connected when its CEO, senior executives, or major shareholders hold or have held political positions (Pang & Wang, 2021). In China, SOEs naturally have political connections because their controlling shareholder is the government. Private firms often form political ties through CEOs, executives, or board members with political backgrounds (Jiang & Kim, 2020). Political connections may offer both opportunities and risks, functioning as a double-edged sword for businesses (Pang & Wang, 2021).

Resource dependence theory provides strong theoretical support for corporate political connections. It illustrates that companies seldom have access to all the necessary resources for their sustainability and growth, leading them to rely on

external sources for resource acquisition (Pfeffer & Salancik, 1978). Governments usually control the key resources that firms need, which leads to high dependence on them. Building political connections may help firms reduce the uncertainty brought by external dependence, and thus affect firm performance (Pang & Wang, 2021). In addition, companies with political ties can anticipate receiving specific advantages from governmental entities and related organizations, such as financing convenience, tax benefits, and government contracts (Faccio, 2006). Especially when market systems are not well developed, firms are more likely to use political connections as a key means to obtain scarce resources and improve competitive advantages (Huang & He, 2020). Politically connected firms send signals to investors that they can obtain important resources from the government, which increases investor confidence and trust in the firm, thus supporting firm operations and development (Longwei et al., 2021). Therefore, based on resource dependence theory, scholars generally believe corporate political connections can promote firm performance (Al-Delawi et al, 2023; Guo et al., 2019; Goldman et al., 2009). Several empirical studies provide support for this view. Bi and Wang (2018) demonstrated that employing financial advisors with political affiliations can enhance the market valuation of acquiring firms. Goldman et al. (2009) found that political connections are also important in the United States, and politically connected boards increase firm value. Wong and Hooy (2018), based on empirical research on Malaysian listed companies, found that enterprises whose board members maintain political connections are likely to exhibit greater consistency in their political affiliations, which in turn is positively associated with corporate performance. Wu et al. (2012) examined Chinese A-share firms using panel data from 1999 to 2007 in another study. Their findings indicate that privately owned enterprises led by politically affiliated executives tend to outperform their counterparts without such connections.

However, some studies have also examined the adverse effects of political connections. Influential stakeholders may harm the interests of other stakeholders for their own benefit, which leads to multiple agency conflicts and weakens firm performance (Pang & Wang, 2021). Political connections can elevate politicians or government officials to positions of excessive influence. Additionally, Shleifer and Vishny (1994) contended that politicians do not offer advantages to firms without expecting something in return. They anticipate that companies will reciprocate, allowing them to derive benefits from these political associations. Fisman (2001)

found that the cost of engaging in rent-seeking may surpass any advantages obtained from political favors, thereby harming performance. Some empirical studies confirm the adverse effects of political connections. Boubakri et al. (2008), in their study of 245 privatized enterprises operating across 41 countries, observed that firms with government-linked affiliations exhibited weaker accounting outcomes than those without such ties. Ling et al. (2016) argued that developing political connections may be risky and does not always bring returns. Their empirical study of 103 listed real estate companies in China confirms that a negative association exists between political connections and return on assets. Through observations of 151,475 firm-years across 49 countries, Pang and Wang (2021) found that political relationships have adverse effects on firm operating performance and firm value. In summary, research on the impact of political connections on firm performance shows different views. This suggests that the relationship between political connections and firm performance is more complex than theoretical expectations, and further research is still needed in China's special institutional environment.

#### ***2.3.4.3 External Audit***

Since the start of economic reforms in the early 1980s, China's audit market has experienced profound changes. It has gradually developed toward marketization (Fang et al., 2018). Under the planned economy system, companies had low demand for independent external audits (He et al., 2017). However, the audit industry made significant progress as economic system reforms moved forward. In the early 1990s, the international Big Five accounting firms established joint ventures with Chinese local firms, which laid the foundation for the internationalization of China's audit market. In 1995, China adjusted some audit standards to make them more consistent with International Standards on Auditing (DeFond et al., 1999). In 2007, related regulations were further revised to fully align audit standards with International Financial Reporting Standards and International Standards on Auditing (Yeung & Lento, 2020). Over the past few decades, the role of independent external auditors has continued to develop. It has gradually become an important part of the corporate governance system of Chinese listed companies (Fang et al., 2018).

External audits primarily serve to deliver independent professional judgments and verify whether satisfactory assurance has been achieved. This means the financial

reports are free from significant inaccuracies, whether caused by fraud or unintentional error. Furthermore, such reports should be presented truthfully and comply with established accounting principles (Aguilera et al., 2015). By offering independent professional assessments, external auditors help strengthen the trust of key stakeholders in the credibility of financial reports. As a result, external auditing is widely regarded as a crucial element of the external governance system, especially in information disclosure (Aguilera et al., 2015). According to agency theory, external auditing improves the quality of accounting information disclosure by reducing information asymmetry between principals and agents, thus limiting management's possibility of manipulating information and improperly obtaining benefits (Yeung & Lento, 2020; Aguilera et al., 2015). Audit firms effectively improve the quality of company financial information through the independence, professionalism, and objectivity of their audit work, reducing corporate financial restatements (Habib et al., 2019) and earnings management (Alves, 2013), and helping to lower corporate financing costs (Zhang & Guo, 2024). When external audit quality improves, the probability of discovering and exposing management misconduct increases significantly. This deterrent effect encourages management to prioritize shareholder value maximization over personal interests, thus improving overall operational efficiency and firm performance (Al-ahdal & Hashim, 2022). High-quality auditing also enhances the timeliness and reliability of financial information disclosure (Ivungu et al., 2019), strengthens corporate information transparency, and limits management's opportunistic behavior by reducing information asymmetry (Sulaiman, 2023). External auditing improves resource allocation by providing independent assurance of the reliability of accounting information. It ultimately creates value for organizations (Fang et al., 2018).

Prior research has consistently highlighted the beneficial influence of external auditing on corporate performance. For instance, Enekwe et al. (2020), examining manufacturing firms listed in Nigeria, reported a statistically significant positive association between external audits and financial outcomes. Similarly, Rahman et al. (2019) used a sample of Bangladeshi listed manufacturing companies. They showed through multiple regression analysis that external audit quality is positively correlated with firm performance. Al-ahdal & Hashim (2022) analyzed panel data from 74 Indian non-financial companies from 2014 to 2019. He concluded that audit quality strongly and favorably affected performance indicators.

However, many companies that receive going concern opinions and healthy financial status assessments eventually experience financial difficulties, bankruptcy, or even collapse. This phenomenon is concerning and raises questions about the quality of financial statement auditing (Ivungu et al., 2019). The agency problem of adverse selection may come from auditors' lack of qualifications or bias in favor of the audited firms (Habib et al., 2019). In addition, information asymmetry among managers, auditors, and shareholders may cause moral hazard due to audit failures or improper assessments (Velte & Loy, 2018). Auditors might overlook financial misconduct and still provide unqualified opinions (DeFond & Zhang, 2014). These actions reduce investor confidence, lower stock prices, and harm firm performance (Reza & Quraishi, 2015).

Several empirical investigations have identified neutral or adverse associations between external auditing and firm performance. Sayyar et al. (2015) analyzed data from 542 publicly listed firms in Malaysia and reported a statistically significant negative correlation between audit quality and ROA. Rahimi and Amini (2015) examined firms on the Tehran Stock Exchange. Their analysis revealed a positive association between audit quality and profitability. However, this relationship was not statistically significant. Similarly, Aryan (2015) researched 69 industrial companies in Jordan, covering the years 2009 to 2014. The study found no meaningful correlation between audit quality and overall firm performance. In sum, prior research shows both positive and negative effects of audit quality on firm performance. The governance role of external auditing remains uncertain. In particular, under China's institutional setting, there is still a lack of related research, and more empirical studies are needed to provide further evidence.

#### **2.3.4.4 Media**

The media serves as a vital element within the external corporate governance framework. It includes various communication channels such as newspapers, television, radio, and online platforms, as well as the journalists who provide content for these channels (Aguilera et al., 2015). As an information intermediary, the media delivers information to different groups (Bushee et al., 2010). From the agency theory perspective, the media helps reduce information asymmetry between firms and stakeholders by sharing information with the public. This can ease agency problems

and improve firm performance (Liu & McConnell, 2013; Bushee et al., 2010; Hassan et al., 2023). The media makes company behavior widely known and increases the transparency of management behavior. This controls management's self-interested behavior and encourages them to make decisions that better meet social expectations (Dai et al., 2015; Dyck et al., 2008; Dyck & Zingales, 2002). Besides spreading information, the media also improves corporate governance through its investigative role (Dyck et al., 2008; Dang et al., 2021; Hassan et al., 2023). By uncovering and disclosing new information, the media puts pressure on firms. Through investigation, the media acts as an independent external governance tool, overseeing the actions and decisions of board members. This helps reduce moral hazard in corporate decision-making (Tajvidi & Karami, 2021). Strict media supervision encourages company management to pursue value-maximizing activities in shareholders' interests (Hassan et al., 2023).

Past research has confirmed a positive relationship between media coverage and company performance. For instance, Chih and Chih (2014) used listed financial holding companies on the Taiwan Stock Exchange as samples. They found a positive correlation between media coverage of corporate social activities and financial performance. Dang et al. (2021) analyzed data from 41 developed and emerging economies, providing empirical support for the positive influence of media attention on firm performance. Meanwhile, Tajvidi (2021) collected data from 384 UK hotels through email surveys. The findings revealed a statistically significant positive connection between the use of social media and performance. Bai & Yan (2023) used China's top 500 companies as research samples and confirmed the positive impact of social media on company performance.

However, some studies have pointed out the limitations of media governance. First, the media may not always reduce information asymmetry effectively. Media outlets may publish entertaining or sensational stories to attract more readers instead of conducting in-depth investigations (Ahern & Sosyura, 2015). Such reporting may not narrow information asymmetry and can lead to irrational investor behavior (Solomon et al., 2014; Barber & Odean, 2008). Second, the media's monitoring role may be limited. Corporate managers can influence or manipulate media reports or be constrained by relationships between media organizations and the firms they report on (Ahern & Sosyura, 2015). Ahmad (2019), based on an empirical study, reported that social media usage did not influence the performance of small and medium-sized

enterprises in the United Arab Emirates.

In conclusion, the media may positively and negatively affect corporate governance. Therefore, whether and how the media relates to company performance remains controversial and needs further empirical testing.

## **2.4 Budget Management**

A budget is a plan of an organization's activities expressed in quantitative or financial units in a short period (Haliah, 2021). The results of many scholars have shown the key role of budgets in management accounting systems (Stryckova, 2023; Dokulil et al., 2020; Wnuk-Pel & Christauskas, 2018). Joshi et al. (2003) argued that budgets quantitatively express plans and are valuable tools for performance measurement. Budget purposes include resource allocation, support for strategy implementation, and assessment and management of employee motivation and compensation (Wnuk-Pel & christtauskas, 2018). Budget combines planning, communication, resource allocation, incentives, performance evaluation, and other functions, establishing its central position in the enterprise's internal control system (Liu, 2019). Budget management is a management system and method that includes the budget's content (Zhang & Li, 2020), which is an integrated part of management control (Kenno et al., 2018). It can clarify the responsibilities and rights of various departments within the enterprise to play the role of incentives and constraints. This is so much so that Otley (1999), a British management professor, described the role of the budget as “one of the few management control methods that can integrate all the key issues of an organization into a single system”.

In China, the budget management system has transformed from a highly centralized budget management system that unified the collection and disbursement of funds to a budgetary system compatible with the market economy. The report of the 20th National Congress proposes establishing a comprehensive, standardized, transparent, scientific, and obligatory budget system. According to the transformation of China's socio-economic development and the characteristics of the development of the budget system itself, the changes in the budget system in the 70 years since the founding of the People's Republic of China can be categorized into the following four stages (Ji, 2019).

## 1. Budget Management under the “Comprehensive Financial Plan” Model (1949–1978)

From 1949 to 1978, China experienced a period of national economic recovery under a centrally planned economic system. During this time, the budgetary system functioned primarily as an extension of this centralized framework, characterized by high levels of unification and strict control over revenue and expenditure. It lacked institutional independence and operational autonomy. The national planning authorities directed enterprise activities through mandatory production targets. In contrast, the financial authorities and national banks replaced the role of a social capital market by implementing systems of “centralized fiscal collection and allocation” and “segmented fund management” (Wong, 2007). SOEs played a dominant role in the economy, with production resources allocated through unified state planning. In essence, SOEs operated as production-oriented administrative units. Their internal budgeting was primarily guided by departmental input, which was subsequently coordinated and finalized by the enterprise planning department (Wu, 1994). Since enterprise performance was not directly linked to financial incentives or penalties, budgets functioned more as comprehensive financial plans than performance-based tools. Although this model appeared theoretically sound, it resulted in low productivity, rigid operations, and widespread inefficiencies.

## 2. Budget Management Focused on Responsibility Costs (1978-1992)

After 1978, China implemented a national policy of reform and opening-up. At the macroeconomic level, the country began transitioning from a centrally planned economy to a market-oriented system. At the microeconomic level, the development of non-state-owned sectors was permitted and encouraged (Ji, 2019). The government liberalized the commodity market and promoted fair competition among enterprises with different ownership structures (Ji, 2019). Simultaneously, the state abolished the “financial collection and expenditure” system for SOEs, redefined the boundaries of responsibilities between the government and enterprises, and promoted the transformation of SOEs into autonomous entities responsible for their own operations and financial outcomes.

During the 1980s, management accounting theories were gradually introduced

into China (Yang, 2014). These theories were increasingly applied in corporate cost accounting and control practices. Many SOEs adopted the “economic responsibility system” to enhance cost control. Several enterprises, such as Shanxi Ganting Machinery Factory (Wang & Zhang, 1988) and Hebei Zholu Chemical Fertilizer Factory (Yu & Ni, 1997), became representative examples of the successful application of responsibility-based cost budgeting. The adoption of this model played a significant role in advancing the reform of SOEs.

### 3. Budget Management Aligned with the Market Economy (1992-2014)

In October 1992, the 14th National Congress of the Communist Party of China officially declared that China’s economic reform aimed to establish a socialist market economy. In 1993, the Third Plenary Session of the 14th Central Committee adopted the *Decision on Several Issues Concerning the Establishment of a Socialist Market Economy System*, which emphasized that the reform of SOEs should be directed toward establishing a modern enterprise system. In line with this objective, developing a budget management system compatible with market-oriented principles became a key priority (Yang, 2014). The enactment of the *Budget Law* in 1994, which came into effect in 1995, marked a turning point. Since then, budget management has entered a new stage characterized by legal standardization and institutionalization.

### 4. Modern Budget Management (2014-Present)

In 2013, the Third Plenary Session of the 18th Central Committee of the Communist Party of China identified public finance as the foundation and central pillar of national governance. Building a modern fiscal system became a priority to support this redefinition, with reforming the budget management system as a key element. In August 2014, the Standing Committee of the National People's Congress passed the revised *Budget Law*, setting out the goal to “establish a comprehensive, standardized, transparent, and open budget system.” This was the first significant revision since the law's enactment, and it emphasized full-scope budget management, transparency, performance orientation, and accountability mechanisms (Liu, 2015).

The new law significantly affected listed companies. First, the requirement for full-scope budgeting—covering all government revenues and expenditures—indirectly

pushed companies to develop more standardized internal budgeting systems. For firms that relied heavily on government subsidies, this introduced a strong hard constraint (Wang, 2018). Second, transparency requirements increased government fiscal openness, influencing enterprises through public procurement and government-business interactions. Listed companies had to improve internal budget disclosure to meet the transparency demands in bidding processes (Xiao & Wang, 2024). In corporate governance, strengthened budget review and accountability mechanisms notably impacted SOEs and mixed-ownership enterprises, with independent directors playing a more active role in budget oversight (Zhao & Zhou, 2022). In addition, the law encouraged public participation in budget supervision, prompting listed firms to pay more attention to the interests of minority shareholders (He & Cai, 2018). Overall, the revised Budget Law had far-reaching effects on budget management in Chinese listed firms. It promoted more standardized and scientific budget practices and enhanced the overall quality of corporate governance (He, 2019).

Although budgets are the cornerstone of almost all modern corporate management control systems, their implementation is still imperfect (Hansen et al., 2003). Many scholars have argued that there are controversial budget factors that reduce their effectiveness. Shu et al. (2023) believed that the separation of powers and the existence of principal-agent make it impossible to fully align the interests and ultimate goals between the owners and managers of the enterprise, and between the enterprise and the external stakeholders. This results in the budget becoming a process in which the two parties of interest play with each other. Hansen et al. (2003) criticized the entire budget process as encouraging abnormal budget "games". Recent research has highlighted the problem of dysfunctional behaviors associated with budgets. According to the results of SeTin et al. (2019)'s survey, companies tend to favor negotiating budgetary goals that are easy to achieve. Managers formulate budgets with a certain degree of slack to easily achieve budgetary goals, leaving a certain amount of surplus management space for themselves (Liu, 2019). This will significantly affect the efficiency of budget management and is not conducive to enterprises' healthy and sustainable development. Note that enterprise budgeting combines top-down and bottom-up methods (Niu, 2018). Some enterprises have adopted a "top-down" budgeting process, which results in poor accuracy of the final budget due to incomplete, untimely, and untrue information grasped by the

enterprise's top management. Moreover, some firms adopt a 'bottom-up' approach to budgeting, whereby managers at the grassroots level are motivated by self-interest and often intend to produce budgets that are easy to accomplish (Liu, 2017).

Despite intense criticism of the budget process, managers continue to view the budget as an essential instrument that is challenging to substitute (Wnuk-Pel and Christauskas, 2018). A survey conducted by Libby and Lindsay (2010) involving Canadian and US firms revealed that 79% of respondents utilized the budget for planning and control purposes, and 94% do not intend to abandon this practice in the foreseeable future. In a survey of Chinese firms, Zhang (2007) found that the Chinese government has vigorously promoted budget management and that 97% of firms have implemented budgets. Hence, it is of particular importance to research the budgetary slack behavior generated by the budget process in depth and identify the factors affecting budgetary slack to inhibit budget slack effectively and improve the enterprise budget management. The following section will introduce the definition of budget slack, the influencing factors, and the impact on firm performance.

## **2.5 Budgetary Slack**

This section discusses the definition of budgetary slack, its influencing factors, and its impact on firm performance.

### **2.5.1 Discovery and Definition of Budgetary Slack**

In an early study, Cyert and March (1963) found through a survey study that budgetary slack results from negotiating budgetary goals by different management levels inside the firm. Williamson (1963) pointed out that subordinate managers try to influence the budget-setting process to obtain slack budgets. Lowe and Shaw (1968) also found evidence that sales forecasts may be used to create budget slack. Schiff and Lewin (1968) noted that the compensation of the budget-responsible person increases as the difficulty of the budget decreases. Hence, the budget-responsible person may use budget participation to distort the communication of information with the supervisor and set the budget at a more achievable level, resulting in budget slack. In private meetings with 32 managers drawn from five multi-divisional organizations, Onsi (1973) found that 80% of the managers confessed that they negotiated for slack

and that slack existed in manufacturing costs, volume estimates, and sales prices, leading him to conclude that slack could exist in operating budgets in any year.

Scholars have discussed the definition of budgetary slack for a long time. Cyert and March (1963), who first introduced the concept of slack, defined budget slack as spending by members of an organization over what is necessary to meet the organization's needs. Consequently, Merchant (1985) defined budget slack as the difference between the total and necessary budgets within a specific range. He argued that when managers can choose their performance evaluation criteria, they intentionally create several resources that exceed actual needs or intentionally underestimate productive capacity. This tendency is particularly evident when supervisors evaluate the performance of their subordinates by the extent to which they meet their budgeted tasks. Mann (1988) argued that budgetary slack is the act of underestimating revenues, overestimating costs, or underestimating one's operating capacity to make budgetary goals more straightforward. According to Lukka (1988), the slack budget is a budgetary phenomenon relative to the "honest budget estimate", in which the budget maker intentionally sets the budget value (cost, expenditure, or resource consumption) higher than the "honest budget estimate", making it more likely that the budget will be achieved. Combining the above definitions, budget slack is intentionally underestimating revenue or capacity and overestimating costs or resources in accomplishing budgetary tasks (Shu et al., 2023; Church et al., 2019; Dunk & Nouri, 1998).

All of the above views have two things in common. Firstly, budgetary slack underestimates revenues and productive capacity and/or overestimates costs and resource consumption in budget management. Secondly, budgetary slack is a form of dysfunctional activity (Shu et al., 2023). This organization's dysfunction is due to a lack of control and information asymmetry in decision-making (Kepramareni et al., 2019).

### **2.5.2 Influencing Factors of Budgetary Slack**

To address the problem of budgetary slack, it is essential to identify its influencing factors. Effective methods can be developed to control slack behavior only by understanding the internal relationships between these factors and budgetary slack (Haliah, 2021). Therefore, much of the literature on budgetary slack examines the

correlations between various influencing factors and slack itself. In general, existing studies classify these factors into three categories: organizational factors (Sanjiwani & Suryanawa, 2020; Dunk & Nouri, 1998), environmental factors (Frihatni & Abbas, 2020), and individual factors (Agustina et al., 2024; Dunk & Nouri, 1998).

#### ***2.5.2.1 Organizational level***

Organizational-level factors are structural and managerial elements that influence budgeting behavior (Sanjiwani & Suryanawa, 2020). These include information asymmetry, budgetary participation, emphasis on budget targets, and organizational commitment.

In the budget management process, there are agency relationships and information asymmetries. Information asymmetry arises when subordinates (agents) have information that influences the decision-making process between subordinates and superiors (principals) (Namazi & Rezaei, 2023). Mohanna and Sponem (2020) argued that in many firms, subordinates have private information that can influence performance more accurately than superiors. If subordinates misrepresent or withhold some or all of the information from their superiors, slack is created in the budget. At the same time, this information asymmetry leads to manipulation of the real situation by those with more information to make the performance evaluation look better. When subordinates are involved in budgeting and their salaries are based on budgets, the problem of information asymmetry is particularly prominent, and the slack caused by information asymmetry should not be underestimated (Pramudiati et al., 2022). Both Zhang et al. (2004) and Zheng et al. (2008) confirmed experimentally that there is a significant positive correlation between information asymmetry among the top and bottom levels and budgetary slack in Chinese firms.

Budget participation requires subordinates to participate in the budget decision process. The budgeting process is a game between superiors and subordinates, and the results reflect the will of both superiors and subordinates. Budgetary participation is one of the triggers of budgetary slack and is a prerequisite for its creation (Pramudiati et al., 2022). Schiff and Lewin (1968) argued that the use of participation budgeting by managers creates budgetary slack, which in turn reduces corporate productivity. Zhang and Zhang (1999) suggested that participation budgeting leads to budgetary slack. Once incentives are linked to budget goals, budget executives will use

participation budgeting to lower budgetary standards, resulting in budgetary slack. Nasution (2020) concluded that budget participation has a significant positive impact on budgetary slack. According to a study by Kepramareni et al. (2019), information asymmetry reinforced the positive effect of participatory budgeting on budget slack.

Budget emphasis refers to supervisors evaluating the performance of subordinates based on the completion of budget indicators and using the evaluation results as the basis for subordinates' compensation (Ngo et al., 2017). Adopting a budget-emphasized performance evaluation approach to budgetary participation will likely create budgetary slack (Pramudiati et al., 2022). Hence, Onsi (1973) and Cammann (1976) investigated studies for different types and sizes of firms. They consistently found that when budgets are used as a performance appraisal, managers at all levels create budgetary slack to ensure their pay increases. Brownell and McInnes (1986) argued that if performance appraisal is tied to budgets, subordinates are expected to participate in negotiations with upper management through budgets, and the resulting budgets are likely to produce budget slack. The findings of Nasution (2020) suggested that budgetary emphasis moderates the relationship between budgetary participation and budgetary slack.

Organizational commitment is “an individual’s relative strength of mind to become part of an organization/company” (Islami & Nahartyo, 2019, P.154). Organizationally committed employees consistently exhibit a dedication to supporting and contributing to their workplace, striving to meet the organization's objectives. Consequently, organizational commitment influences budgetary slack (Sanjiwani & Suryanawa, 2020). Those who show strong organizational commitment tend to place the organization's interests above their own, which helps minimize budgetary slack. As a result, higher levels of employee organizational commitment are associated with a reduced likelihood of budgetary slack (Pramudiati et al., 2022).

#### ***2.5.2.2 Environmental uncertainty***

Environmental factors refer mainly to uncertainty (Dunk & Nouri, 1998). Environmental uncertainty is “the inability of individuals to judge the probability of how much a decision that has been made will fail or succeed due to the difficulty in predicting the possibilities that will occur” (Sanjiwani & Suryanawa, 2020, P.89). Environmental uncertainty is one factor that often leads organizations to adapt their

organizational situation according to the environment. An organization's primary source of uncertainty is the environment, including competitors, consumers, suppliers, regulators, and the government (Nasution, 2020). Kren and Liao (1988) argued that it is generally difficult for firms to distinguish between "unintentional forecast bias" and "intentional budgetary slack", resulting in budgetary slack becoming inevitable. Therefore, they suggested that when there is uncertainty in the environment, uncertainty should be assessed in order to measure budgetary slack accurately. Kren (2003) claimed that environmental changes are an external factor in creating budgetary slack and that the greater the external environmental changes, the more likely budgetary slack is to be created. Rising environmental uncertainty weakens the effectiveness of budgetary control and, at the same time, encourages budget participants to engage in the creation of budgetary slack (Yilmaz & Özer, 2011).

#### ***2.5.2.3 Individual level***

Individual-level research focuses on the behaviour of budget participants to study the relationship between human behaviour and budgetary slack. According to Onsi (1973), based on the definition of budget slack, the budget slack problem from the perspective of behavioural factors investigates which behavioural factors impact budget slack. The behavioural factors being proposed included 13 categories. Correspondingly, Collins (1978) explored how personality characteristics shape budgetary behaviour and found that individuals with adaptable temperaments are generally more open to collaboration, value interpersonal relationships, and engage proactively in budget processes, focusing on meeting targets. In contrast, individuals with inflexible traits often exhibit cautious behaviour, adhere firmly to authority structures, and show a higher propensity to engage in budgetary slack.

Individual personality also influences risk attitudes, affecting tendencies toward slack creation. Risk preference emerges as a key determinant in this context. According to Young (1985), risk-averse people are more likely to build slack into budgets than individuals who are risk-tolerant. Webb (2002) further noted that concerns about reputation can significantly influence the budgeting decisions of those responsible for financial planning. Stevens (2002) similarly proposed that reputation influences slack behaviour. He found that reputation, based on ethical values, is a stable and important factor in reducing slack creation. Additionally, Agustina et al.

(2024) highlighted the role of trustworthiness, including integrity, goodwill, and competence, in reducing the likelihood of budgetary slack behaviour.

### **2.5.3 Corporate Governance and Budgetary Slack**

Corporate governance is an institutional arrangement between capital investors and enterprise stakeholders. It can effectively address the interrelationships of stakeholders through the rational use of monitoring mechanisms and incentives (García-Sánchez et al., 2022). Corporate governance is to solve the agency problem and establish an effective incentive and constraint mechanism to motivate operators to serve the maximization of owners' interests (Schäuble, 2019). Corporate governance is essentially a set of institutional arrangements that regulate the behavior of different stakeholders in the firm by establishing appropriate structures and systems (Aguilera et al., 2015). This helps ensure that business decisions are made wisely and carried out effectively.

Corporate governance, as a micro-level institution of the enterprise, directly affects the changes and efficiency of budget management (Xiong, 2014). Wang and Li (2001) argued that setting budget targets is a bargaining process. Note that budget targets reflect the shareholders' bottom line, and both the board structure and the manager influence the setting of budget targets. Lin's (2004) study analyzed the role of budget management in corporate governance from a contractual perspective, showing that budget management is one of the elements belonging to the contract of corporate governance. Feng (2006) analyzed the reasons for management accounting change from the institutional economics perspective, in which the institutional factor is important. Corporate governance belongs to the micro institution at the company level. Accordingly, adjustments in governance structure are expected to influence changes in management accounting practices, particularly those related to budgeting activities. In this regard, governance reforms are likely to shape budgetary processes. Dokulil et al. (2020) found that budgeting practices in Czech firms are influenced not only by conventional factors but also by additional elements, with ownership structure being the most significant among them.

*Company Law of the People's Republic of China* (4th amendment in 2018) legally defines the corporate governance structure. For example, Article 103 of the law assigns the authority to review and approve the annual financial budget to the

shareholders' general meeting. Meanwhile, Article 112 stipulates that the right to formulate the annual financial budget is vested in the board of directors, which is accountable to the general meeting of shareholders. Article 119 stipulates that the manager must organize the implementation of the company's annual financial budget and investment plan. Therefore, budget management is based on company law, which includes the responsibilities and rights of shareholders, operators, various departments, and employees. Moreover, the objectives are broken down into each functional department, so their rights and responsibilities can be clarified and refined.

According to Bai and An (2021), the governance of budgetary slack should be approached from the perspective of firms' institutional factors rather than focusing solely on the budget itself. According to agency theory, budgetary slack reflects the opportunistic behavior of agents during the budgeting process (Mao & Zhu, 2009). Driven by self-interest, agents may deliberately understate revenues or overstate costs when preparing budgets. This gives them more flexibility and helps them gain greater economic benefits (Mohanna & Sponem, 2020). However, such behavior harms the interests of principals and leads to inefficient resource allocation. Effective control of this agency problem relies on the design of corporate governance systems. Mechanisms like checks and balances, incentive alignment, supervision, and accountability are employed to address the conflict of interest between principals and agents (Seal, 2006). Corporate governance, as a set of institutional arrangements for governing enterprises, provides institutional support for corporate budget management and directly affects budget management reform and efficiency improvement (Xiong, 2014). The influence of corporate governance on budgeting is both inevitable and important. Thus, exploring which factors in corporate governance affect budgetary slack helps companies improve at an institutional level to enhance budget management efficiency. It helps reveal how corporate governance affects corporate management activities and ultimately affects corporate value (Xiong, 2014).

The following two sections will discuss the effects of internal and external corporate governance mechanisms on budgetary slack.

#### ***2.5.3.1 Internal Corporate Governance and Budgetary Slack***

Internal corporate governance encompasses the organizational frameworks and control mechanisms established within a firm to align managerial actions with

shareholder interests, minimize agency problems, and promote operational effectiveness. When applied to budgetary management, these governance mechanisms significantly shape managerial behavior in budget formulation and influence the occurrence of budgetary slack. This section examines several key aspects of internal corporate governance, including ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives.

Among corporate governance factors, ownership structure significantly impacts budgetary slack (Bai & An, 2021; An et al., 2019; Pan et al., 2008). When ownership is more concentrated, the higher the shareholding of the controlling shareholder, the stronger their incentive to monitor management (Alkurdi et al., 2021). At the same time, to maintain their positions, managers will more actively improve operating performance and internal management levels. In this situation, the value orientation of managers as agents and shareholders as principals tends to align. This helps with effective budget implementation. On the contrary, when company ownership is dispersed among many small shareholders, due to free-rider behavior, small shareholders lack sufficient motivation to effectively monitor management (Ahmed Sheikh et al., 2013; Berle & Means, 1932). Thus, managers may become the actual controllers of the company. This creates insider control problems and heightens the information asymmetry between shareholders and management (Pan et al., 2008). Managers are more prone to introducing budgetary slack for personal gain when such asymmetries exist. An et al. (2019) used panel data from A-share listed companies from 2010 to 2017, reporting that increased ownership concentration constrains management's opportunistic behavior to a greater extent and reduces the possibility of budgetary slack. However, empirical studies by Luo (2010) and Pan et al. (2008) found that a higher ownership percentage held by the largest shareholder is associated with a greater degree of budgetary slack. A possible reason is that SOEs represent a significant share of listed firms in China. The absence of owners is quite severe. When ownership is heavily concentrated, budgetary slack may become more pronounced (Luo, 2010).

Compared to private-controlled enterprises, state-controlled listed companies are more prone to budgetary slack problems (Bai & An, 2021; Xiong, 2014). The fundamental characteristic of SOEs is their public nature. The government is not the ultimate beneficiary of their residual income (Yang et al., 2021). Under this

institutional arrangement, the government lacks regulatory capacity and incentives. This leads to serious "insider control" phenomena in SOEs and further aggravates information asymmetry between owners and management (Bai & An, 2021). In this information asymmetric environment, management is more likely to create budgetary slack for their interests. Empirical studies by Xiong (2014) and An et al. (2019) also confirmed that SOEs have more severe budgetary slack than non-SOEs.

Managerial ownership, as a form of equity-based incentive, helps align the interests of managers with company performance. This can reduce moral hazard and adverse selection, and ease agency conflicts (Jensen & Meckling, 1976). According to agency theory, the alignment of interests between managers and shareholders improves when managers possess shares in the company. This incentive effect can reduce self-serving behavior and limit budgetary slack (Li & Zhao, 2020). However, as management shareholding increases, it may weaken the board's constraints on them and cause management entrenchment problems (Shleifer & Vishny, 1986). In such cases, managers may use their control power to make decisions that serve themselves, which can increase budgetary slack (Xiong, 2014). In empirical research, Li and Zhao (2020), using a sample of state-owned A-share listed firms in China, found that managerial ownership had no significant effect on budgetary slack. In contrast, Xiong (2014) drew on data from Chinese non-financial A-share firms between 2008 and 2010, which determined that managerial equity holdings were associated with reduced budgetary slack and contributed positively to budgetary control.

Agency theory posits that the primary role of the board of directors is to oversee management, mitigate information asymmetry, and consequently lower agency costs (Jensen & Meckling, 1976). Moreover, large-scale boards can invest more time and energy in supervision activities and strengthen supervisory functions (Abor, 2007). In the budget management process, this strengthened supervision mechanism can effectively constrain management's opportunistic behavior and reduce budgetary slack where managers deliberately overestimate costs or underestimate revenues (Liu et al., 2022). However, agency theory also points out problems that large-scale boards may face. Oversized boards easily create "free-rider" problems. Some directors may rely on others to supervise and not actively fulfill their duties (Ahmed Sheikh et al., 2013; Lipton & Lorsch, 1992). Hence, directors may reduce their initiative in supervision due to dispersed responsibility. They may also fail to identify budget problems on time due to poor communication. In this case, managers

may take advantage of the board's coordination difficulties to retain more control during the budgeting process, which increases budgetary slack (Luo, 2010).

Existing research shows that independent directors can usually play a strong supervisory role in corporate governance (Fernández-Temprano & Tejerina-Gaite, 2020; Melville & Merendino, 2019; Dahya et al., 2002; Weisbach, 1988). Unlike internal directors, independent directors have stronger objectivity and independence because they do not have direct employment relationships or other economic interests with company management (Fogel et al., 2021). Their independence helps ease conflicts between shareholders and managers, lowers agency costs, and reduces the possibility of management misappropriating company resources (Fama & Jensen, 1983; Alodat et al., 2021). Independent directors can effectively constrain management behavior from the perspective of shareholder interests by participating in board decisions and supervision activities. They can help improve transparency and compliance during the budgeting process by strengthening budget review and accountability. This can reduce budgetary slack caused by inflated costs or underestimated revenues (Liu et al., 2022). However, some scholars questioned the role of independent directors. Bhagat and Black (2001) argued that independent directors often lack the time or expertise to carry out their responsibilities effectively. Xiong (2014) discovered no significant correlation between the independent directors ratio and budgetary slack. This suggests that the impact of independent directors on governance is ambiguous and requires additional investigation.

CEO duality occurs when an individual holds the position of chief executive officer and chairman of the board (Khan et al., 2021). When one person holds both positions, power may become too concentrated. This concentration weakens the board's monitoring role and reduces its ability to check management, which raises agency costs (Fama & Jensen, 1983; Jensen & Meckling, 1976). In such cases, agency problems may worsen, and managers may act more opportunistically, leading to greater budgetary slack (Xiong, 2014). On the other hand, some scholars have highlighted the possible benefits of CEO duality. Krause et al. (2017) argued that separating the two roles may increase information asymmetry, as the chairman may not have timely access to detailed information about company operations. Guillet et al. (2013) further pointed out that CEO duality helps reduce agency costs, improve internal communication efficiency, and accelerate the company's response to external environmental changes. From this perspective, dual roles reduce information

asymmetry by reducing information transmission levels and communication costs, and instead help weaken budgetary slack (Wu, 2023).

Executive compensation incentives can reduce agency costs by aligning the interests of executives with those of the company, helping to ease agency conflicts under the decentralized structure of modern corporations (Chulkov & Barron, 2023). As rational economic agents, executives tend to weigh personal benefits against costs and choose actions that maximize their interests (Kayani & Gan, 2022). Increasing executive compensation can strengthen the alignment between executives and shareholders, reducing opportunistic behavior and lowering executives' motivation to use budgetary slack to secure personal benefits. An et al. (2018) studied Chinese A-share listed companies from 2010 to 2015 and analyzed how executive compensation affects budgetary slack. Their research shows that executive compensation has a significant negative relationship with budgetary slack. However, in practice, companies rely on information provided by executives to prepare budgets and use the set budget targets as performance evaluation standards. In this context, executives may exploit information asymmetry by providing budget information below performance levels. This allows them to lower the difficulty of meeting targets and increase compensation, which leads to greater budgetary slack (Pramudiati et al., 2022).

#### ***2.5.3.2 External Corporate Governance and Budgetary Slack***

Product market competition is a key external governance mechanism that encourages management to work toward maximizing firm value (Babar & Habib, 2021; Gillan, 2006). Competition helps reduce information asymmetry and ease agency problems (Lee et al., 2019). Hart (1983) pointed out that in highly competitive markets, external monitoring incentives increase, and shareholders are more likely to get involved in management to prevent management from taking actions that harm firm value. Product market competition also makes shareholders pay more attention to long-term goals, which requires managers to be more forward-looking and responsible in budget decisions. This limits their ability to manipulate budgets for personal gain (Liu et al., 2022). In addition, product market competition also encourages companies to pay more attention to effective resource allocation, reduce waste and redundant budget arrangements, and further compress the space for budgetary slack (Laksmana

& Yang, 2015). Babar and Habib (2021) also noted that product market competition improves operating efficiency and indirectly curbs opportunistic actions by management, including excessive slack.

In China's transitional economic environment, political connections are important supplements and substitutes for formal institutions (He et al., 2019). Political connections refer to direct links that companies establish with the government through their core management personnel (Pang & Wang, 2021). Firms with political ties often take on political tasks, such as promoting local economic development or supporting specific industries, which leads to policy-related burdens (Lin et al., 2004). Compared with other firms, those carrying such burdens face higher business risks and uncertainty (Liu, 2019). To cope with external uncertainty, firms often build a certain level of resource slack to provide a cushion, which helps maintain stability and improve responsiveness (Cyert & March, 1963). Managers may set easier budget targets to create such a cushion (An & Ai, 2022; Kren & Liao, 1988). However, resource dependence theory offers a different view of political connections. Because of their close ties with the government, these firms often gain access to valuable resources, such as easier financing, tax benefits, and government contracts (Faccio, 2006). Liu (2019) found that politically connected firms receive direct financial support and enjoy favorable tax policies. These resources make it easier to meet budget goals and weaken managers' motivation to use slack, effectively reducing the occurrence of budgetary slack.

By delivering independent professional judgments, external auditors help build trust among stakeholders who rely on financial reports. As a result, they are widely considered a key component of external governance mechanisms, particularly in enhancing corporate transparency and the quality of disclosed information (Aguilera et al., 2015). According to agency theory, external auditing improves the quality of accounting information disclosure by reducing information asymmetry between principals and agents, which limits managers' ability to manipulate information and gain improper benefits (Yeung & Lento, 2020; Aguilera et al., 2015). In addition, high-quality auditors often encourage their client firms to voluntarily and promptly disclose more firm-specific information. This improved disclosure helps reduce information asymmetry (Sulaiman, 2023). According to Fang et al. (2018), based on panel data from Chinese listed firms, the authors found that high-quality auditors help restrict managers from overusing corporate resources, which is reflected in reduced

slack.

As an information intermediary, the media delivers information to various groups (Bushee et al., 2010). According to agency theory, the media mitigates information asymmetry between companies and their stakeholders by disseminating information to the public, thereby alleviating agency issues (Liu & McConnell, 2013; Bushee et al., 2010; Hassan et al., 2023). Increased media attention often forces firms to disclose more detailed and timely information about their operations (He et al., 2024; Bushee et al., 2010). Enhanced disclosure helps stakeholders, especially shareholders, better understand managerial behavior, thus weakening managers' motivation to use company resources for personal gain. In addition, the media is seen as a "social arbiter" (Wiesenfeld et al., 2008), exerting pressure on managers by shaping public opinion. When managers realize that their budget-related decisions may attract media attention and face public scrutiny, they are more likely to act in line with shareholder interests and actively reduce budgetary slack (Hassan et al., 2023). Dai et al. (2015) further noted that negative media coverage increases reputational risk. This drives managers to manage budgets more carefully and improve resource allocation to protect the firm's image.

In summary, corporate governance, as a system that guides firm operations, not only provides an institutional foundation for budget management but also plays an important role in shaping budget behavior (Xiong, 2014). Budgetary slack is an opportunistic behavior caused by information asymmetry and agency conflicts. Such behavior becomes more serious when corporate governance mechanisms fail (Mao & Zhu, 2009). Therefore, effective corporate governance is important for controlling budgetary slack. At the theoretical level, existing research shows that internal governance mechanisms (ownership structure, board characteristics, and executive compensation) and external governance factors (product market competition, political connections, audit quality, and media attention) may affect budgetary slack. However, at the empirical level, related research is still limited. Existing literature primarily focuses on one aspect of corporate governance and lacks systematic and comprehensive empirical analysis. In addition, China's corporate governance environment has unique characteristics. National policies significantly influence Chinese companies' governance models and face continued market-oriented reforms (Jiang & Kim, 2020). This background presents new challenges for investigating the connection between corporate governance and budgetary slack. Therefore, in the

Chinese context, further exploring the impact of corporate governance mechanisms on budgetary slack is necessary.

## **2.6 Research Gaps**

Firms operate under different national institutional environments. As a result, they are subject to different internal and external institutional constraints and incentives in corporate governance, and they adopt governance mechanisms suited to their national context (Ali et al., 2018). Because of these differences in institutional settings, empirical research has not reached a consistent conclusion on the relationship between corporate governance factors and firm performance (Guluma, 2021; Peng et al., 2021). Although the impact of corporate governance on firm performance has been widely examined (Abang'a et al., 2022; Puni & Anlesinya, 2020; Bhagat & Bolton, 2019), its mechanisms in China's unique market environment remain underexplored. In addition, corporate governance consists of both internal and external mechanisms (Schäuble, 2019; Aguilera et al., 2015; Denis & McConnell, 2003). Compared to the vast body of research on internal governance, the role of external governance in affecting firm performance—both directly and indirectly—has not been sufficiently studied (Aguilera et al., 2015). Therefore, this study focuses on internal and external corporate governance in the Chinese context to examine their respective impacts on firm performance, aiming to address the existing research gap.

Budgetary slack leads to efficiency bias in an asymmetric information environment, reduces managerial effort or leads to more resource consumption, and ultimately negatively impacts firm performance (Mohanna & Sponem, 2020). However, some scholars believe that reasonable budget slack can effectively prevent enterprises from encountering the impact of unknown risks in the process of development. This leaves enough space for managers to respond, which in turn allows enterprises to achieve better development (An et al., 2020; Ashbaugh-Skaife et al., 2008). However, from the point of view of the long-term development of enterprises, budget slack will undoubtedly increase the cost of enterprises, waste key resources, and make managers and employees produce different degrees of slack, which is not conducive to the sustainable development of enterprises. Therefore, controlling budgetary slack is important for improving firm performance.

Budgetary slack is a more complex human phenomenon, and its influencing

factors are undoubtedly the basis for effective control over it (Sanjiwani & Suryanawa, 2020; Puni & Anlesinya, 2020). It is only possible to prescribe the proper remedy and find a solution to control budgetary slack by clarifying the relationship between the various influencing factors and budgetary slack. Most researchers have examined the factors influencing budgetary slack from the perspectives of budget process (Mohanna & Sponem, 2020), budget participation (Sanjiwani & Suryanawa, 2020; Otalor & Oti, 2017; De Baerdemaeker & Bruggeman, 2015), information asymmetry (Pramudiati et al., 2022; Kepramareni et al., 2019), and employee honesty (Agustina et al., 2024; Chong et al., 2021). However, these studies have focused on the setup of the budget system itself and human behavioral factors, neglecting the fundamental impact of the institutional context of the budget on the budgetary slack. In addition, the corporate budget management in Western developed countries has been extensively promoted, and the corresponding institutional arrangement is relatively perfect. In contrast, the institutional arrangements of Chinese enterprises are still undergoing continuous adjustment and improvement. As Bai and An (2021) pointed out, the governance of budgetary slack should begin with institutional factors rather than focusing solely on the budgeting system itself.

As an important institutional foundation for budget management, corporate governance directly influences the implementation and effectiveness of budgeting (Xiong, 2014). Some studies have explored the relationship between corporate governance and budget management (Dokulil et al., 2020; Feng, 2006; Lin, 2004). However, how governance affects budgetary slack has not been systematically examined, especially in Chinese A-share listed companies (Bai & An, 2021; Xiong, 2014). Moreover, most existing studies focus on either corporate governance (Löhde et al., 2021; Jiang & Kim, 2020; Shao, 2019) or budgetary slack (Shu et al., 2023; Haliah, 2021; Mohanna & Sponem, 2020), without exploring their relationship and combined impact on firm performance.

Based on the above, this study aims to fill the gap by examining how internal and external corporate governance mechanisms influence budgetary slack. It further analyzes the mediating role of slack in the relationship between governance and firm performance. This provides a complete empirical understanding of how governance affects firm outcomes through budget behavior.

## **2.7 Summary of the Chapter**

This chapter reviewed the key literature on corporate governance, budgetary slack, and firm performance. It first introduced an overview of corporate governance, focusing on developing governance mechanisms in China. It also differentiated between two primary categories of governance mechanisms: internal and external. Internal governance includes ownership structure, board of directors, and managerial incentives. External governance covers product market competition, political connections, external audit quality, and media attention. Consequently, the chapter discussed basic practices in budget management and examined how corporate governance influences budget-related behavior. Based on this, it defined the concept of budgetary slack. It summarized its influencing factors from four dimensions: organizational level, individual level, environmental uncertainty, and institutional level. It also explored the possible effects of budgetary slack on firm performance. Finally, the chapter explained firm performance and identified gaps in existing studies. These gaps highlight the need to examine the relationship between corporate governance, budgetary slack, and firm performance in Chinese listed companies.

## **CHAPTER THREE**

### **CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

#### **3.1 Introduction**

This chapter presents the theoretical foundation and conceptual framework of the study. Section 3.2 explains two underpinning theories: agency theory and resource dependency theory. Section 3.3 develops a conceptual framework that links corporate governance, budgetary slack, and firm performance. Based on this, Section 3.4 proposes the research hypotheses. Section 3.5 provides a summary of the chapter.

#### **3.2 Underpinning Theories**

Two widely used theories in corporate research have been adopted to build a solid theoretical foundation for this study. These theories provide various perspectives on the connections between corporate governance, budgeting practices, and company performance. The first perspective is agency theory, which examines the conflicts of interest that can arise between principals and agents. The second perspective is resource dependency theory, which emphasizes the significance of external resources and how companies navigate their dependencies.

##### **3.2.1 Agency Theory**

Agency theory is the fundamental theory of corporate governance and the primary theoretical basis for studying budgetary slack using an economic approach. “*The Modern Corporation and Private Property*” (Berle & Means, 1932) was a seminal pioneer in agency theory (Bendickson, 2016). Berle and Means (1932) proposed that ownership of modern American corporations was decentralized, which led to a separation of ownership and control. Shareholders, acting as principals, assign authority to managers, who serve as agents, to operate the business in their stead. This delegation comes with the anticipation that the agents will act in a manner that prioritizes the interests of the principals (Eisenhardt, 1989; Jensen & Meckling, 1976).

However, the agent may use the company's property for his or her purposes, creating a conflict between the principal and the agent (Panda & Leepsa, 2017):

*“Agency theory is based on the relationship between one party, the principal, who designates certain tasks and decisions to another party, the agent. The focus of agency theory stems from assumptions that the agent will behave opportunistically, particularly if their interests conflict with the principal.” (Mitchell and Meacheam, 2011, p. 151)*

An agency relationship is also a contract between the principal and the agent, where both parties work for their own interests, creating agency conflicts (Jensen & Mecking, 1976).

In agency theory, agents and principals are regarded as rational individuals driven by self-interest. Their goals often diverge in such relationships, as each party seeks to maximize utility (Panda & Leepsa, 2017). At the same time, there is also an information asymmetry advantage for the agent due to the difference in the degree of involvement of each principal and the agent in the agency affairs (Shapiro, 2005). The agent has private information that the principal does not have, resulting in the principal's inability to fully grasp and monitor the agent's behavior. Without a reasonably designed and effective agency contract and management system, the agent's behavior will ultimately damage the principal's interests, resulting in agency problems. The direct consequence of agency problems is increased agency costs, affecting firm performance. Consequently, principals should implement a well-designed system of checks and balances—typically contractual arrangements—to motivate, monitor, and restrict agents' actions. This approach aims to mitigate agency conflicts, lower associated costs, enhance the effective use of resources, and ultimately improve overall organizational performance.

In essence, budgetary slack is one of the manifestations of the opportunistic behavior of budgetary participants in pursuit of maximizing their own interests, which can also be seen as a derivative of the agency relationship. Agency theory offers a framework to comprehend the differing goals of shareholders and managers, manifesting in the form of budgetary slack as managers might inflate budgets to secure personal benefits at the cost of shareholders' interests. According to proponents of agency theory, budgetary slack leads to efficiency bias in an asymmetric information environment, reduces managerial effort or leads to more resource

consumption, and ultimately negatively influences a firm's overall performance (Mohanna & Sponem, 2020). Effective corporate governance mechanisms can help address agency-related conflicts, particularly those between owners and managers, by curbing agency costs and thereby enhancing organizational performance (Wang et al., 2019). Improved company performance is one of the advantages associated with implementing effective corporate governance practices (Puni & Anlesinya, 2020). Corporate governance, as a set of institutional arrangements for governing firms (Belloc, 2012), is the institutional foundation of corporate budget management and can directly influence the change and efficiency of budget management (Xiong, 2014). Corporate governance focuses on the implications of the division between ownership and control, resulting in inefficiencies such as budgetary slack stemming from conflicts of interest between principals (the owners) and agents (the managers). It significantly boosts the efficiency of resource allocation within a firm, subsequently enhancing overall performance.

### **3.2.2 Resource Dependency Theory**

Resource dependence theory suggests that no firm can have all the resources it needs to be self-sufficient. To sustain its growth or achieve its goals, a firm must depend on its external environment, exchanging the resources it needs with the environment where it is located (Pfeffer & Salancik, 1978). Therefore, the ability to acquire resources is crucial for any firm. Resource dependence theory explains the relationship between the firm and the external environment, where the firm's strong motivation to acquire resources drives the firm to become more dependent on the external environment. Resource dependence theory suggests that firms should formulate their development strategies accordingly to the resources they possess or depend on. The resources a firm owns or relies on and the efficiency of their allocation determine the firm's strategic choices, and the firm's strategy determines its performance.

In order to survive and develop, it has become an important strategic choice for enterprises to actively seek and establish political connections (Ling et al., 2016). Political resources can help firms obtain policy dynamics and business information in advance, effectively reducing financing costs and promoting faster development (Al-Delawi et al., 2023). In the period of economic transition, enterprises are in an

intricate and complex environment, and their business activities are often characterized by high risk and greater uncertainty. Therefore, enterprise executives need to focus on reducing the risk and uncertainty of business activities, minimizing various adverse effects, and creating a resource environment conducive to the survival and development of enterprises. The central and local governments control the allocation and approval rights of many scarce resources that firms urgently need to acquire (Al-Delawi et al., 2023). Therefore, firms automatically become more dependent on the government. This dependence creates risk and uncertainty, which in turn affects firm performance (Pang & Wang, 2021). When firms have access to various scarce resources provided by the government, it is much less complicated for firms to achieve their budgetary goals, and managers' incentives for budgetary slack are weakened. The effective suppression of budgetary slack greatly enhances the enterprise's resource allocation efficiency, thus improving firm performance.

### **3.3 Conceptual Framework**

Analyzed from the agency theory perspective, budgetary slack is a manifestation of the agent's continuous pursuit of economic benefits due to self-interest in budget formulation and execution. Budgetary slack can be a byproduct of the agency problem in corporate governance, where managers, acting as agents, may have incentives to manipulate budget forecasts to create slack. This slack can cushion managers (An & Ai, 2022). However, it may also lead to inefficiencies and resource misallocation (Otalor & Oti, 2017), impacting firm performance. Corporate governance can significantly alleviate the agency problem between owners and managers, establish effective incentives and constraints, and reduce the motivation of management to utilize information asymmetry to create budgetary slack. This significantly enhances the enterprise's resource allocation efficiency, improving the enterprise's performance. In addition, resource dependence theory is often used to describe the dependence of firms on the government, which can help explain the political connections of executives (Pang & Wang, 2021). This dependence creates risk and uncertainty, which in turn affects firm performance.

The following framework examines the effect of corporate governance, budgetary slack, and firm performance. The independent variable of this study is the corporate governance mechanism. Corporate governance mechanisms are categorized

into two parts: internal governance mechanisms (ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives) and external governance mechanisms (product market competition, political connections, external audit quality, and media attention). The dependent variables are measured by market and accounting-based firm performance (Return on Asset (ROA) and Return on Equity (ROE)). Meanwhile, the mediating variable is budgetary slack.

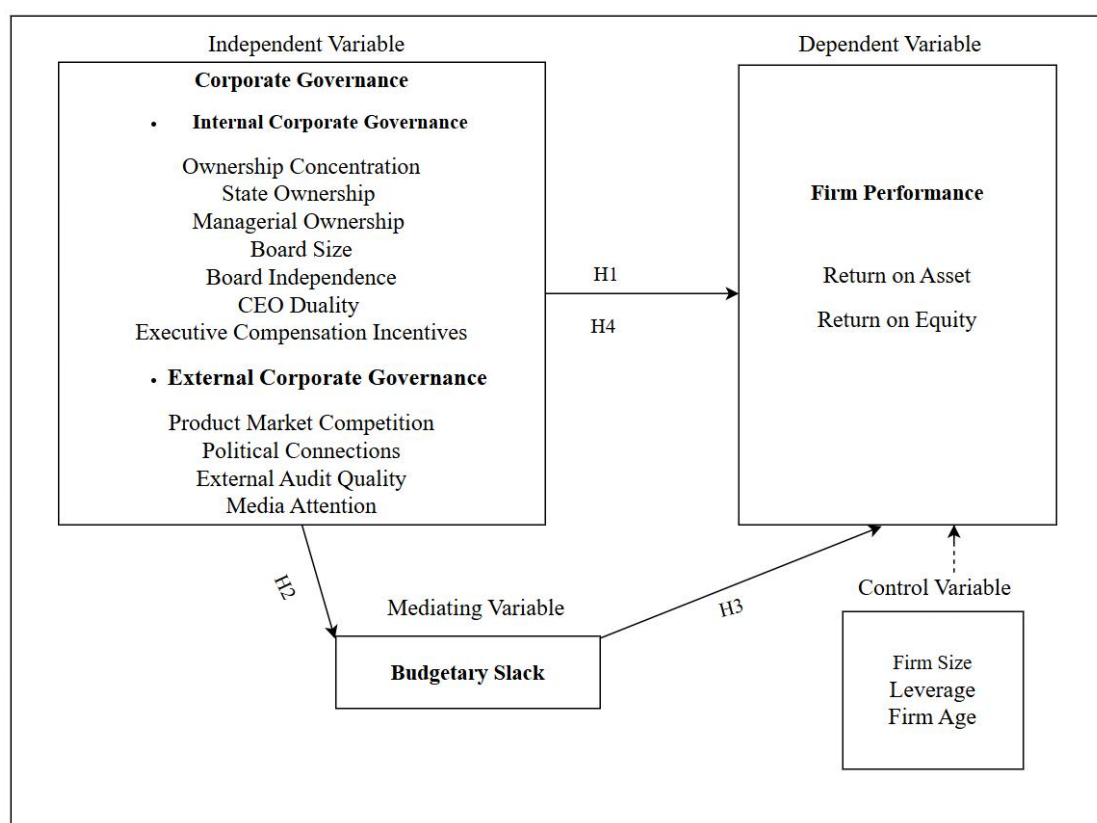


Figure 3.1 The Relationship Between Corporate Governance, Budgetary Slack, and Firm Performance

### 3.4 Hypothesis Development

#### 3.4.1 Corporate Governance and Firm Performance

Effective corporate governance can align the interests of management with those of owners and other stakeholders and alleviate corporate agency problems. Improvements in corporate governance can reduce agency costs, enhance investor confidence, and help firms obtain long-term capital, enhancing firm performance.

Corporate governance is typically divided into internal and external (Schäuble, 2019; Denis & McConnell, 2003). Internal governance is a core element of general corporate governance, including equity structure, board characteristics, and managerial layer (Gillan, 2006). External corporate governance mechanisms refer to those that operate outside the company's core (Aguilera et al., 2015). Therefore, this section focuses on in-depth analysis of the impact of corporate governance on firm performance and hypotheses in terms of both internal governance (ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives) and external governance (product market competition, political connections, external audit quality, and media attention).

#### ***3.4.1.1 Internal Corporate Governance and Firm Performance***

Ownership structure is an important factor that influences corporate governance mechanisms (Iwasaki et al., 2022). It determines how the general meeting of shareholders operates and further influences the board composition and functioning, fundamentally affecting firm performance.

Agency theory suggests that ownership structure is closely linked to monitoring mechanisms within a firm (Puni & Anlesinya, 2020). When corporate ownership is highly dispersed, the ability of majority shareholders to oversee management is weakened, as the monitoring cost often exceeds their limited equity stake. As a result, these shareholders lack sufficient financial motivation to engage in active oversight, which can eventually contribute to inefficient managerial practices and declining firm performance. Conversely, as the proportion of shares held by significant shareholders increases, their ability to offset regulatory costs through enhanced oversight grows. This heightened motivation for monitoring from major shareholders tends to correlate with gradual improvements in firm performance (Wang et al, 2019). Moreover, a “higher ownership concentration would mean that shareholders can influence the decision-making such that their own interests are maximized” (Gaur et al., 2015, p. 920). In contrast, when shareholding is too fragmented, as shown in their study, financial outcomes deteriorate, as with listed firms on the New Zealand Stock Exchange between 2004 and 2007. Puni and Anlesinya (2020) conducted a panel data analysis involving 38 public companies in Ghana from 2006 to 2018 to find that equity concentration positively relates to firm

performance.

State-owned listed firms have historically dominated China's listed firms. Many studies have shown that state ownership leads to lower corporate efficiency (Iwasaki et al., 2022; Sun & Tong, 2003). State-Owned Enterprises (SOEs) often deviate from profit-maximizing behavior when the state emphasizes political objectives over commercial goals (Shleifer & Vishny, 1997). The prioritization of political goals is often linked to the relaxation of budget constraints, distorting senior executives' incentive structure (Lin et al., 2020). The state may have conflicts of interest with a few shareholders and managers, creating serious agency problems (Lin et al., 2020). As SOEs frequently suffer from bureaucratic inefficiencies, there is typically a notable gap in information between senior management and the government. This situation renders SOEs susceptible to numerous challenges, such as insufficient transparency in the decision-making processes concerning enterprise management and heightened monitoring expenses (Huang et al., 2017). These factors can collectively diminish the overall performance of the enterprise. Empirical evidence also showed that state equity ownership is often negatively linked to firm performance (Iwasaki et al., 2022; Lin et al., 2009). Lin et al. (2009) found that state ownership has the most significant negative impact on firm efficiency. Iwasaki et al. (2022) found that state ownership negatively affects firm performance across emerging markets. Similar adverse effects have also been observed in separate studies focusing on Eastern European Union (EU) countries, as well as in Russia and China.

Managerial ownership is another ownership structure that may improve corporate governance effectiveness. When managers become shareholders in the company, their personal interests become closely tied to overall company performance. This helps motivate them to take actions that benefit shareholders and reduce agency conflicts (Jensen & Meckling, 1976). Cho (1992) further pointed out that managerial ownership helps with job stability and reduces risk-averse behavior. This leads managers to make decisions that focus more on maximizing shareholder profits. However, managerial ownership may weaken board oversight and create management entrenchment problems when it becomes too high. This can hurt corporate governance efficiency (Shleifer & Vishny, 1986). However, in the Chinese context, listed company managers receive limited stock options through performance evaluations. Because their ownership stakes are relatively low, they usually cannot gain actual control over the company. This means management entrenchment problems do not

occur (Iwasaki et al., 2022). Some empirical studies confirm this view. Qin and Deng (2009) used Chinese companies as their research sample. They proved that managerial ownership has a significant positive effect on firm performance. Ali et al. (2018) researched companies listed in the Chinese A-share market, revealing that ownership by management has a beneficial impact on enhancing company performance.

The board of directors is a crucial internal governance element within a corporation. Its size significantly affects corporate governance (Peng et al., 2021). Scholars of resource dependence theory argue that a larger board can access critical resources, bringing more experience, knowledge, and skills to offer more constructive advice and views for firm performance (Pfeffer & Salancik, 1978). As a key resource channel, the board can bring in valuable human and relational capital, enhancing its capacity to acquire firm-specific information and insights. This improvement in board capability can lead to a better understanding of internal operations, ultimately raising the quality of strategic choices and contributing to enhanced organizational performance (García-Ramos & Díaz, 2021; Hillman & Dalziel, 2003). Agency theory also suggests that when shareholders cannot effectively monitor managers, a larger board should be established to strengthen the supervision function, which can positively affect firm performance (Abor, 2007). A growing body of empirical research supports the favorable impact of larger boards. In their analysis of 188 non-financial firms operating in Malaysia between 2019 and 2020, Khatib and Abdulnaser (2021) identified a strong and positive association between the number of board members and firm performance. Similarly, Puni and Anlesinya (2020) used panel data from 38 publicly listed firms in Ghana and reported a comparable result, confirming that larger boards are linked to improved corporate outcomes. Supporting this pattern, Gaur et al. (2015) arrived at the same finding when examining firms listed on the New Zealand Stock Exchange.

Independent directors play a dual role on the board as experts and supervisors, providing professional advice and oversight to the company (Madhani, 2017). From the perspective of professional services, independent directors help the board evaluate executive performance more objectively and develop corporate strategies. From the supervision perspective, as outside directors, they monitor the behavior of controlling shareholders independently, safeguarding the rights of minority investors (Wang et al., 2019). Modern corporate governance's division between ownership and managerial control frequently leads to interest conflicts between equity holders and executive

teams (Jensen & Meckling, 1976). Board independence helps reduce these conflicts by lowering agency costs and decreasing managers' likelihood of misuse of company resources. This improves the effectiveness of supervision and control, enhancing the firm's financial performance (Fama & Jensen, 1983; Alodat et al., 2021). Borokhovich et al. (1996) identified a favorable association between board independence and firm performance. They noted that the reputational risk faced by independent directors encourages them to perform their supervisory duties more carefully and responsibly. Firm performance is an important indicator for the market to evaluate its role. Resource dependence theory, in addition to agency theory, underscores the beneficial influence of independent directors. This theory posits that external independent directors are crucial for obtaining essential resources. They help firms connect with important external resources and strengthen the board's function as a provider of resources (García-Ramos & Díaz, 2021; Hillman & Dalziel, 2003). Recent empirical research has reinforced the beneficial effect of board independence on company performance. A study by Kao et al. (2019) focused on Taiwanese publicly traded companies between 1997 and 2015 and revealed a notable positive relationship between the ratio of independent directors and corporate performance. Similarly, Khan et al. (2021) examined non-financial Malaysian enterprises. They verified that greater board independence enhances firm outcomes by strengthening monitoring functions and facilitating access to valuable external resources.

CEO duality describes a governance arrangement in which the CEO concurrently holds the position of chairperson of the board (Khan et al., 2021). Academic research has different views on how CEO duality affects firm performance. From the resource dependence theory perspective, CEO duality may positively affect resource integration and information sharing (Hillman & Dalziel, 2003). It could also enhance the board's capacity to allocate resources. Adams and Ferreira (2007) pointed out that when one individual holds both the CEO and chair positions, it is more likely that their knowledge and experience will be shared with the board, improving the board's efficiency.

In contrast, separating the roles of CEO and chair may increase problems related to information asymmetry (Krause et al., 2017). Guillet et al. (2013) argued that CEO duality helps reduce agency costs, improve communication efficiency, and speed up the company's response to changes in the external environment, which can enhance firm performance. This view is supported by several empirical studies

(Sheikh & Kareem, 2015; Guillet et al., 2013; Dian, 2014). However, another view grounded in agency theory raises concerns about CEO duality. Fama and Jensen (1983) and Jensen and Meckling (1976) emphasized that excessive concentration of power in the governance structure may lead to managerial opportunism and weaken the board's ability to monitor the CEO. When the CEO also acts as board chair, board independence is reduced, which may lower its capacity to restrain the CEO's behavior and make replacing an underperforming CEO more difficult (Khan et al., 2021). This can intensify agency problems and increase the influence of personal goals of top executives, eventually harming firm performance. In the Chinese institutional context, the effects of CEO duality are particularly complex. On one hand, as noted by Dian (2014), power conflicts between the board chair and the CEO are common in Chinese firms. CEO duality may help reduce such internal friction and improve strategic alignment.

On the other hand, Chinese listed firms often suffer from ineffective board governance and decision-making dominated by the board chair. CEO duality in such cases may further strengthen individual control, weaken the oversight role of other directors, and reduce overall governance quality (Wang et al., 2019). Therefore, although CEO duality may bring short-term benefits such as smoother coordination, its long-term implications for governance and performance sustainability require careful attention. In conclusion, CEO duality may offer advantages in specific contexts through resource integration and quicker response to change, based on agency theory and the characteristics of China's governance system. This study argues that such a structure is more likely to cause governance imbalance and weaken oversight, which can negatively affect firm performance.

Managerial incentives can effectively reduce agency costs and are considered one of the best ways to solve agency problems (Morgan & Poulsen, 2001). As rational economic agents, executives weigh personal benefits against the costs they must bear and choose actions that help maximize their interests (Kayani & Gan, 2022). According to agency theory, providing compensation incentives to managers can reconcile managers' goals with those of shareholders. This can encourage managers to make decisions that are beneficial for the firm over the long term (Chen et al., 2023). Cao et al. (2019) pointed out that managerial compensation incentives can reduce the adverse effects of information asymmetry through interest coordination, which helps improve overall firm performance. Numerous empirical investigations have

documented a favorable connection between executive compensation incentives and firm performance. Al Farooque et al. (2019) examined 432 Thai enterprises listed on the stock exchange between 2000 and 2011. Their analysis revealed that executive compensation had a meaningful positive influence on performance outcomes. Raithatha and Komera (2016) examined Indian listed firms from 2002 to 2012 and reached a similar conclusion, confirming the positive influence of executive compensation on firm performance. Using a sample of Chinese publicly traded firms from 2007 to 2019, Chen et al. (2023) also demonstrated a statistically significant and positive association between managerial incentives and firm performance.

#### ***3.4.1.2 External Corporate Governance and Firm Performance***

Product market competition is widely regarded as a powerful external governance mechanism encouraging managerial efforts to enhance firm value (Babar & Habib, 2021). Improving transparency alleviates information asymmetry and mitigates agency-related issues (Lee et al., 2019). Firms in highly competitive industries have limited pricing power and face greater financial constraints. To access capital at a reduced cost, they must provide greater disclosure to investors, which contributes to lowering information asymmetry (Lee et al., 2019). As competition becomes more intense, managers must show their ability by achieving strong performance to prove their value (Liu et al., 2018). As a result, agency problems are reduced, and the goals of managers and owners become more aligned, with both working to maximize firm performance (Hart, 1983). Existing literature suggests that competitive forces can enhance productivity and positively affect firm outcomes (Mnasri & Ellouze, 2015). Obembe and Soetan (2015) used data from 76 non-financial firms listed in Nigeria and revealed that the effect of external market competition significantly boosts productivity. Sheikh (2018) showed that product market competition helps improve firm performance. Liu et al. (2022) argued that in the Chinese market, product market competition has a significant positive impact on firm performance and plays a key role in promoting the healthy performance development among Chinese firms.

When the market system is poorly developed, firms rely more heavily on political connections to obtain limited resources and enhance their competitive position (Huang & He, 2020). In China's transitional economy, the government

strongly influences economic activities as both the policymaker and the central controller of critical resources needed for business survival and growth. Firms are heavily affected by government policies because the government controls many essential resources for their continued operation and development (Pang & Wang, 2021). Under these conditions, political connections are a valuable supplement or substitute for formal institutions (He et al., 2019). Many firms actively seek and build political connections to survive and grow as an important strategic choice (Ling et al., 2016). Political resources can help firms access policy trends and business information early. They can also reduce financing costs and promote faster development (Al-Delawi et al., 2023). Through political ties, firms may receive tax benefits, government subsidies, and industry access permits, which can improve firm performance (Guo et al., 2019). Bi and Wang (2018) discovered that financial advisors with political ties generated increased market value for firms involved in acquisitions. Wu et al. (2012) analyzed data from publicly traded companies in China from 1999 to 2007 in a separate study. They revealed that private enterprises led by politically connected executives outperformed those lacking such affiliations.

External audits play a crucial role in corporate governance by promoting transparency and accountability towards stakeholders. As per agency theory, these audits help mitigate the information asymmetry between principals and agents. This improves the quality of financial reporting and limits managers' opportunities to manipulate information or pursue personal gain (Yeung & Lento, 2020; Aguilera et al., 2015). Audit firms enhance the quality of financial information through independent, professional, and objective audit work. They help reduce financial restatements (Habib et al., 2019), limit earnings management (Alves, 2013), and lower financing costs (Zhang & Guo, 2024). When audit quality improves, the chance of detecting and exposing managerial misconduct increases. This deterrent effect encourages managers to focus on maximizing shareholder value rather than pursuing self-interest, which helps improve overall efficiency and firm performance (Al-ahdal & Hashim, 2022). High-quality audits also improve the timeliness and reliability of financial disclosures (Ivungu et al., 2019). They increase information transparency and reduce managers' potential for opportunistic behavior by lowering information asymmetry (Sulaiman, 2023). By providing independent assurance about the reliability of accounting information, external audits help improve resource allocation and ultimately create value for the organization (Fang et al., 2018).

Previous studies have assessed external auditors' role and effectiveness from the firm performance perspective. Findings show that strong, experienced, skilled auditors significantly improve financial performance. This is because auditors carry out their duties professionally and adequately. For example, it has been demonstrated that auditors' independence positively influences the financial outcomes of publicly traded manufacturing enterprises in Nigeria. Rahman et al. (2019) analyzed Bangladeshi listed manufacturing firms. Using multiple regression techniques, they reported a strong positive association between external audit quality and business performance. Similarly, the study by Nedelcu et al. (2015) confirmed that external audit quality positively affected the profitability of Romanian banks. These cross-country findings suggest that high-quality external audits can improve firm performance regardless of the institutional environment by improving information transparency, enhancing corporate governance, and optimizing resource allocation.

The media serve an essential function in corporate governance by helping to spread information, which helps to reduce information asymmetry between companies and market participants (Liu & McConnell, 2013; Bushee et al., 2010). The media makes corporate behavior more visible and increases the transparency of management actions. This helps to limit self-interested behavior and encourages managers to make decisions that meet social expectations (Dai et al., 2015; Dyck & Zingales, 2002; Dyck et al., 2008). Media reports can attract the attention of governments and regulatory agencies. In this way, media supplements legal rules and pushes firms to improve their governance (Dang et al., 2021). Zhou et al. (2016) proved that media oversight can effectively reduce violations by listed companies. They also found that the more violations a company commits, the stronger the effect of media monitoring. Media coverage can also raise public awareness and influence corporate image. This may lead companies to improve their behavior. Dai et al. (2015) found that media reports can strengthen the effects of shareholder actions.

In many cases, controlling shareholders may act more carefully to protect corporate and personal reputations. At the same time, strict media oversight can limit managerial self-interest and encourage managers to focus on activities that maximize shareholder value (Hassan et al., 2023). When positive media coverage increases, investors are more likely to form optimistic expectations about a company's future. As a result, they may be more willing to buy shares or increase their investments (Pollock & Rindova, 2003). This higher investment interest helps companies raise capital and

lower financing costs. Media reports also influence consumer decisions. Rodriguez et al. (2015) found that social media use positively impacts customer-oriented activities and sales performance. Media attention can directly affect market performance by shaping consumer behavior. All these factors work together to improve firm performance. Dang et al. (2021) employed the data from 41 developed and emerging market countries and showed a positive relationship between media attention and firm performance. According to Bai and Yan (2023), using a sample of China's top 500 firms, they confirmed the positive effect of social media on firm performance.

Therefore, this study proposes hypotheses:

H1: There is a relationship between internal and external corporate governance and firm performance.

H1a: Ownership concentration is positively related to firm performance.

H1b: State ownership is negatively related to firm performance.

H1c: Managerial ownership is positively related to firm performance.

H1d: Board size is positively related to firm performance.

H1e: Board independence is positively related to firm performance.

H1f: CEO duality is negatively related to firm performance.

H1g: Executive compensation incentives are positively related to firm performance.

H1h: Product market competition is positively related to firm performance.

H1i: Political connections are positively related to firm performance.

H1j: External audit quality is positively related to firm performance.

H1k: Media attention is positively related to firm performance.

### **3.4.2 Corporate Governance and Budgetary Slack**

Corporate governance, as a micro-level institution of the enterprise, directly affects the changes and efficiency of budget management (Xiong, 2014). Corporate governance functions as a mechanism to address the agency conflict between shareholders and management, greatly enhancing the resource allocation efficiency of enterprises. This is so that the incentive for management to take advantage of information asymmetry to develop budgetary slack is reduced. Corporate governance mechanisms are typically divided into internal and external (Schäuble, 2019; Aguilera et al., 2015; Denis and McConnell, 2003). Internal governance is a core element of

general corporate governance, including capital structure, board characteristics, and managerial incentives (Gillan, 2006). External corporate governance mechanisms refer to those that operate outside the company's core (Aguilera et al., 2015). Therefore, this section focuses on the in-depth analysis of the effect of corporate governance on budgetary slack in terms of both internal governance (ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives) and external governance (product market competition, political connections, external audit quality and media attention), as well as develops hypotheses.

#### ***3.4.2.1 Internal Corporate Governance and Budgetary Slack***

The composition and allocation of a firm's equity are defined by its ownership structure, which plays a vital role in corporate governance (Iwasaki et al., 2022). The structure of ownership establishes the fundamental distribution of power within a company. It affects how control rights are allocated among shareholders, directors, and management. In actual budgeting practices, ownership structure inevitably directly impacts budget decisions and control mechanisms (Xiong, 2014). Different types of ownership structures lead to different patterns of control. The controlling party's incentives and governance ability determine budget targets, affecting budgetary slack (Xiong, 2014).

In firms with concentrated ownership, controlling shareholders share common goals with the enterprise. Consequently, they often actively safeguard their interests by asserting ownership rights and making managerial decisions (Jiang & Kim, 2020). Even if they do not participate in daily operations, they still closely monitor and exercise key control rights. The higher the ownership held by controlling shareholders, the stronger their motivation to supervise managers (Alkurdi et al., 2021). At the same time, to keep their positions, managers must gain the trust and approval of the controlling shareholders. If firm performance is poor, managers may risk being replaced quickly. This pressure encourages them to consider the controlling shareholders' preferences when making budget-related decisions (Shao, 2019). In such cases, the goals of budget-setting managers tend to align with those of controlling shareholders, which reduces their motivation to create budgetary slack.

Compared with other countries, listed firms in China are frequently

characterized by state ownership (Jiang & Kim, 2020). Due to the insufficient oversight of day-to-day operations by state shareholders, managers may take advantage of this weakness to pursue personal interests, undermining the rights of both state and minority shareholders. This results in more severe insider control problems in state-controlled enterprises (Beck & Brødsgaard, 2022). State-controlled enterprises are often expected to fulfill social responsibilities such as promoting economic growth and creating jobs. These multiple goals can weaken profit-oriented incentives and constraints, leading to soft budget constraints for managers (Lin et al., 2020). In addition, due to public ownership, the government is not the ultimate beneficiary of residual profits (Yang et al., 2021). The government struggles to supervise managers effectively without sufficient capacity for monitoring and incentive mechanisms. This institutional environment encourages insider control in state-controlled enterprises, allowing managers to dominate the budgeting process and increasing the likelihood of creating budgetary slack for personal gain.

Managerial ownership, as a governance mechanism, helps reduce moral hazard and information asymmetry in the principal-agent relationship by aligning managers' personal interests with firm performance (Jensen & Meckling, 1976). According to agency theory, when managers hold company shares, their interests become more consistent with those of shareholders. This alignment reduces managers' opportunistic behavior and helps limit budgetary slack (Li & Zhao, 2020). Based on data from non-financial A-share listed firms in China from 2008 to 2010, Xiong (2014) determined that managerial ownership can somewhat restrain budgetary slack and plays a positive role in budget management.

The board of directors establishes a connection between shareholders and managers, which plays a vital role in aligning their interests (Fernández-Temprano & Tejerina-Gaite, 2020). The board mainly performs monitoring and advisory functions (Melville & Merendino, 2019). According to agency theory, conflicts of interest may arise when ownership is separated from control in corporate settings. The board, representing shareholders' interests, monitors managerial decisions and behaviour. The board mitigates information asymmetry through effective oversight and diminishes agency costs (Jensen & Meckling, 1976). The increased size of a board often brings greater resources, which in turn facilitates access to diverse expertise and experience. This helps improve decision-making and monitoring efficiency (Abor, 2007). In budget management, the board's supervisory role is significant. Budgeting

often involves large amounts of information collection, analysis, and judgment. Due to their information advantage, managers may have the motive and opportunity to manipulate budget data (Shu et al., 2023). A larger board, with stronger monitoring capacity, can spend more time and effort reviewing the budget, detect and correct potential opportunistic behaviour by managers (Liu et al., 2022), and reduce the tendency to overstate costs or understate revenues.

Some scholars discovered that independent directors can be particularly effective monitors (Fernández-Temprano & Tejerina-Gaite, 2020; Melville & Merendino, 2019; Dahya et al., 2002; Weisbach, 1988). To improve governance and promote standardized operations in listed companies, the CSRC emphasized the importance of appointing independent directors to boards in 2001. Although there are still many shortcomings in the actual functioning of the independent director system, it should not be dismissed, as it remains a positive governance tool (Fogel et al., 2021). Independent directors can offer advice from different perspectives and areas of expertise. They help and supervise managers in formulating and implementing corporate strategies. In budget management, independent directors monitor both the board's budget discussions and the management's budget execution. They can strengthen budget review and accountability mechanisms, improve budget transparency and compliance (Liu et al., 2022), and help reduce budgetary slack caused by deliberate overestimating costs or underestimating revenues by managers.

Agency theory suggests that when the board chair and the CEO are the same person, this may lead to excessive concentration of managerial power, weakening board independence and its monitoring function, increasing agency costs (Fama & Jensen, 1983; Jensen & Meckling, 1976). In budget management, concentrated power may further reduce the transparency of budget information. This makes it easier for managers to manipulate the budgeting process, which may increase budgetary slack. However, the relationship between leadership structure and budgetary slack in Chinese listed companies must be understood within the country's unique institutional setting. First, Chinese listed firms often exhibit highly concentrated ownership, where controlling shareholders usually hold dominant power and directly appoint the board chair and top executives (Jiang & Kim, 2020). Second, in Chinese companies, the board chair is not only responsible for strategic decisions but is also deeply involved in daily operations, with substantial overlap or even competition in duties between the chair and the CEO (Dian, 2014). As a result, even when the two positions are formally

separated, the CEO's independence may remain limited. Whether the roles are separated or combined, the lack of an effective supervisory mechanism may still worsen information asymmetry in this governance context. This could make managers more likely to leave greater budgetary buffers, which increases the likelihood of budgetary slack (Wu, 2023; Xiong, 2014). This effect may be even more pronounced under CEO duality.

Executive incentive mechanisms align executives' personal interests with the company's overall interests. This helps lower agency costs and ease common conflicts under decentralized governance structures (Chulkov & Barron, 2023). As rational economic agents, executives tend to make decisions that maximize their interests after weighing expected benefits against potential costs (Kayani & Gan, 2022). Regarding motivation, executives usually prefer to maintain or improve their compensation levels due to concerns about reputation, career advancement, and other personal factors, rather than accept pay reductions (An et al., 2018). Therefore, increasing executive compensation can improve interest alignment between executives and shareholders. It reduces the motivation for opportunistic behaviour and lowers the likelihood that executives will use budgetary slack to compensate for personal losses (An et al., 2018).

#### ***3.4.2.2 External Corporate Governance and Budgetary Slack***

Product market competition is regarded as a significant external mechanism of corporate governance that encourages managers to enhance the firm's value (Babar & Habib, 2021; Gillan, 2006). Shareholders and boards can better understand firm performance and operations in competitive markets. This helps them obtain more information about managerial effort, which supports monitoring and evaluation. In this way, product market competition helps reduce information asymmetry and agency problems (Lee et al., 2019). Hart (1983) argued that shareholders have stronger incentives to monitor managers in highly competitive markets. This reduces the chance that managers use budgets to seek personal gains. Schmidt (1997) determined that intense market competition increases bankruptcy risk. This forces managers to be more cautious when making and implementing budgets. To protect their reputation and job security, managers are more likely to treat budgeting as a key part of business strategy. This helps improve budget execution and supports steady or strong

performance in a competitive environment (Kadel, 2011). From this view, the space for budget slack is reduced. Other than that, Laksmana and Yang (2015) showed that firms focus more on using resources efficiently in highly competitive markets. This lowers the likelihood of deliberately creating budgetary slack. Babar and Habib (2021) also found that market pressure drives firms to pursue higher efficiency and lower waste, which indirectly limits managerial opportunism, including excessive slack.

In China's transition economy, political connections are a valuable supplement or substitute for formal institutions (He et al., 2019). To survive and grow, firms actively seek and build political ties as a key strategy (Ling et al., 2016). In China, many controlling shareholders have political backgrounds. The government is the controlling shareholder for SOEs, which naturally creates political connections. In non-state-owned firms, controlling shareholders often build ties with the government through politically connected CEOs, executives, or board members (Jiang & Kim, 2020). Based on resource dependence theory, political connections can bring various benefits, such as easier access to financing, tax breaks, and government contracts (Faccio, 2006). In such cases, it becomes easier for firms to meet performance targets. This lowers the pressure to maintain reputation, and firms may not need to use budgetary slack to ensure performance. Liu (2019) examined that when firms receive direct subsidies and tax benefits, it becomes easier to reach budget goals. As a result, managers have weaker incentives to create budgetary slack.

According to agency theory, external auditing helps reduce information asymmetry between principals and agents. This improves the quality of accounting information disclosure and lowers managers' chances to manipulate information or seek personal gains (Yeung & Lento, 2020; Aguilera et al., 2015). Large audit firms can effectively reduce management's discretion over financial reporting. They also lower the possibility that managers hide resource misappropriation through accounting methods, which helps prevent insiders from using their positions for private benefit (Guedhami et al., 2014). In addition, high-quality auditors often encourage firms to disclose more timely and firm-specific information. This improves information transparency, reduces asymmetry, and makes managerial actions visible to shareholders. As a result, managers are less likely to misuse corporate resources for personal purposes (Sulaiman, 2023). Piotroski et al. (2015) stated that accounting transparency can reveal irregularities in governance and help outside investors identify the risk of resource expropriation. This limits the space for managerial self-interest. In

the Chinese context, Fang et al. (2018) found that firms audited by large audit firms disclose significantly more firm-specific information in their financial reports. Based on this, it can be assumed that firms are more transparent under the supervision of large auditors. As a result, the likelihood that managers use budgetary slack to divert resources is significantly reduced.

The media draws public attention through reporting, which shapes how society views corporate behavior (Cui et al., 2023). This influence is about spreading information and about monitoring (Dyck & Zingales, 2002). Previous studies have shown that media supervision can effectively constrain managerial behavior. A higher level of media attention can limit managers' discretionary power during the budgeting process and reduce their motivation to use budgetary slack for personal gain (Dyck & Zingales, 2002). At the same time, greater media coverage often pushes firms to disclose more detailed and timely information about their operations (He et al., 2024; Bushee et al., 2010). This helps reduce information asymmetry between managers and external stakeholders. When investors have a clearer picture of management behavior, managers are less likely to use firm resources for personal gain. Bednar et al. (2013) pointed out that better transparency helps reveal misconduct and allows external investors to detect the risk of resource misuse. This reduces the chances for managers to pursue private benefits. In empirical studies, Miller (2006) discovered that firms with more media attention tend to include more firm-specific information in their financial reports, and their managers behave more cautiously in decision-making. In China, related studies also confirm the governance role of the media. Zhou et al. (2016) found that media supervision significantly reduces corporate misconduct. This effect is more potent in firms with more serious violations. These findings suggest that high media attention improves information disclosure and strengthens external oversight, which helps prevent managers from using budgetary slack to take firm resources. Media can also pressure managers by shaping public opinion (Wiesenfeld et al., 2008). When managers realize that their budget decisions may be reviewed or even exposed by the media, they are more likely to act in the interest of shareholders and reduce budgetary slack. Dai et al. (2015) pointed out that negative media coverage increases a firm's reputation risk. This forces managers to be more cautious in budgeting and improve resource allocation efficiency to protect the firm's image.

Therefore, this study proposes hypotheses:

H2: There is a relationship between internal and external corporate governance

and budgetary slack.

H2a: Ownership concentration is negatively related to budgetary slack.

H2b: State ownership is positively related to budgetary slack.

H2c: Managerial ownership is negatively related to budgetary slack.

H2d: Board size is negatively related to budgetary slack.

H2e: Board independence is negatively related to budgetary slack.

H2f: CEO duality is positively related to budgetary slack.

H2g: Executive compensation incentives are negatively related to budgetary slack.

H2h: Product market competition is negatively related to budgetary slack.

H2i: Political connections are negatively related to budgetary slack.

H2j: External audit quality is negatively related to budgetary slack.

H2k: Media attention is negatively related to budgetary slack.

### **3.4.3 Budgetary Slack and Firm Performance**

From the agency theory perspective, budgetary slack essentially reflects the opportunistic behavior of agents during the budgeting process (Mao & Zhu, 2009). Driven by self-interest, agents often deliberately underestimate revenues or overestimate costs to create more room for operational flexibility and gain personal economic benefits (Mohanna & Sponem, 2020). This behavior not only harms the interests of principals but also reduces the efficiency of resource allocation within the firm. Budgetary slack is often regarded as a dysfunctional (Shu et al., 2023; Lukka, 1988) and unethical activity (Pramudiati et al., 2022; Douglas & Wier, 2000), and therefore should be controlled (Fisher et al., 2000). Budgetary slack can lead to resource waste and low management efficiency (Otalor & Oti, 2017). When budget targets are set below the actual capability of the firm, employees can easily achieve the preset goals without entirely using available resources. This outcome is clearly harmful to organizational development (Yee, 2014). The presence of budgetary slack fails to motivate budget implementers and gives them the chance to hide mistakes, which results in lower managerial efficiency (Islami & Nahartyo, 2019). Budgetary slack also seriously disrupts the rational allocation of resources. Such misallocation can eventually generate a large amount of ineffective costs, which negatively affects firm performance.

Therefore, this study proposes the hypothesis:

H3: Budgetary slack is negatively related to firm performance.

### **3.4.4 Corporate Governance, Budgetary Slack, and Firm Performance**

Effective corporate governance can inhibit management's opportunistic and short-term behaviors and maximize the convergence of management's and shareholders' goals, reducing the agency costs of the company and enhancing its performance. Budgetary slack is agents' performance at all levels in budget formulation and execution due to self-interest in pursuing economic interests (Mao & Zhu, 2009). Budgetary slack arises due to asymmetric information, which has been identified as a primary cause of agency issues (Mohanna & Sponem, 2020). One of the core aims of corporate governance mechanisms is to address these agency concerns. This involves designing ways to align the agent's behavior with the principal's interests, developing sound incentive and restraint frameworks, and encouraging agents to prioritize the maximization of owners' interests (Wang et al., 2019). Corporate governance can significantly alleviate the principal-agent problem between owners and managers of enterprises. This is so that the incentive for management to take advantage of information asymmetry to develop budgetary slack is reduced (Löhde et al., 2021), greatly enhancing the efficiency of resource allocation in the enterprise, thus improving firm performance. This section explores the complex dynamic relationship between corporate governance, budget slack, and corporate performance from two aspects: internal governance (ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives) and external governance (product market competition, political connections, external audit quality and media attention), as well as proposes hypotheses.

#### ***3.4.4.1 Internal Corporate Governance, Budgetary Slack, and Firm Performance***

Agency theory posits that the structure of ownership functions as a key mechanism for monitoring within corporate governance. Existing studies show that when ownership is highly dispersed, shareholders usually hold only a small portion of shares and lack the economic incentives to monitor managers effectively. This often

leads to lower management efficiency and worse firm performance (Puni & Anlesinya, 2020). As ownership becomes more concentrated, large shareholders have more substantial incentives to monitor. By exercising their rights and participating directly or indirectly in management, they can protect their own interests, restrain managerial opportunism, and help improve firm performance (Wang et al., 2019; Jiang & Kim, 2020; Gaur et al., 2015). In a highly concentrated ownership structure, controlling shareholders pay more attention to business operations. Managers tend to engage in more truthful budgeting when subjected to intensive oversight from controlling shareholders. This reduces their motivation to overstate costs or understate revenues (An et al., 2019). As a result, the space for creating budgetary slack is reduced, making budgets more accurate and improving firm performance.

Compared with most other countries, state ownership dominates Chinese listed firms (Jiang & Kim, 2020). Numerous empirical studies have identified an inverse association between state ownership and corporate performance (Iwasaki et al., 2022; Lin et al., 2009; Sun & Tong, 2003). The government often prioritizes political objectives over economic efficiency to achieve policy goals such as social stability and employment (Shleifer & Vishny, 1997). This weakens profit-maximization as the primary business goal in state-owned enterprises and reduces the incentives and constraints on managers (Lin et al., 2020). With weak oversight, managers in state-owned firms may abuse their budgeting power and create budgetary slack for personal gain (Yang et al., 2021). In addition, state shareholders tend to monitor daily operations less closely, which increases information asymmetry and internal control problems (Beck & Brødsgaard, 2022). These factors create more room for budgetary slack. Budgetary slack reflects lower efficiency in resource allocation and can harm firm performance.

Managerial ownership serves as a key governance tool that mitigates agency-related conflicts by aligning the interests of managers with those of shareholders (Jensen & Meckling, 1976). When managers hold shares in the company, their personal interests become closely tied to the firm's performance. This incentivizes them to make decisions supporting shareholder value maximization (Cho, 1992). Some studies suggested that a high level of managerial ownership may lead to insider control and lower governance efficiency (Shleifer & Vishny, 1986). However, under China's institutional background, managerial ownership in listed firms is usually low and does not lead to effective control. Therefore, problems such as

entrenchment are not common (Iwasaki et al., 2022). On the contrary, many empirical studies have found that managerial ownership significantly positively affects firm performance in Chinese listed firms (Qin & Deng, 2009; Ali et al., 2018). Other than that, when managers hold company shares, their personal goals are more likely to align with shareholder goals. This alignment helps limit self-interested behavior and reduces the likelihood of budgetary slack (Li & Zhao, 2020), which improves firm performance.

The board of directors acts as a key link between shareholders and managers. It performs monitoring and advisory roles (Melville & Merendino, 2019). Board size is an important factor in evaluating governance capacity. It affects how well the board gathers and processes information and how effectively it monitors managerial actions (Abor, 2007). According to resource dependence theory, a larger board can bring together more expertise and social capital, which helps improve decision-making and firm performance (Pfeffer & Salancik, 1978; Hillman & Dalziel, 2003). Agency theory also suggests that a larger board can reduce information asymmetry and agency problems by strengthening oversight, which lowers agency costs (Jensen & Meckling, 1976). In the budgeting process, managers often have more information than the board. They may use this advantage to manipulate budget figures for personal gain, which leads to budgetary slack (Shu et al., 2023). Budgetary slack reduces resource allocation efficiency and harms firm performance (Liu et al., 2022). A larger board, with more diverse members and stronger monitoring ability, can better review budget proposals and detect opportunistic behavior early, which helps prevent budgetary slack.

The board mainly performs monitoring and advisory functions (Melville & Merendino, 2019). According to agency theory, when ownership and control are separated, conflicts of interest may arise between shareholders and managers, leading to agency problems (Jensen & Meckling, 1976). Appointing independent directors can strengthen the board's autonomy and its oversight capacity. This helps reduce agency costs and improve governance efficiency and firm performance (Fama & Jensen, 1983; Alodat et al., 2021). According to resource dependence theory, independent directors can also help the firm access important external resources, strengthening the board's ability to support strategy implementation and performance improvement (Hillman & Dalziel, 2003; García-Ramos & Díaz, 2021). In budget management, budgetary slack refers to managers using their information advantage to overstate costs or understate

revenues for personal gain (Shu et al., 2023). This behavior harms resource allocation and reduces overall performance. By strengthening oversight procedures and enhancing accountability within the budgeting process, independent directors help limit budgetary slack. Their oversight increases transparency and compliance, which helps improve budget quality and firm performance (Liu et al., 2022).

CEO duality refers to the arrangement in which the same individual holds both the board chair and chief executive officer positions. This structure may improve the coordination of strategic decisions and enhance execution efficiency (Donaldson & Davis, 1991). Under certain conditions, it may also help establish unified leadership authority and strengthen strategic consistency. However, when the CEO holds both the leadership of the board and operational control of the firm, the board's ability to monitor and balance managerial power may be weakened, creating potential governance risks. CEO duality can lead to a high concentration of individual power, making the budgeting process less subject to adequate oversight and lacking diverse input (Wu, 2023). According to agency theory, when the CEO also serves as the board chair, it gives the manager more control and information. This makes it easier for the CEO to set more relaxed budget targets. This may help them meet performance evaluations or avoid external accountability, leading to budgetary slack (Fama & Jensen, 1983). An increase in budgetary slack indicates a deviation from optimal resource allocation and a misalignment between managerial goals and shareholder interests, which may ultimately reduce firm performance (Mohanna & Sponem, 2020). Therefore, budgetary slack may be a key mediating factor in CEO duality and firm performance. In other words, CEO duality may indirectly weaken resource efficiency and governance effectiveness by increasing budgetary slack, negatively affecting firm performance.

The separation between ownership and control makes executive incentives important for addressing agency problems (Chulkov & Barron, 2023). According to agency theory, linking executives' personal interests with shareholder interests through adequate compensation can reduce agency costs and improve firm performance (Morgan & Poulsen, 2001; Chen et al., 2023). As rational economic agents, executives weigh personal gains against the costs of their efforts and tend to act in ways that maximize their interests (Kayani & Gan, 2022). From a behavioral perspective, executives are often motivated by reputation and career advancement concerns, and they generally seek to maintain or increase their compensation levels

(An et al., 2018). When executive compensation is reasonably secured, their interests are more aligned with those of shareholders, and the motivation to act opportunistically is reduced. Specifically, adequate compensation can discourage executives from using budgetary slack to seek personal benefits (An et al., 2018). When compensation incentives effectively limit budgetary slack, resource allocation becomes more efficient, contributing to better firm performance.

#### ***3.4.4.2 External Corporate Governance, Budgetary Slack, and Firm Performance***

According to agency theory, product market competition reduces information asymmetry and mitigates agency problems (Lee et al., 2019). In intensely competitive environments, companies encounter tighter financial limitations stemming from restricted pricing authority. To secure capital at a reduced cost from the market, they must enhance their transparency to alleviate information asymmetry (Lee et al., 2019). As competition increases, managers must demonstrate their capabilities by delivering strong performance to prove their value (Liu et al., 2018). As a result, agency problems are reduced, and the goals of managers and owners become more aligned, aiming to improve firm performance (Hart, 1983). In industries with intense competition, firms must increase transparency to gain external funding, which reduces the space for managers to create budgetary slack (Lee et al., 2019). At the same time, competitive markets force firms to use resources more efficiently, making it harder for managers to build slack into the budget (Laksmana & Yang, 2015). Budgetary slack is a key source of resource waste and inefficiency (Otalor & Oti, 2017). When product market competition limits slack, firms can use resources more effectively, improve transparency, and enhance performance.

Political connections are an important external governance factor (Liu, 2024). In China's transitional economy, political ties are seen as a helpful supplement or substitute for formal institutions (He et al., 2019). According to resource dependence theory, firms rarely possess all the necessary resources and often rely on external support (Pfeffer & Salancik, 1978). Since the government controls many critical resources, firms depend highly on it. Building political connections can reduce uncertainty from external dependence and affect firm performance (Pang & Wang, 2021). Political ties often bring benefits such as easier access to financing, tax breaks, and government contracts (Faccio, 2006). When firms receive such support, meeting

budget targets becomes easier, and managers have less incentive to create slack. Budgetary slack is reduced, resource allocation becomes more efficient, and firm performance improves.

External auditors serve as a key component of the corporate governance framework. Michas (2011) argued that external audits are a key part of governance, as they increase the credibility of financial disclosures and strengthen internal controls. According to agency theory, external audits help reduce information asymmetry between shareholders and managers, improving accounting information's transparency and quality (Yeung & Lento, 2020). Guedhami et al. (2014) found that large audit firms can limit management's discretion in financial reporting and reduce the chance of hiding resource misappropriation. This oversight helps prevent abuse of power by insiders and protects the firm's and its stakeholders' interests. Fan and Wong (2005) also found that high-quality auditors encourage timely and voluntary disclosure of firm-specific information, which supports good governance. Better transparency lowers information asymmetry and helps shareholders monitor managers more effectively, reducing self-serving actions such as budgetary slack (Fang et al., 2018). When slack is reduced, firms allocate resources more efficiently, which helps improve overall performance.

As an information intermediary, the media helps spread information to different groups (Bushee et al., 2010). With its broad reach, negative media coverage pressures managers and serves as an external monitoring force that can reduce self-interested behavior (Dyck et al., 2008). For example, to avoid reputational damage, managers may be less likely to create budgetary slack for personal gain (Webb, 2002), which benefits firm operations. According to agency theory, when information asymmetry exists, managers may use slack to pursue their own interests (Pramudiati et al., 2022). However, media exposure increases the visibility of corporate behavior. It improves transparency, limiting opportunities for managers to act in self-interest and pushing them to make decisions that align with public and social expectations (Dai et al., 2015; Dyck et al., 2008). Cui et al. (2023) also found that media supervision strongly restricts executive decisions, especially those that may harm shareholder interests. Media pressure forces managers to be more careful in budget planning and implementation, reducing the chance of slack. Less budgetary slack improves resource allocation efficiency, allowing more resources to support real business needs instead of being wasted or misused, which helps improve firm

performance.

Therefore, this study proposes hypotheses:

H4: Budgetary slack mediates the relationship between internal and external corporate governance and firm performance.

H4a: Budgetary slack plays a mediating role in the relationship between ownership concentration and firm performance.

H4b: Budgetary slack plays a mediating role in the relationship between state ownership and firm performance.

H4c: Budgetary slack plays a mediating role in the relationship between managerial ownership and firm performance.

H4d: Budgetary slack plays a mediating role in the relationship between board size and firm performance.

H4e: Budgetary slack plays a mediating role in the relationship between board independence and firm performance.

H4f: Budgetary slack plays a mediating role in the relationship between CEO duality and firm performance.

H4g: Budgetary slack plays a mediating role in the relationship between executive compensation incentives and firm performance.

H4h: Budgetary slack plays a mediating role in the relationship between product market competition and firm performance.

H4i: Budgetary slack plays a mediating role in the relationship between political connections and firm performance.

H4j: Budgetary slack plays a mediating role in the relationship between external audit quality and firm performance.

H4k: Budgetary slack plays a mediating role in the relationship between media attention and firm performance.

### **3.5 Summary of the Chapter**

This chapter establishes the theoretical foundation and conceptual framework for the study. It presents agency and resource dependency theories as the primary frameworks for understanding the connections between corporate governance, budgetary slack, and firm performance. Based on these theories, a conceptual framework was developed to illustrate how governance mechanisms—both internal

and external—may influence firm performance directly or indirectly through budgetary slack.

The chapter then formulated a series of research hypotheses that reflect these relationships. First, Hypothesis 1 explores the direct relationship between corporate governance and firm performance, including both internal mechanisms (ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives) and external mechanisms (product market competition, political connections, external audit quality, and media attention). This set of hypotheses aligns with Research Objective 1, which aims to examine the direct effect of internal and external corporate governance on firm performance. Second, examines how internal and external corporate governance mechanisms relate to budgetary slack. This corresponds to Research Objective 2, which identifies how internal and external corporate governance affects budgetary behavior. Third, Hypothesis 3 explores the relationship between budgetary slack and firm performance. It corresponds to Research Objective 3, which assesses how budgetary slack influences organizational outcomes. Fourth, Hypothesis 4 investigates whether budgetary slack functions as a mediating variable in the relationship between internal and external governance mechanisms and firm performance. This hypothesis corresponds to Research Objective 4. Together, these hypotheses serve as the foundation for the empirical investigations discussed in the subsequent chapters. In addition, they offer a systematic framework for examining the theoretical model and addressing the study's central research questions.

## CHAPTER FOUR

### RESEARCH METHODOLOGY

#### 4.1 Introduction

This chapter presents the research methodology adopted in this study. Section 4.2 describes the population of the study, including the sample selection criteria and data collection procedures. Section 4.3 outlines the data analysis procedures. Section 4.4 introduces the panel data analysis techniques, including model selection, diagnostic test analysis, and the testing of mediating effects. Section 4.5 details the measurement of variables, including firm performance, internal and external corporate governance mechanisms, budgetary slack, and control variables. Section 4.6 presents the empirical models used for hypothesis testing. Section 4.7 provides a summary of the chapter.

#### 4.2 Population of the study

The population of this study covers all Chinese A-share companies that have been continuously listed on the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE) from 2014 to 2023. A-shares are stocks denominated in Renminbi (RMB) traded in domestic markets and mainly owned by local investors. In contrast, B-shares are priced in foreign currencies and available for trading in Shanghai and Shenzhen. H-shares refer to the shares of companies based in mainland China listed on the Hong Kong Stock Exchange (HKEX). By focusing on A-share companies listed on SSE and SZSE, this research thoroughly represents China's economic activities (Allen et al., 2024). Table 4.1 below shows the number of companies for each share category.

Table 4.1  
Number of Listed Companies by Share Category (as of 2023)

| Share Category                           | No. of Firms |
|------------------------------------------|--------------|
| A-share listed companies on SSE and SZSE | 5096         |
| B-share listed companies on SSE and SZSE | 85           |

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Source: the official websites of SSE, SZSE, and HKEX

The Chinese stock market was established in 1990 with the founding of SSE and the SZSE, the two domestic stock exchanges. The Main Boards in Shanghai and Shenzhen are the foundation of the A-share market, where established and large corporations are publicly traded. Alongside these Main Boards, the A-share market encompasses additional platforms, such as the Small and Medium Enterprise (SME) Board, the Growth Enterprise Market (GEM) Board on the SZSE, and the Star Market on the SSE. The SME Board began operations in 2004 and aimed to enhance equity financing opportunities for smaller and emerging businesses. However, it was integrated into the Shenzhen Main Board in February 2021. The GEM Board, often called ChiNext, was launched in 2010 to function similarly to Nasdaq by catering to high-growth and technology-oriented startups (Li et al., 2024). The Star Market, officially known as the SSE Science and Technology Innovation Board, specifically targets China's technology sector. Moreover, it was inaugurated on July 22, 2019. According to the *Guidelines on Industry Classification of Listed Companies* issued by the CSRS in China, there are primarily 19 categories under which these companies are classified. As of 2023, there were 5,096 A-share listed companies across SSE and SZSE, with their particular distribution detailed in Table 4.2.

Table 4.2

The Total Number of A-share Listed Companies on SSE and SZSE in 2023

| <b>China A-Share Market</b> | <b>No. of Listed Companies</b> |
|-----------------------------|--------------------------------|
| Shanghai Main Board         | 1,692                          |
| Shenzhen Main Board         | 1,505                          |
| GEM Board                   | 1,333                          |
| The Star Market             | 566                            |
| Total Population            | 5096                           |

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Source: the official websites of SSE, SZSE

#### 4.2.1 Sample Selection

The sample in this study includes Chinese A-share companies listed on the SSE and SZSE. The panel data used in the study cover ten full fiscal years from 2014

to 2023. 2014 was chosen as the starting point because of a significant revision to China's Budget Law. The revised law clarified the procedures for budget preparation, rules for budget balance, and requirements for final account management (Xiao & Wang, 2024). These changes significantly impacted corporate budget practices and internal governance mechanisms (He, 2019). Moreover, a longer time span also helps to collect more comprehensive data, identify long-term patterns, and reduce the influence of short-term factors (Baltagi, 2008). Deaton (1995) and Baltagi (2008) suggested that panel data covering five to ten years can provide more substantial support for analyzing economic behavior. Therefore, using data from 2014 to 2023 is reasonable for this study.

In China, budget information disclosure by listed companies is not mandatory. Companies can decide whether to disclose such information and what details to include. Among different types of budget data, revenue budgets are the most commonly disclosed because they are central to the corporate budgeting system (Tang, 2020; An et al., 2016). Based on this, the study uses purposive sampling, with the main criterion being whether a company disclosed revenue budget data for the following year in its annual reports (Shu et al., 2023; Tang et al., 2020; An et al., 2020). Purposive sampling allows researchers to select data-rich samples based on predefined standards. This helps manage differences in disclosure behavior and ensures that the sample represents firms willing to disclose forward-looking financial information (Etikan et al., 2016). This method also improves the match between the sample and the research goals, enhancing the findings' rigor and credibility (Campbell et al., 2020). In addition, purposive sampling reduces the risk of including companies with incomplete or inconsistent budget disclosure, which could affect data comparability and the validity of empirical analysis. The study manually collected revenue budget data disclosed by A-share companies between 2014 and 2023 and obtained a sample of 3,433 companies.

To ensure data quality, this study further screens the sample based on prior research (Fang et al., 2018; Shao, 2019; Tang, 2020; Xiao, 2022; He et al., 2024). The screening process is described as follows:

1. Exclusion of Companies with Delisting Risks

One hundred nineteen companies labeled Special Treatment (ST) or Particular

Transfer (PT)<sup>1</sup> are excluded. According to the regulations of the Chinese stock exchanges, these labels are given to companies facing severe financial difficulties, such as continuous losses, high debt ratios, or abnormal business operations. These companies often show extreme financial indicators or irregular accounting patterns, which may affect the accuracy of empirical results and lead to biased estimates (Xiao, 2022).

## 2. Exclusion of Companies with Delisting Risks

Based on the industry classification by the CSRC, 100 financial firms are excluded. Financial companies follow different regulatory frameworks, accounting standards, and accrual systems. Their financial behavior is fundamentally different from that of non-financial firms, making them unsuitable for direct comparison in empirical analysis (Al-Shaer et al., 2024).

## 3. Exclusion of Companies with Delisting Risks

Another 100 companies were excluded due to missing values in key variables, abnormal financial indicators, or incomplete information in the database. Missing data refer to empty or invalid records in essential variables, which can lead to inconsistent sample analysis and reduced statistical power (Hair et al., 2010). Incomplete data may also cause biased estimates and reduce the robustness of the model. In some cases, it may reflect poor information disclosure or weaknesses in corporate governance (Little & Rubin, 2019; Dechow et al., 2010). Hence, keeping only firms with complete and consistent financial data helps improve the credibility of the findings. It supports the rigor and reliability of the empirical analysis (Pigott, 2001).

Table 4.3  
Sample Selection Process

| <b>Selection Criteria</b>                             | <b>No. of Firms</b> |
|-------------------------------------------------------|---------------------|
| Total A-Share Listed Companies on SSE and SZSE (2023) | 5096                |
| (-) Firms without budget disclosures                  | (1663)              |

<sup>1</sup> When a listed company reports negative net profits for two consecutive fiscal years, it will be designated as Special Treatment (ST) by securities regulators. If an ST company continues to report losses in the subsequent fiscal year, it will be further downgraded to Particular Transfer (PT) status. Companies under PT status will have their stock trading suspended and face a significant risk of delisting (Kim et al., 2016).

|                                            |       |
|--------------------------------------------|-------|
| (-) Firms with ST/PT risk warnings         | (119) |
| (-) Finance firms                          | (100) |
| (-) Firms with missing or unavailable data | (100) |
| Final sample                               | 3114  |

After applying these criteria, the final research sample consists of 3,114 firms. Table 4.3 shows the sample selection process of this study. According to the guideline established by Roscoe (1975), a regression model should have a minimum sample size of at least tenfold the number of independent variables included. The study ensures adequate statistical power since our sample size (3,114 firms) significantly exceeds this threshold. Additionally, based on Bougie and Sekaran's (2019) sample size determination table, a minimum of 357 firms is required for a population of over 5,000. Similarly, Israel (1992) suggested that for a population of 5,000, a minimum of 370 responses is needed to achieve a 95% confidence level with a  $\pm 5\%$  margin of error. Therefore, this study's final sample of 3,114 listed firms provides strong representativeness and explanatory power.

Table 4.4  
Number of Observations Per Year

| Year  | No. of Observations | Percentage of Total Sample |
|-------|---------------------|----------------------------|
| 2014  | 1411                | 8.94%                      |
| 2015  | 1353                | 8.57%                      |
| 2016  | 1546                | 9.79%                      |
| 2017  | 1791                | 11.35%                     |
| 2018  | 1942                | 12.3%                      |
| 2019  | 1748                | 11.07%                     |
| 2020  | 1605                | 10.17%                     |
| 2021  | 1604                | 10.16%                     |
| 2022  | 1668                | 10.57%                     |
| 2023  | 1118                | 7.08%                      |
| Total | 15786               | 100%                       |

During the sample period (2014-2023), this study obtained 15,786 firm-year observations. The number of firms for each year is as follows: 1,411 in 2014, 1,353 in 2015, 1,546 in 2016, 1,791 in 2017, 1,942 in 2018, 1,748 in 2019, 1,605 in 2020,

1,604 in 2021, 1,668 in 2022, and 1,118 in 2023, as shown in Table 4.4. It is important to note that the data used in this study are structured as an unbalanced panel, meaning that the number of observations for each firm is not the same across all years. Panel data refer to repeated observations of the same subjects, such as firms, individuals, or regions, over multiple periods (Baltagi, 2008; Hsiao, 2005). Panel datasets are typically classified as balanced or unbalanced, depending on whether observations are available for each unit across every period. A balanced panel includes observations for every subject in all time periods. In contrast, an unbalanced panel allows for missing data in some years (Baltagi, 2008).

In economic research, unbalanced panel data are more common. For example, in studies that track firms over time, some firms may exit the market during the sample period while new ones enter (Baltagi, 2008). In this study, the unbalanced nature of the data is mainly due to the voluntary disclosure system for budget information in Chinese listed firms. Whether a firm discloses budget information often depends on its own motivation. Previous research shows that some firms may selectively disclose or not disclose budget data to improve their business performance appearance (Tang, 2020). Additionally, external factors such as macroeconomic conditions and regulatory policy changes may affect firms' willingness and behavior to disclose information (Lu et al., 2024). As a result, some firms disclose budget data only in certain years or stop disclosing for a period, leading to an unbalanced panel structure in the final dataset.

Although a balanced panel provides a more uniform structure, forcing a balanced subsample would require dropping many firms that did not disclose budget data every year. This would significantly reduce the sample size, lower the efficiency of the estimates, and weaken statistical power (Wang et al., 2021). It could also introduce sample selection bias if the exclusion is not random, affecting the robustness (Wooldridge, 2016). In contrast, using unbalanced panel data can preserve sample information to the greatest extent, more truly reflect the actual situation of Chinese listed companies in budget disclosure, and improve the research's explanatory power. For this reason, unbalanced panel data have been widely used in empirical research across multiple fields, including corporate governance, financial accounting, and policy analysis (Baltagi, 2008; Wu & Lin, 2013), providing a reliable analytical foundation for this study.

#### 4.2.2 Data Collection

This study uses data on budget disclosure, corporate governance, and firm performance. The data collection for this study began in August 2014 and continued until February 2025. It is important to note that, according to the regulations of China's securities authorities, listed companies are generally required to disclose their annual reports for the previous fiscal year by the end of April of the following year (Zhao, 2024). In practice, most companies release their annual reports between the end of March and April. As a result, by February 2025, most listed companies had not yet disclosed their 2024 annual reports. This means that that year's budget, governance, and financial data were incomplete and could not be included in the sample. Therefore, the final data period used in this study ends in 2023, ensuring the completeness and reliability of the dataset.

For budget data, the CSRC provided disclosure guidelines in the *Guidelines for the Content and Format of Information Disclosure by Companies Offering Securities to the Public No. 2 (2001)*. In practice, budget disclosure by listed firms is voluntary. Companies decide whether to disclose such information and what specific content to include. Usually, firms disclose their budget plans in the "Management Discussion and Analysis" or "Future Outlook" sections of their annual reports (Tang, 2020). The content mainly includes forecasts for next year's revenue, costs, or profits. It sometimes also describes the company's production, business plans, and goals through text. Among various types of budget information, revenue budgets are the most commonly disclosed content because they are central to companies' budget management systems (Tang, 2020; An et al., 2016).

This study adopts a content analysis approach to manually extract budgeted revenue information from the final reports of Chinese A-share firms from 2014 to 2023. These documents were retrieved directly from the official websites of the Shanghai and Shenzhen Stock Exchanges. This study follows standardized coding rules based on Tang (2020) to ensure the data collection process was systematic and consistent. First, keywords such as "预算 (budget)," "预测 (forecast)," and "展望 (outlook)" were used to screen the reports and identify whether firms disclosed revenue budgets for the following year. If a firm reported a specific revenue forecast as a single figure, a growth rate, or a range, it was coded as "Disclosure = Yes." If only vague strategic goals were mentioned without specific numbers, it was coded as

“Disclosure = No.” Second, the method for extracting numerical values was as follows: if the budget was disclosed as a single value, it was directly recorded. If disclosed as a range, the median was used. Meanwhile, if reported as a growth rate, the revenue was calculated based on the actual revenue of the previous year. A double-checking process was conducted after the initial coding to ensure the reliability and accuracy. Following the sampling standards suggested by Bougie and Sekaran (2019) and Israel (1992), 400 firm-year observations were randomly selected from the complete dataset for verification. A simple percentage agreement index was used to assess consistency. The results showed an overall agreement rate of 99%, indicating high reliability and validity in the coding process (Krippendorff, 2018).

For corporate governance, firm performance, and other financial data, the study followed the methods used in previous research, such as Shao (2019), Jiang and Kim (2020), Shu (2023), and Li et al. (2024). The data were obtained from the CSMAR database. This includes data on ownership structure, board characteristics, executive incentives, product market competition, political connections, external auditors, firm performance, and control variables. The CSMAR database comprehensively contains over 20 years of firm-level data from SSE and SZSE-listed companies, covering financial data, corporate governance data, and stock price information (Choi et al., 2023). CSMAR is widely recognized as one of the most authoritative databases for research on Chinese listed firms. It is also the only Chinese-language database in the Wharton Research Data Services platform. It has been used in many top academic journals (Li et al., 2024; Jiang & Kim, 2020). During the data collection, relevant variables were extracted from CSMAR’s topic-based sub-databases. These modules include “Governance Structure,” “Shareholder Type,” “Executive Features,” “Financial Indicator Analysis,” and “Financial Report Information.” All variables were identified and matched by stock code and fiscal year to ensure consistency and completeness. Media data were collected from the China National Research Data Services (CNRDS) database, following the approach of He et al. (2024) and Pan et al. (2022). CNRDS contains media reports from national news portals, local news websites, major financial media outlets, and industry-specific news sources (He et al., 2024). Media data were also sorted by stock code and year to allow integration with the corporate governance dataset.

### **4.3 Data Analysis Procedures**

After data collection and sample selection, the data were further processed before the empirical analysis was conducted. This step was necessary to ensure the robustness of the model estimation and the credibility of the results. This study used Stata 18 as the primary analytical tool. Stata offers clear advantages in handling panel data involving multiple time periods and cross-sectional units compared to other statistical software. It allows for efficient estimation of panel models such as fixed and random effects (Baltagi, 2008). In addition, Stata provides a comprehensive set of econometric diagnostic tools, including tests for multicollinearity, heteroskedasticity, and serial correlation. These tools are important for identifying potential model issues and improving the reliability of the estimation results (Torres-Reyna, 2007).

#### **4.3.1 Winsorisation of Data**

Winsorization is a method of statistical adjustment applied to limit the distortion caused by extreme observations within the dataset, aiming to minimize the chance of identifying outliers (Leone et al., 2019). To mitigate the impact of such outliers on regression estimations, this research adopted the procedures suggested by He et al. (2024), Liu et al. (2023), Pang and Wang (2021), and Shao (2019). The process involved modifying the data by capping values at the 1st and 99th percentiles. Specifically, any observation below the 1st percentile was replaced with the 1st percentile value, while those exceeding the 99th percentile were substituted accordingly (Cameron & Trivedi, 2010). In total, 316 extreme observations (158 on each side) are winsorized in both directions.

#### **4.3.2 Normality**

Normality is a basic assumption in multivariate analysis. Normality testing is usually done before other statistical analyses to make sure the analysis results are accurate and reliable (Rani Das, 2016; Hair et al., 2010). From a statistical view, normality shows whether the data distribution shape matches the basic features of the normal distribution (Allende-Alonso et al., 2019). Data that follows a normal distribution shows a bell-shaped curve. This distribution is symmetric, and the sample

mean is unbiased (Rani Das, 2016; Hair et al., 2010). Researchers often rely on skewness and kurtosis values to assess whether a dataset satisfies the assumption of normal distribution. Skewness reflects the degree of asymmetry in the distribution. If the skewness value is positive, the distribution curve leans toward the left with a longer right tail. Conversely, a negative value indicates a longer tail on the left, suggesting a right-shifted curve. Kurtosis, on the other hand, captures the peakedness of the distribution. A higher kurtosis score implies a sharper peak, while a lower value indicates a flatter and more uniform distribution profile (Islam, 2018; Hair et al., 2010).

When checking normality, sample size is an important factor. The Central Limit Theorem (CLT) gives theoretical support for the normal distribution of sample means for large samples. According to this theorem, as the sample size increases, the distribution of sample means approaches a normal distribution. This trend is independent of the distribution shape of the original data (Islam, 2018). Hence, when the sample size is large, even if the original data does not fully follow a normal distribution, the distribution of sample means can still be seen as close to normal (Casella & Berger, 2002). This is a good reason to use methods like multivariate regression that depend on normality assumptions.

#### **4.4 Panel Data Analysis**

Panel data include observations across both cross-sectional units and time periods. They record how multiple individuals perform at different points in time (Baltagi, 2008; Hsiao, 2005). Unlike traditional data, which has only one dimension, panel data regression models consider both individual and time dimensions. More specifically, a panel regression model explains the value of the dependent variable for a given individual at a given time as the sum of a constant term, the product of explanatory variables and their coefficients for that individual and time, and an error term (Baltagi, 2008; Hsiao, 2005). The model includes all individuals (from 1 to N) and all time periods (from 1 to T), forming a comprehensive framework for analysis. Panel data have many advantages. By combining cross-sectional and time series information, panel data significantly increases the number of observations. This improves the reliability of statistical inference, enhances the accuracy of parameter estimates, and helps reduce multicollinearity between variables (Baltagi, 2008). Panel

data also allow researchers to control for unobserved differences across individuals or over time, which is impossible with pure cross-sectional or time series data. This two-dimensional structure gives a broader view of the data. When individuals behave similarly for certain variables, panel data make it possible to better understand one individual's behavior by comparing it to others (Hsiao, 2005). This structure provides a stronger empirical basis for studying complex patterns and dynamic changes.

Panel data analysis mainly uses three types of models: the Pooled Ordinary Least Squares (POLS), Fixed Effects Model (FEM), and Random Effects Model (REM) (Bugenbayev et al., 2021; Gujarati & Porter, 2009; Greene, 2003). The POLS is a standard regression method in panel data analysis. It combines all observations into one single dataset. Consequently, it runs the regression as if the data came from a single cross-section. If the data meet the standard assumptions of the regression model, POLS can produce consistent and unbiased parameter estimates. However, POLS has some limitations. It does not account for differences across individuals or over time, nor does it control for any fixed or random effects that may exist (Breuer & DeHaan, 2024). The estimates may be biased or inconsistent if these unobserved features are related to the explanatory variables. Therefore, researchers should carefully check whether the model assumptions hold before using this method. This is important to ensure that the estimation results are reliable and valid.

When scholars assume that individual heterogeneity in the sample is weakly associated with the independent variables, the REM becomes a valid regression approach (Barili et al., 2018). This situation often arises when the model controls for many influencing factors, which can help minimize the potential connection between unobserved unit-level traits and explanatory variables. Unlike FEM, REM retains time-invariant individual attributes instead of eliminating them. These stable features are treated as part of the model's error term. Suppose these latent characteristics are, in fact, independent of the regressors. In that case, there is no need for separate control over their influence. The REM can provide more efficient parameter estimates (Baltagi, 2008). In other words, under the key assumption that the unobserved individual effects are not related to the regressors, the REM enables researchers to retain information from time-invariant variables and fully utilize both the cross-sectional and time-series dimensions of panel data, improving estimation efficiency.

The FEM allows for unobserved heterogeneity across individuals by assigning

a unique intercept to each cross-sectional unit. These intercepts are assumed to remain constant over time. This approach captures stable characteristics across the observation period, but these characteristics vary between individuals. Some unobserved factors may affect both the dependent and independent variables. The estimates may be biased if they are not controlled for (Barili et al., 2018). The FEM uses techniques such as differencing or dummy variables to control for these time-invariant but correlated individual effects, which helps reduce endogeneity caused by omitted variables (Breuer & DeHaan, 2024). Compared with other panel data methods, the FEM is more robust when the explanatory variables are related to individual characteristics. Its parameter estimates are usually more consistent and reliable (Baltagi, 2008). The model also helps reduce the variance of the error term. This is especially useful when the residuals show large fluctuations, as it improves the accuracy and power of statistical inference (Breuer & DeHaan, 2024). In this study, because different companies may show different characteristics during various periods, the fixed effects model effectively controls biases related to individual and time characteristics. This improves the reliability of regression results.

#### **4.4.1 Model Selection for Panel Data Analysis**

This study uses several statistical tests to determine the most appropriate regression model. The F-test is used to compare the FEM with the POLS. The Breusch-Pagan Lagrange Multiplier (LM) test is applied to compare the POLS with the REM. The Hausman test is used to decide between the FEM and the REM (Bugenbayev et al., 2021; Alodat et al., 2021). These tests help guide the selection of the most suitable panel data estimation method for the empirical analysis.

F-test is used to check whether the FEM is better than the POLS (Bugenbayev et al., 2021). Under the null hypothesis ( $H_0$ ), it is assumed that individual-specific effects do not exist, implying the suitability of the POLS approach. The alternative hypothesis ( $H_1$ ) states that at least one individual effect is not equal to zero, which means the FEM is more suitable. When the p-value falls below the significance level (0.05), the null hypothesis is rejected, suggesting that the FEM is superior to the POLS. However, if the p-value meets or exceeds the threshold, POLS may still be considered acceptable. The Breusch-Pagan LM test compares the REM and POLS (Castro, 2013). The null hypothesis ( $H_0$ ) assumes no random individual effects, which

implies the POLS model is valid. The alternative hypothesis ( $H_1$ ) suggests random individual effects, which supports using the REM. Suppose the p-value of the LM test is less than the significance level. In that case, the null hypothesis is rejected, indicating significant random effects and favoring the REM over the POLS. Suppose the p-value is greater than or equal to the significance level. In that case, it is considered that the POLS is sufficient to explain the data. The Hausman test is used to choose between the FEM and REM (Hausman,1978). The null hypothesis ( $H_0$ ) assumes that individual effects are uncorrelated with the explanatory variables, meaning the REM is appropriate. The alternative hypothesis ( $H_1$ ) assumes that individual effects are correlated with the explanatory variables, and the FEM should be used instead. Suppose the test result is significant (p-value < 0.05). In that case, the null hypothesis is rejected, suggesting that the FEM is more reliable and should be preferred. If the result is insignificant, the REM is considered to provide consistent and more efficient estimates. Figure 4.1 shows the model selection process for panel data.

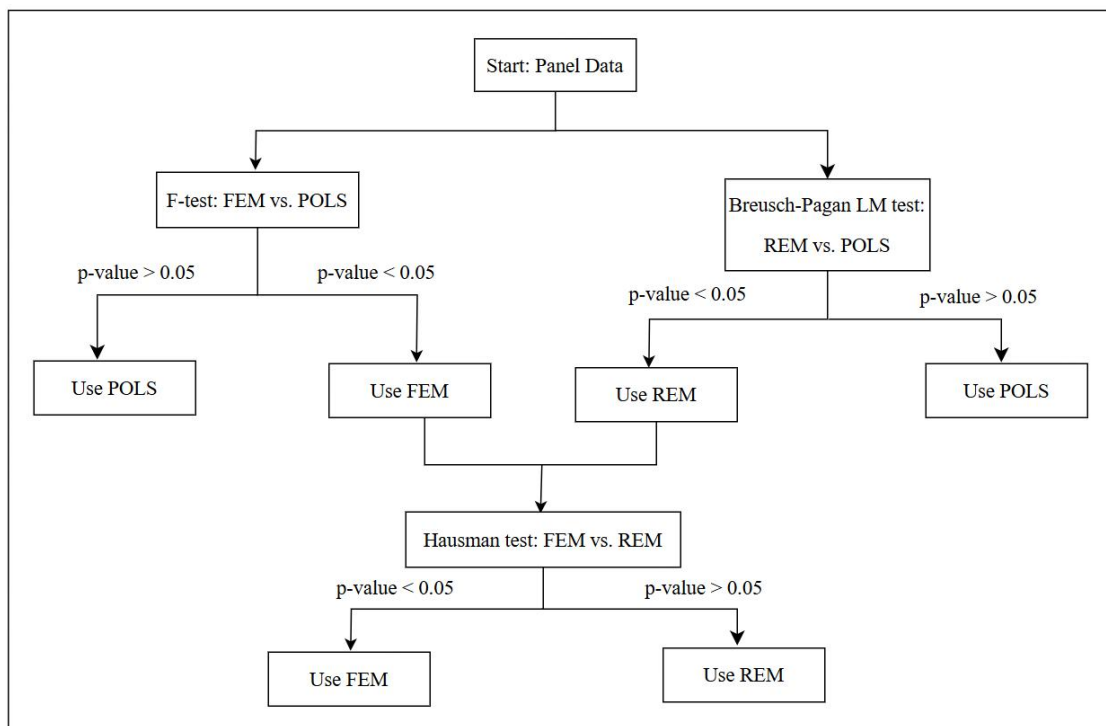


Figure 4.1 Model Selection for Panel Data

## **4.4.2 Diagnostic Test Analysis**

### ***4.4.2.1 Multicollinearity***

In multiple linear regression analysis, multicollinearity refers to a situation where the independent variables are highly linearly related (Chandrasekhar et al., 2016). In theory, multicollinearity has two extreme cases: it can be completely absent or fully present (Adeboye et al., 2014; Alin, 2010). However, in practical research, most datasets fall between these two extremes (Alin, 2010). Multicollinearity must be taken seriously in regression analysis because it can lead to several problems. These include high sensitivity of coefficient estimates to small changes in the data, coefficients with signs that contradict theoretical expectations, a lack of statistical significance for theoretically important variables, and difficulty in identifying the relative importance of correlated predictors (Adeboye et al., 2014).

Multicollinearity is often confused with correlation. Correlation denotes a linear relationship involving two variables. Meanwhile, multicollinearity can occur between two separate variables or between one variable and a linear combination of several others (Alin, 2010). This indicates that correlation is merely a specific instance of multicollinearity. A strong correlation suggests the presence of multicollinearity. However, the reverse is not necessarily true. Multicollinearity can be present even when all correlations are low (Alin, 2010).

Standard methods for diagnosing multicollinearity include the Pearson correlation coefficient, the Variance Inflation Factor (VIF), and tolerance. Pearson's correlation evaluates how strongly two variables are linearly related. A value above 0.8 is generally considered an indication of serious multicollinearity (Senaviratna & Cooray, 2019). Tolerance denotes the extent of variability in a specific predictor that remains unaccounted for by other predictors (Senaviratna & Cooray, 2019). A tolerance value of 1 suggests little or no multicollinearity, while a value of 0 indicates a potential problem. Tolerance values below 0.1 are usually seen as a sign of multicollinearity (Senaviratna & Cooray, 2019). VIF quantifies the inflation in the variance of a regression coefficient caused by multicollinearity. A VIF value above 10 is generally taken as evidence of a multicollinearity issue (Senaviratna & Cooray, 2019).

#### 4.4.2.2 Heteroskedasticity and Serial Correlation

When performing regression analysis on panel data, it is essential to check for heteroskedasticity and serial correlation (Baltagi, 2011; Gujarati & Porter, 2009). These tests help select proper commands in Stata 18 based on the characteristics of the data. They help handle heteroskedasticity, serial correlation, or both. By doing these tests, researchers can ensure that the standard errors are robust and that the coefficient estimates are unaffected by these problems (Bugenbayev et al., 2021; Torres-Reyna, 2007). The modified Wald test can be used for heteroskedasticity (Torres-Reyna, 2007). Heteroskedasticity is present if the p-value ( $\text{Prob} > \chi^2$ ) is less than the 0.05 significance level. In macro panel data, serial correlation tests are crucial for long time series. The serial correlation may result in underestimated standard errors of regression coefficients and overestimated R-squared values (Al-Shaer et al., 2024). For testing serial correlation, the Wooldridge test is commonly used (Drukker, 2003). If the p-value ( $\text{Prob} > F$ ) is less than 0.05, then the model has serial correlation. When heteroskedasticity is found, White standard errors can improve the model's robustness to this issue (Wooldridge, 2016). If serial correlation also exists, cluster-robust standard errors can be applied to strengthen the model's resistance to both types of disturbances and improve the reliability of the overall estimation results (Moody & Marvell, 2020; Thompson, 2011).

#### 4.4.3 Mediating Effect

When analyzing how an independent variable  $X$  influences a dependent variable  $Y$ , if  $X$  impacts  $Y$  indirectly through another variable  $M$ ,  $M$  is a mediator (Wen & Ye, 2014). The regression models below illustrate how these three variables are related, and Figure 4.2 shows the corresponding diagram:

$$Y = cX + \varepsilon_1 \quad (4.1)$$

$$M = aX + \varepsilon_2 \quad (4.2)$$

$$Y = c'X + bM + \varepsilon_3 \quad (4.3)$$

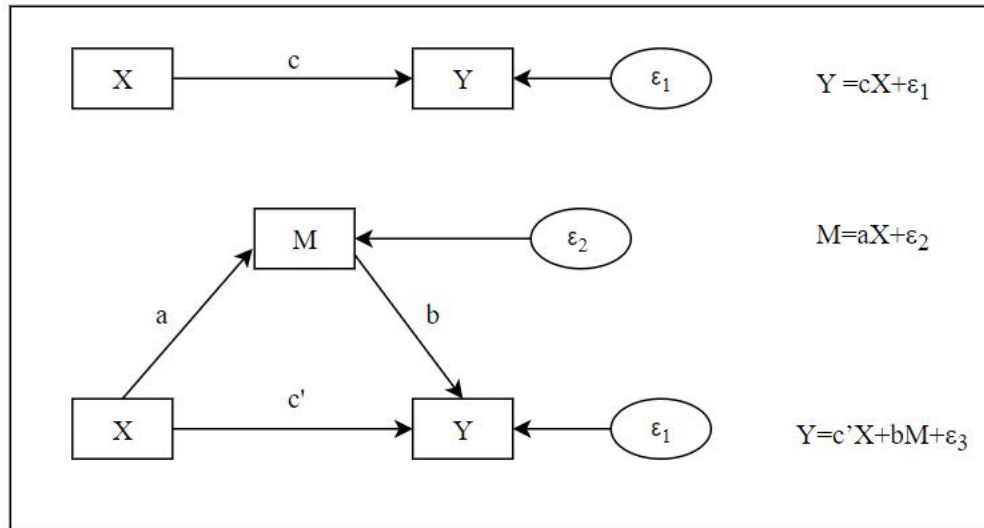


Figure 4.2 Path Diagram of the Mediation Model

The coefficient  $c$  in Equation (4.1) indicates the overall impact of independent variable  $X$  on dependent variable  $Y$ . Coefficient  $a$  in Equation (4.2) reflects the influence of independent variable  $X$  on the mediating variable  $M$ . In Equation (4.3), coefficient  $b$  denotes the effect of mediating variable  $M$  on dependent variable  $Y$ , while accounting for the influence of independent variable  $X$ . Coefficient  $c'$  signifies the direct relationship between independent variable  $X$  and dependent variable  $Y$ , with mediation from variable  $M$  controlled for (Wen & Ye, 2014; Baron & Kenny, 1986). The terms  $\varepsilon_1$ ,  $\varepsilon_2$ , and  $\varepsilon_3$  represent regression residuals.

The most common method for testing mediating effects is step-by-step testing of regression coefficients, known as the causal steps approach by Baron and Kenny (1986) (Xu et al., 2022; Wen & Ye, 2014; Wen et al., 2004). This method includes three steps: (i) assessing coefficient  $c$  from Equation (4.1); (ii) evaluating coefficient  $a$  in Equation (4.2) and coefficient  $b$  in Equation (4.3); (iii) examining coefficient  $c'$  in Equation (4.3). In the causal steps approach by Baron and Kenny (1986), the first step tests the total effect of  $X$  on  $Y$ . If the coefficient  $c$  is not significant, the analysis of mediation should stop. The second step tests the significance of the coefficient product by indirectly testing coefficients  $a$  and  $b$  in sequence. The third step distinguishes between complete mediation and partial mediation. If coefficients  $a$ ,  $b$ , and  $c'$  are all significant, this indicates a partial mediating effect. If  $a$  and  $b$  are significant, but  $c'$  is not significant, this indicates a full mediation effect (Baron & Kenny, 1986; Wen & Ye, 2014). Partial mediation means that the effect of the

independent variable X on the dependent variable Y is transmitted partly through the mediating variable M. At the same time, X directly affects Y (Baron & Kenny, 1986). In other words, M does not fully explain the path from X to Y. In contrast, complete mediation means that M entirely explains the relationship between X and Y, with no remaining direct effect (Baron & Kenny, 1986). In other words, the path from X to Y is fully explained by M. This study uses the causal steps approach to test the mediating effect of budgetary slack.

## **4.5 Measurement of Variables**

This section discusses the measurement of the following variables: firm performance, internal governance, external governance, budgetary slack, and control variables.

### **4.5.1 Firm Performance**

Firm performance is a key indicator that measures a company's operational results and development status within a specific period. It usually indicates how well a company performs in terms of profitability, efficiency of operations, and market valuation (Al-Matari et al., 2014). In the existing literature, firm performance is commonly measured using two types of indicators: accounting-based and market-based measures (Al-Shaer et al., 2024; Liu et al., 2022; Al-Matari et al., 2014). A prime example of a market-based indicator is Tobin's Q (Al-Shaer et al., 2024; Al-Matari et al., 2014). This measure, which is oriented towards future projections, reflects the market's anticipations regarding a company's potential for profitability and growth. However, the dependability of Tobin's Q is contingent upon the presumption that capital markets operate with high efficiency and that stock prices precisely represent a company's intrinsic worth (Demsetz & Villalonga, 2001; Liu et al., 2015). In practical application, Tobin's Q is easily affected by investor sentiment, such as optimistic or pessimistic expectations, and interference from various external factors, including macroeconomic conditions and corporate strategic effectiveness (Demsetz & Villalonga, 2001). Therefore, this indicator often has significant uncertainty. Particularly in China's capital market, due to incomplete institutions, inadequate information disclosure, and intense market speculation, stock prices cannot fully

reflect companies' actual value and operational status (Bai & An, 2021; Liu et al., 2015).

Therefore, following the research of Liu et al. (2022), Bai & An (2021), and Liu et al. (2015), this study uses the accounting-based indicators Return on Asset (ROA) and Return on Equity (ROE) to measure firm performance. Al-Matari et al. (2014) and Javeed et al. (2020) pointed out that accounting-based indicators are more suitable for corporate governance research because they better reflect a company's current operational status. Compared with market-based measures, accounting indicators are derived from audited financial statements. They are less affected by short-term market fluctuations, speculative behavior, or investor sentiment. Therefore, they are more objective and reliable in institutional environments with limited market transparency (Bai & An, 2021). Specifically, ROA reflects a firm's ability to generate profits using its assets. It shows how efficiently a company uses its resources and is especially useful for assessing operational performance (Al-Shaer et al., 2024). ROE directly shows how management uses shareholders' equity to create returns. It is an important measure of shareholder profitability (Liu et al., 2022). The combination of ROA and ROE provides a comprehensive evaluation of firm performance. It captures both asset utilization efficiency and the ability to create shareholder value. ROA and ROE each provide a distinct view of a company's operational efficiency and profitability. The specific calculation methods are as follows:

$$ROA = \frac{\text{Net income}}{\text{Total Assets}} \quad (4.4)$$

$$ROE = \frac{\text{Net income}}{\text{Shareholder's equity}} \quad (4.5)$$

## 4.5.2 Internal Governance

### 4.5.2.1 Ownership Concentration

Concentrated ownership refers to situations where powerful major shareholders hold high ownership percentages in companies, allowing them to

influence or control minority shareholders in decision-making processes (Bhakar et al., 2024; Abdulsamad & Yusoff, 2016). Ownership concentration is typically assessed through the percentage of shares held by significant shareholders (Kao et al., 2019). The existing body of literature presents varying methodologies for measuring ownership concentration. For instance, Boshnak (2024) employed the shareholding percentages of the three largest shareholders as a metric. Conversely, Abdullah et al. (2019) and Alkurdi et al. (2021) utilized the shareholding percentages of the top five shareholders for their assessments. Additionally, Kao et al. (2019) and Shao (2019) measured ownership concentration by calculating the proportion of shares owned by the ten largest shareholders relative to the total number of shares.

In China's capital market, ownership is highly concentrated, and it is common for one dominant shareholder to control a listed company (Wang et al., 2019). In many cases, the largest shareholder holds a significantly higher share than others and has decisive influence over corporate decisions (Jiang & Kim, 2020). Therefore, compared with using the top three, five, or ten shareholders, the shareholding percentage of the largest shareholder can more accurately reflect the impact of ownership concentration on corporate governance and managerial behavior (Wang et al., 2019). Based on this, following the studies of Wang et al. (2019), Peng et al. (2021), and Lin et al. (2021), this study uses the proportion of shares held by the largest shareholder to measure ownership concentration.

#### ***4.5.2.2 State Ownership***

SOEs are firms where the government exercises control through ownership arrangements (European Commission, 2016). Since 2001, listed companies in China must disclose whether they have an ultimate controlling shareholder (Liu et al., 2018). This allows researchers to identify the nature of ownership and the type of controlling party. If the ultimate controller is a government agency or one of its affiliates, the firm is classified as an SOE. If the ultimate controller is a private entity, the firm is classified as a non-SOE (Xin et al., 2019). Building on the research conducted by Yang et al. (2021), An and Ai (2022), and Liu et al. (2018), this study employs a dummy variable to assess state ownership. This variable is assigned a value of 1 for state-owned firms and 0 for non-state-owned firms.

#### ***4.5.2.3 Managerial Ownership***

Managerial ownership refers to company insiders, such as managers or board members, holding shares in the company (Bhakar et al., 2024; Boshnak, 2024). When these individuals hold equity, their personal incentives align more closely with the company's strategic goals. This alignment may encourage them to emphasize long-term development, reduce opportunistic behavior, and mitigate conflicts of interest between shareholders and management (Jensen & Meckling, 1976). Based on the studies by Zeng et al. (2023) and Boshnak (2024), this study measures managerial ownership by the percentage of shares held by top executives, including managers and inside directors.

#### ***4.5.2.4 Board Size***

Board size typically refers to the overall count of directors on a company's board (Al-Shaer et al., 2024; Alodat et al., 2021). It is a significant element of the corporate governance framework. Theoretically, a larger board may improve monitoring, but it may also reduce decision-making efficiency if it becomes too large (Fama & Jensen, 1983; Goodstein et al., 1994; Merendino & Melville, 2019). Following the studies of Al-Shaer et al. (2024), Shao (2019), and Li et al. (2015), this study measures board size using the natural logarithm of the number of board members.

#### ***4.5.2.5 Board Independence***

In defining independent directors, this study follows the relevant regulations issued by the CSRC. According to the regulations, directors with any of the following conditions do not qualify as independent directors: (1) currently or previously employed by the company and its subsidiaries; (2) individuals or legal entities that directly or indirectly hold more than 1% of the company's outstanding shares; (3) legal representatives of the top ten major shareholders, or their immediate family members; (4) employees working in institutions that directly or indirectly hold more than 5% of the company's outstanding shares; (5) employees of the company's top five shareholders, or their immediate family members; (6) personnel who provide financial,

legal, or consulting services to the company and its subsidiaries (Liu, 2015). In addition, independent directors must also meet the specific independence requirements in the company's articles of association and related systems. This study measures board independence by the percentage of independent directors (García-Ramos & Díaz, 2021; Shao, 2019).

#### ***4.5.2.6 CEO Duality***

CEO duality refers to situations where the chief executive officer also serves as the board's chairman (Khan et al., 2021). In this study, following the research of Alodat et al. (2021), García-Ramos & Díaz (2021), and Puni & Anlesinya (2020), CEO duality is measured as a dummy variable. When the same person holds the chairman and CEO positions, the value is 1. When different people hold the chairman and CEO positions, the value is 0.

#### ***4.5.2.7 Executive Compensation Incentives***

According to agency theory, executive compensation mechanisms can help limit managers' opportunistic behavior. This can align the interests of executives with those of shareholders and support firm growth and long-term development (Grossman & Hart, 1983). In China, most listed companies disclose only the compensation of the top three highest-paid executives in their annual reports (Cheng, 2018). Following the approach of An et al. (2018), Cheng (2018), and Zhou & Yang (2019), this study measures executive compensation using the natural logarithm of the total compensation of the top three executives as reported in the annual reports.

### **4.5.3 External Governance**

#### ***4.5.3.1 Product Market Competition***

Product market competition refers to the competitive relationship among firms formed through the market's supply and demand of products and services (Giroud & Mueller, 2011). Such competition can motivate managers and employees to utilize their capabilities and create value for the firm fully (Wang et al., 2022). Prior studies

have shown that among various approaches to assess market competition, the Herfindahl-Hirschman Index (HHI) is one of the most appropriate tools for measuring the intensity of market competition (Babar & Habib, 2021; Bharath & Hertz, 2019; Liu et al., 2022). Researchers commonly use the HHI to evaluate market concentration and assess competition levels. When an industry includes many firms with relatively small market shares, it is considered highly competitive, and the HHI tends to be low.

In contrast, if an industry is dominated by a few large firms, the level of competition is lower, and the HHI is higher (Babar & Habib, 2021; Liu et al., 2018). One key advantage of the HHI is its ability to capture market concentration while assigning greater weight to larger firms (Liu et al., 2022). Therefore, this study adopts the HHI as a measure of product market competition among Chinese A-share listed firms, following the approach of prior literature (Babar & Habib, 2021; Liu et al., 2022; Tran et al., 2024). The HHI is calculated using the following formula:

$$HHI_i = \sum S_{ij}^2 \quad (4.6)$$

where  $S_{ij}$  represents the market share of firm  $j$  in industry  $i$ , calculated as the ratio of the firm's net sales to the industry's total sales in a given year.

#### **4.5.3.2 Political Connections**

Political connections refer to the relationships enterprises establish with the government through their key personnel. Specifically, when a company's CEO, senior management, or major shareholders have political backgrounds, the company is considered to have political connections (Pang & Wang, 2021). This study defines political connection based on prior literature and the institutional context of China. Suppose at least one of the company's major shareholders, chairman, or CEO meets the following conditions. In that case, the company is considered to have political connections: (1) currently serves or previously served as a government official; (2) currently serves or previously served as a National People's Congress representative; (3) currently serves or previously served as a Chinese People's Political Consultative Conference member (Lin et al., 2011; Lin et al., 2021; Pang & Wang, 2021). If the enterprise has political connections, the dummy variable takes a value of 1. Otherwise,

it takes a value of 0.

#### ***4.5.3.3 External Audit Quality***

Audit quality refers to the auditor's ability to detect and prevent material manipulation or misstatements in financial reports while maintaining independence, thereby reducing accounting bias and enhancing the reliability of financial information (Ivungu et al., 2019; Davidson & Neu, 1993; DeAngelo, 1981). Since audit quality cannot be directly observed, researchers often rely on proxy indicators (Ivungu et al., 2019; Brown et al., 2011). The existing literature widely recognizes audit firm size as a valid proxy for audit quality (Brown et al., 2011; Fang et al., 2018). Larger audit firms are generally considered to provide higher-quality audits because they have stronger reputations, greater resources, and higher exposure to litigation risk, which incentivizes them to conduct audits more rigorously and conservatively (Sulaiman, 2023; DeAngelo, 1981). As a result, higher audit quality is commonly associated with engagement by large audit firms (Ivungu et al., 2019; Brown et al., 2011). Following the research of Al-ahdal & Hashim (2022), Elewa & El-Haddad (2019), and Yeung & Lento (2020), this study uses whether a company is audited by Big Four accounting firms (PricewaterhouseCoopers, Deloitte, Ernst & Young, or KPMG) as an indicator to measure external audit quality. Suppose a company hires one of the Big Four accounting firms in a given year. In that case, the dummy variable takes the value of 1, representing higher audit quality for that year. If the company hires a non-Big Four accounting firm, the variable takes the value of 0.

#### ***4.5.3.4 Media Attention***

Media attention refers to the frequency or extent of coverage by various communication channels, such as newspapers, radio, television, and online media, on a specific topic (Chen et al., 2025; Warkulat & Pelster, 2024). With the rapid development of internet technology, the influence of traditional media has gradually declined. In contrast, online media has rapidly gained prominence. It has attracted broad public attention and now plays an increasingly important role in capital markets (Chen et al., 2025). Online media coverage generally refers to news content published on the internet (Wang et al., 2022). Compared with traditional print media, online

news has clear advantages regarding speed, reach, repost rates, and audience impact (Tajvidi & Karami, 2021). Therefore, following Chen et al. (2025) and Wang et al. (2022), this study uses online media coverage as a proxy for media attention. Specifically, it is measured by the natural logarithm of the total number of online news articles reported annually about each A-share listed company in China.

#### **4.5.4 Budgetary Slack**

Based on a review of many academic studies, the measurement of budgetary slack can be grouped into three main types. The first type is based on subjective survey questionnaires. This method comes from how budgetary slack was first discovered. For example, Schiff and Lewin (1968) discovered the existence of budgetary slack through interviews with department managers. Later, many researchers, such as Onsi (1973), Dunk (1993), and Merchant (1985), developed related scales to measure the level of slack. Onsi's (1973) scale, for instance, includes four types of questions: managers submit budget figures that are easy to achieve; department managers set two sets of standards; superiors accept higher slack during economic growth; and slack helps execution but is not approved by superiors. These findings indicate that survey-based scales primarily measure budgetary slack from the perspective of managers' subjective motivations. However, this method overlooks an important issue: managers operate within an organizational system, and their motivations are often influenced by external conditions and internal rules, particularly the design of the budgeting system. For example, Fisher et al. (2002) noted that when a budget serves both planning (resource allocation) and control (performance evaluation) functions, it imposes stronger constraints on subordinate managers' behavior, reducing budgetary slack. This suggests that survey scales may not effectively capture budgetary slack's actual existence or level. Instead, they mostly reflect managers' subjective behaviors or psychological reasons for creating slack. In addition, applying this method in empirical studies in Chinese research faces challenges. Managers may be unwilling to answer or may not take sensitive questions seriously, leading to a low response rate, which affects the accuracy of the measurement (Li & Zhao, 2020).

The second method for measuring budgetary slack is experimental research. Since budgetary slack often results from agents' opportunistic behavior and moral

hazard under conditions of information asymmetry, many scholars have used experiments to examine the factors that influence slack (Collins, 1978; Chow, 1988; Liu et al., 2019). In these studies, budgetary slack is usually measured as the difference between the self-reported budget submitted by participants and the expected budget value based on a theoretical model. However, because the real business environment is complex and constantly changing, and agents' motivations vary, the external validity of experimental findings is difficult to ensure. Budgeting is an efficient activity, whereas experimental studies are based on simplified and artificially constructed settings, which differ significantly from real-world management situations (Xiong, 2014). This limits the applicability of such research in practice and may lead to conclusions that contradict actual business behavior. Therefore, this method of measuring budgetary slack is usually only suitable for specific experimental settings, and its value in guiding real-world budget management is limited.

The third method measures budgetary slack using data collected from publicly disclosed corporate financial reports. In December 2001, the CSRC issued guidelines on the content of annual reports for listed companies, titled *Guidelines for the Content and Format of Information Disclosure by Companies Offering Securities to the Public*. Guideline No. 2 requires companies to disclose budget data. However, such disclosure remains voluntary. In recent years, the number of Chinese listed companies that voluntarily disclose budget information for the next fiscal year in their regular financial reports has increased significantly. Based on this trend, Chinese scholars have begun to measure budgetary slack using companies' voluntarily disclosed business targets for the upcoming year. This is typically done by comparing the disclosed growth targets to the industry average growth rate (Shu et al., 2023; An & Ai, 2022; Tang, 2020; Zheng et al., 2008; Pan & Cheng, 2007). Since voluntarily disclosed budget data often go through formal procedures, such as board discussions and shareholder approvals, they reflect the agency relationship between shareholders and managers. Comparing these data with the average growth rate in the industry helps reveal the overall level of budgetary slack within the company (Tang, 2020; Pan & Cheng, 2007). At the same time, since listed companies are more likely to disclose revenue budget data, and considering the availability of such data, this study measures budgetary slack based on the revenue budget figures voluntarily disclosed in their annual reports.

Budgetary slack is an underestimation of the objectives of the budgetary mandate, as opposed to "honest budget estimates" (Lukka, 1988). Therefore, the key to designing a budgetary slack variable is approximating this "honest estimate reasonably". Since the specific budget data made by firms each year is mainly based on their past performance and the average performance of their industry, the reference standards for these estimates can be divided into two main types: one is based on industry comparison, and the other is based on comparison with the company's base year actual performance (Li & Cai, 2012; Zheng et al., 2008). This study adopts the industry comparison method to measure budgetary slack. The average industry growth rate reflects the overall growth trend of firms operating under similar market conditions, economic environments, and institutional settings. It is thus considered a reasonable proxy for the honest budget expectation (Pan & Cheng, 2007). Compared to the base year comparison method, industry comparison can effectively avoid abnormal base year data caused by sudden factors or one-time events in individual companies. This makes the valuation more stable and representative (Zheng et al., 2008).

This study first uses the budgeted operating revenue disclosed in the annual reports to calculate the firm's budgeted revenue growth rate in year  $n$ . This is compared with the industry's average revenue growth rate in year  $n-1$ . If "company budget growth rate minus industry growth rate" is directly used as the indicator, a larger value would imply a tighter budget and less slack. To make it easier to understand and analyze, this study follows the method of Tang (2020) and Zheng et al. (2008). It calculates budgetary slack as the difference between the industry growth rate in year  $n-1$  and the firm's budgeted growth rate in year  $n$ . A positive value indicates that the budget target is set lower than expected, suggesting the presence of slack. A negative value implies that the budget is tight. The larger the positive difference, the higher the level of slack (Tang, 2020; Zheng et al., 2008). The specific calculation formula is as follows:

$$SLACK = I_{n-1}^* - \frac{I_n^* - I_{n-1}^*}{I_{n-1}^*} \quad (4.7)$$

where

|                  |                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------|
| $I_n^*$          | Budgeted operating income of the enterprise in year $n$ , where year $n$ is the budget year                        |
| $I_{n-1}$        | Actual operating income of the enterprise in year $n-1$ , where year $n-1$ is the previous year of the budget year |
| $I_{n-1}^\wedge$ | Average growth rate of industry revenue in year $n-1$ , where year $n-1$ is the previous year of the budget year   |

#### **4.5.5 Control Variables**

Control variables play an important role in empirical analysis. They are necessary to ensure the validity and reliability of research findings. It is possible to isolate the influence of factors other than the independent variables that may affect firm performance by including control variables. This study follows Al-Shaer et al. (2024), Bhakar et al. (2024), and Alodat et al. (2021). It selects the following control variables: firm size, leverage, and age.

##### **4.5.5.1 Firm Size**

Larger firms usually have more resources, greater market influence, and stronger ability to resist risk, which may positively affect firm performance (Bhakar et al., 2024). However, a larger firm size may also lead to more complex management structures and lower administrative efficiency, negatively affecting performance (Al-Shaer et al., 2024). Therefore, it is important to include firm size as a key control variable (Puni & Anlesinya, 2020). This study follows Al-Shaer et al. (2024) and Shao (2019), and measures firm size by the natural logarithm of total assets.

##### **4.5.5.2 Leverage**

Leverage reflects the extent to which a firm relies on external financing in its operations and indicates its ability to cope with economic downturns or market shocks (Kao et al., 2019). On one hand, high leverage can increase return on equity in favorable economic conditions, support firm expansion, and signal positive growth expectations to the market (Saleh et al., 2017). On the other hand, excessive leverage

significantly raises financial risk, weakens debt repayment capacity, and may ultimately harm firm performance (Ozkan & Ozkan, 2004). This study follows the approach of Brahma et al. (2021) and Kao et al. (2019), and measures leverage as the ratio of total debt to total assets.

#### ***4.5.5.3 Firm Age***

Firm age refers to the years a company has operated since its establishment (Kao et al., 2019). In this study, it is included as a control variable to account for the potential effect of a firm's development stage on its performance. Existing research has not agreed on the relationship between firm age and performance. Some studies suggest that as firms grow older, they gain more management experience, build stronger relationships with stakeholders, and develop more stable operational systems, which may help improve performance (Al-Shaer et al., 2024). However, at the same time, longer firm age may also lead to increased bureaucracy, reduced adaptability, and organizational rigidity, which could weaken a firm's ability to innovate and respond to market changes (Alodat et al., 2021). Some researchers have found a negative relationship between firm age and performance, mainly due to increasing complexity and decreasing flexibility as firms age (Zeitun & Al-Kawari, 2012). Other studies point out that the effect of firm age on performance may be mixed, depending on internal factors and external conditions (Abdullah et al., 2019). Based on the work of Alodat et al. (2021) and Kao et al. (2019), this study measures firm age as the number of years since the firm was founded.

Table 4.5  
Summary of Variable Design

| Variable                                                | Measurement             | Operationalization                                                                                                                    | References                                                |
|---------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Dependent Variable<br>(Firm Performance)                | Return on Asset         | Ratio of net income to total assets                                                                                                   | (Al-Shaer et al., 2024; Liu et al., 2022; Bai & An, 2021) |
|                                                         | Return on Equity        | Ratio of net income to total shareholder equity                                                                                       |                                                           |
| Independent Variable<br>(Internal Corporate Governance) | Ownership Concentration | The proportion of shares held by the first largest shareholder                                                                        | (Wang et al., 2019; Peng et al., 2021; Lin et al., 2021)  |
|                                                         | State Ownership         | Dummy variable: State-owned enterprises take the value of 1, non-state-owned enterprises take the value of 0                          | (Yang et al., 2021; An & Ai, 2022; Liu et al., 2018)      |
|                                                         | Managerial Ownership    | The percentage of shares held by top executives, including managers and inside directors                                              | (Zeng et al., 2023; Boshnak, 2024)                        |
|                                                         | Board Size              | The natural logarithm of the number of board members                                                                                  | (Al-Shaer et al., 2024; Shao, 2019; Li et al., 2015)      |
|                                                         | Board Independence      | The ratio of the number of independent directors to the total number of directors                                                     | (García-Ramos & Díaz, 2021; Shao, 2019)                   |
|                                                         | CEO Duality             | Dummy variable: The value of 1 is taken when the chairman of the board of directors and the CEO are held concurrently. Otherwise, the | (Alodat et al., 2021; García-Ramos & Díaz, 2021;          |

|                                 |                                   |                                                                                                                               |                                                                         |
|---------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                                 |                                   | value of 0 is taken                                                                                                           | Puni & Anlesinya, 2020)                                                 |
|                                 | Executive Compensation Incentives | The natural log of the average compensation of the top three executives with the highest compensation                         | (An et al., 2018; Cheng, 2018; Zhou & Yang, 2019)                       |
| Independent Variable            | Product Market Competition        | Herfindahl-Hirschman Index (The sum of the squares of the market shares of all firms in the industry)                         | (Babar & Habib, 2021; Liu et al., 2022; Tran et al., 2024)              |
| (External Corporate Governance) | Political Connections             | The dummy variable takes one if a firm is politically connected and 0 otherwise                                               | (Lin et al., 2021; Pang & Wang, 2021)                                   |
|                                 | External Audit Quality            | The dummy variable equals 1 if the company hires a Big Four accounting firm, indicating higher audit quality, and 0 otherwise | (Al-ahdal & Hashim, 2022; Elewa & El-Haddad, 2019; Yeung & Lento, 2020) |
|                                 | Media Attention                   | The natural logarithm of the total number of online news articles reported annually                                           | (Chen et al., 2025; Wang et al., 2022)                                  |
| Mediating Variable              | Budgetary Slack                   | Actual industry growth rate in year n-1 minus the budgeted growth rate of the enterprise in year n                            | (Tang, 2020; Zheng et al., 2008)                                        |
| Control Variable                | Firm Size                         | The natural logarithm of total assets                                                                                         | (Al-Shaer et al., 2024; Shao, 2019)                                     |
|                                 | Leverage                          | Ratio of total debts to total assets                                                                                          | (Brahma et al., 2021, and Kao et al., 2019)                             |

|  |          |                                     |                                         |
|--|----------|-------------------------------------|-----------------------------------------|
|  | Firm Age | Number of years since establishment | (Alodat et al., 2021; Kao et al., 2019) |
|--|----------|-------------------------------------|-----------------------------------------|

## 4.6 Empirical Research Models

Empirical research models are designed to evaluate the relationship between corporate governance, budgetary slack, and firm performance. The independent variable is corporate governance. Corporate governance is categorized into two parts: internal and external. Internal governance includes ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives. External governance includes product market competition, political connections, external audit quality, and media attention. Meanwhile, dependent variables are measured by accounting-based firm performance (ROA and ROE). The control variables are company size, leverage, growth, and agency cost.

Model 1 examines the direct effect of internal and external corporate governance on firm performance. Model 2 examines the effect of internal and external corporate governance on budgetary slack. Model 3 investigates the indirect effect of internal and external corporate governance on firm performance through the mediating role of budgetary slack.

### Model 1:

$$\begin{aligned} FP = & \alpha_0 + \beta_1 TOP1 + \beta_2 SOE + \beta_3 MSHARE + \beta_4 BOARD + \beta_5 INDDIR \\ & + \beta_6 DUAL + \beta_7 SALARY + \beta_8 HHI + \beta_9 PC + \beta_{10} MEDIA + \\ & \beta_{11} BIG4 + \beta_{12} SIZE + \beta_{13} LEV + \beta_{14} AGE + \varepsilon \end{aligned} \quad (4.8)$$

### Model 2:

$$\begin{aligned} SLACK = & \alpha_0 + \beta_1 TOP1 + \beta_2 SOE + \beta_3 MSHARE + \beta_4 BOARD + \beta_5 INDDIR \\ & + \beta_6 DUAL + \beta_7 SALARY + \beta_8 HHI + \beta_9 PC + \beta_{10} MEDIA + \\ & \beta_{11} BIG4 + \beta_{12} SIZE + \beta_{13} LEV + \beta_{14} AGE + \varepsilon \end{aligned} \quad (4.9)$$

### Model 3:

$$\begin{aligned} FP = & \alpha_0 + \beta_1 TOP1 + \beta_2 SOE + \beta_3 MSHARE + \beta_4 BOARD + \beta_5 INDDIR \\ & + \beta_6 DUAL + \beta_7 SALARY + \beta_8 HHI + \beta_9 PC + \beta_{10} MEDIA + \\ & \beta_{11} BIG4 + \beta_{12} SLACK + \beta_{13} SIZE + \beta_{14} LEV + \beta_{15} AGE + \varepsilon \end{aligned} \quad (4.10)$$

Where

|       |                  |
|-------|------------------|
| FP    | Firm performance |
| SLACK | Budgetary slack  |

|        |                                   |
|--------|-----------------------------------|
| TOP1   | Ownership concentration           |
| SOE    | State ownership                   |
| MSHARE | Managerial ownership              |
| BOARD  | Board size                        |
| INDDIR | Board independence                |
| DUAL   | CEO duality                       |
| SALARY | Executive compensation incentives |
| HHI    | Product market competition        |
| PC     | Political connections             |
| BIG4   | External audit quality            |
| MEDIA  | Media attention                   |
| SIZE   | Firm size                         |
| LEV    | Leverage                          |
| AGE    | Firm age                          |

#### **4.7 Summary of the Chapter**

This chapter presents the research methodology used in this study. The chapter first explains the population, sample selection, and data collection procedures. The study focuses on A-share listed companies in China from 2014 to 2023. The data analysis procedures were then described, including the winsorisation technique used to treat extreme values and the assessment of normality assumptions. This was followed by an overview of panel data analysis, including model selection, diagnostic tests such as multicollinearity, heteroskedasticity, serial correlation, and the procedure for testing mediating effects. The chapter then detailed the measurement of all variables used in the study. These included firm performance indicators, internal governance variables (ownership concentration, state ownership, managerial ownership, board size, board independence, CEO duality, and executive compensation incentives), external governance variables (product market competition, political connections, external audit quality, and media attention), the mediating variable of budgetary slack, and control variables. Finally, the chapter outlines the empirical models constructed to examine the relationships among corporate governance, budgetary slack, and firm performance. This chapter provides the empirical foundation for the regression results and hypothesis testing presented in the next

chapter.

## **CHAPTER FIVE**

### **DATA ANALYSES**

#### **5.1 Introduction**

This chapter presents the data analysis of this study. Section 5.2 reports the reliability test. Section 5.3 explains the treatment of normality assumptions. Section 5.4 provides descriptive statistics and outlines the main features of the variables. Section 5.5 uses Pearson's correlation to give a view of the relationships among the variables. Section 5.6 conducts diagnostic tests to identify potential problems of multicollinearity, heteroskedasticity, and serial correlation in the models. Section 5.7 presents the selection of panel data regression models. Section 5.8 uses multiple regression analysis to examine the effects of internal and external corporate governance mechanisms on firm performance (FP) and budgetary slack (SLACK). Section 5.9 further tests the mediating role of SLACK in the relationship between internal and external corporate governance and FP. To check the robustness of the regression results, Section 5.10 applies alternative measures of FP and includes industry fixed effects. Section 5.11 summarizes the empirical results based on the proposed hypotheses. Section 5.12 provides a complete summary of this chapter.

#### **5.2 Reliability Test**

Multiple procedures were implemented throughout the data collection and processing phases to enhance the reliability of the dataset employed in this research. Specifically, for information related to budget disclosure, a manual content analysis method was used to extract revenue forecast figures from annual reports of Chinese A-share listed firms spanning the years 2014 to 2023. These reports were sourced directly from the official websites of the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE). A standardized coding procedure was adopted based on Tang (2020), which included consistent use of keywords and clear rules for identifying and interpreting disclosed revenue budgets. A double-checking procedure was conducted to verify the consistency and accuracy of the manual coding process. Following the sampling guidelines proposed by Bougie and Sekaran (2019) and Israel

(1992), a random sample of 400 firm-year observations was selected from the full dataset. Each observation was re-coded and compared with the original entry using a simple percentage agreement method. The result showed a 99% agreement rate, which indicates a high level of coding reliability and suggests that the budget disclosure data used in this study are consistent and accurate (Krippendorff, 2018).

Data were obtained from the CSMAR database for corporate governance variables, firm performance indicators, and financial control variables. This database has been widely used in prior studies (e.g., Shao, 2019; Shu, 2023; Li et al., 2024) and is recognized as a reliable and authoritative source for firm-level data on Chinese listed companies (Jiang & Kim, 2020). All variables were extracted from topic-specific modules such as “Governance Structure,” “Shareholder Type,” “Executive Features,” “Financial Indicator Analysis,” and “Financial Report Information.” Each variable was matched by stock code and fiscal year to ensure completeness and internal consistency. In addition, media attention data were collected from the China National Research Data Services (CNRDS) database, a recognized source of news and media information in academic research (He et al., 2024; Pan et al., 2022). The data were sorted and merged using stock codes and years to maintain consistency across datasets. The use of established databases and rigorous data processing procedures ensures the overall reliability and validity of the dataset used in this study.

### **5.3 Treatment of Normality Assumptions**

In statistics, the assumption of normality is an important basis for many statistical methods. If this assumption is violated, the validity of statistical inference may be affected (Rani Das, 2016). When assessing normality, sample size is a key factor. The Central Limit Theorem (CLT) provides important theoretical support for the distribution of sample means for large samples. According to the CLT, as the sample size increases, the distribution of the sample mean tends to become normal, regardless of the shape of the original data distribution (Islam, 2018; Casella & Berger, 2002). This means that when the sample size is large enough, the distribution of the sample mean will exhibit normality characteristics, even if the original data are not normally distributed. Casella and Berger (2002) pointed out that this theoretical foundation allows using parametric methods for valid inference under large sample

conditions, even when variables show some degree of skewness or kurtosis. When the sample size exceeds 10,000, non-normality usually has little impact on analysis results, and parametric analysis results are usually reliable (Allende-Alonso et al., 2019). This study constructs a panel dataset based on 15,786 annual observations with significant sample characteristics. Therefore, this study follows the conclusions on the CLT and conducts subsequent regression analysis under large sample conditions.

#### **5.4 Descriptive Analysis**

Descriptive statistics is a quantitative method to identify and summarize key characteristics of information collected in research (Cooksey, 2020; Holcomb, 2016). Unlike inferential or inductive statistics, which are designed for concluding, descriptive statistics focus on directly analyzing and summarizing existing sample data rather than inferring population characteristics from sample data. This approach typically does not rely on probability theory frameworks and does not involve complex parameter estimation. Descriptive statistics is widely used in research primarily due to two advantages. First, it provides basic information about variables in a dataset, offering the necessary background for further analysis. Second, it highlights potential relationships between variables, revealing patterns and connections that may require deeper investigation (Young & Wessnitzer, 2016). In this study, STATA 18 was used to conduct descriptive statistical analysis of all research variables to understand the basic characteristics and distribution of the data comprehensively.

Table 5.1  
The Descriptive Results

| <b>Variables</b> | <b>N</b> | <b>Mean</b> | <b>SD</b> | <b>Min</b> | <b>Median</b> | <b>Max</b> |
|------------------|----------|-------------|-----------|------------|---------------|------------|
| ROA              | 15786    | 0.042       | 0.062     | -0.252     | 0.041         | 0.210      |
| ROE              | 15786    | 0.066       | 0.130     | -0.702     | 0.077         | 0.326      |
| TOP1             | 15786    | 0.339       | 0.149     | 0.084      | 0.319         | 0.742      |
| SOE              | 15786    | 0.353       | 0.478     | 0          | 0             | 1          |
| MSHARE           | 15786    | 0.068       | 0.127     | 0          | 0.003         | 0.569      |
| INDDIR           | 15786    | 0.380       | 0.059     | 0.333      | 0.364         | 0.600      |
| DUAL             | 15786    | 0.278       | 0.448     | 0          | 0             | 1          |
| BOARD            | 15786    | 2.128       | 0.201     | 1.609      | 2.197         | 2.708      |
| SALARY           | 15786    | 14.743      | 0.715     | 13.129     | 14.698        | 16.749     |
| HHI              | 15786    | 0.213       | 0.199     | 0.038      | 0.146         | 1          |
| PC               | 15786    | 0.139       | 0.346     | 0          | 0             | 1          |
| MEDIA            | 15786    | 5.238       | 1.026     | 3.091      | 5.136         | 8.266      |
| BIG4             | 15786    | 0.094       | 0.292     | 0          | 0             | 1          |
| SLACK            | 15786    | 0.190       | 0.563     | -1.680     | 0.151         | 2.596      |
| SIZE             | 15786    | 22.823      | 1.330     | 20.475     | 22.621        | 26.847     |
| LEV              | 15786    | 0.434       | 0.192     | 0.072      | 0.429         | 0.867      |
| AGE              | 15786    | 11.598      | 7.371     | 1          | 10            | 33         |

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Note: This table displays the descriptive statistics for all variables based on a final sample comprising 15,786 firm-year observations.

ROA is the ratio of net income to total assets. ROE is the ratio of net income to total shareholder equity. TOP1 refers to the proportion of shares held by the largest shareholder. SOE is a dummy variable that takes 1 for state-owned enterprises and 0 for non-state-owned enterprises. MSHARE is the percentage of shares held by top executives. BOARD is the natural logarithm of the number of board members. INDDIR is the ratio of independent directors to the total number of directors. DUAL is a dummy variable that takes the value of 1 if the same person holds the chairman and CEO roles, and 0 otherwise. SALARY is the natural logarithm of the total compensation of the top three executives. HHI, or Herfindahl-Hirschman Index, is computed as the sum of squared market shares for all firms within an industry. PC is a dummy variable equal to 1 if the firm is politically connected, and 0 otherwise. MEDIA represents the natural logarithm of the total number of online news articles reported annually about each firm. BIG4 is a dummy variable equal to 1 if a Big Four accounting firm audits the firm-year, and 0 otherwise. SLACK is measured as the actual industry growth rate in year  $n-1$  minus the firm's budgeted growth rate in year  $n$ . SIZE is the natural logarithm of total assets. LEV is the ratio of total debt to total assets. AGE is the number of years since establishment.

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Table 5.1 displays the descriptive statistics for all variables utilized in this research, highlighting the distinct features of Chinese A-share listed companies. The statistical measures provided include the mean, standard deviation, maximum, minimum, and median values. Firm performance is defined as the dependent variable and is assessed through Return on Asset (ROA) and Return on Equity (ROE) metrics. The average ROA value is 0.042, with a median of 0.041 and a standard deviation of 0.062. The range of profitability among the sampled firms is indicated by maximum and minimum values of 0.210 and -0.252, respectively, demonstrating significant variability in their profitability levels. For ROE, the mean is 0.066, the standard deviation is 0.130, and the median is 0.077. The highest and lowest values are 0.326 and -0.702, showing that shareholder returns fluctuate even more. The variation in FP suggests that corporate governance mechanisms may play a critical role in firm operations. On the one hand, internal governance mechanisms, such as ownership concentration, managerial shareholding, executive compensation, and board structure, are widely regarded as important factors that affect resource allocation efficiency and reduce conflicts among stakeholders, thereby directly influencing FP (Bhakar et al., 2024; Chen et al., 2023; Iwasaki et al., 2022; Fernández-Temprano & Tejerina-Gaite, 2020; Aguilera et al., 2015).

On the other hand, external governance factors, such as media coverage (Bai & Yan, 2023; Ahmad et al., 2019), product market competition (Liu et al., 2022; Bharath & Hertz, 2019), and external auditing (Yeung & Lento, 2020; Schäuble, 2019), may also constrain managerial opportunism and help improve FP. In addition, the differences in performance may reflect variations in budgetary management practices. According to agency theory, SLACK may lead to inefficiency under conditions of information asymmetry. It can reduce managerial effort or cause greater resource waste, harming FP (Mohanna & Sponem, 2020).

From the perspective of internal corporate governance, this study focuses on several governance variables, including ownership concentration (TOP1), state ownership (SOE), managerial shareholding (MSHARE), board size (BOARD), board independence (INDDIR), CEO duality (DUAL), and executive compensation incentives (SALARY). TOP1 is assessed based on the percentage of shares held by the largest shareholder (TOP1). The average value of TOP1 is 0.339, and the median is 0.319, which is consistent with the findings of Jiang and Kim (2020). This indicates that most sample firms have a high level of TOP1. This feature is especially

prominent in the Chinese capital market, where the phenomenon of dominant shareholders is common (Jiang & Kim, 2020; Wang et al., 2019). In many Chinese firms, the largest shareholders have absolute control, often holding significantly more shares than other shareholders, which limits the influence of minority shareholders (Choi et al., 2023). This ownership structure has a dual impact on governance. On one hand, high ownership concentration may enhance the motivation and ability of major shareholders to monitor managers, helping to reduce agency costs (Alkurdi et al., 2021).

On the other hand, excessive concentration may also lead to resource expropriation by controlling shareholders, which weakens governance effectiveness and harms firm performance (Queiri et al., 2021). State-Owned Enterprise (SOE) is a dummy variable. The mean value of SOE stands at 0.353, suggesting that SOE accounts for roughly 35.3% of the total sample. This proportion aligns with the findings of Jiang and Kim (2020), illustrating the prominent influence of the government in China's corporate landscape (Iwasaki et al., 2022). The average value of MSHARE is 0.068, but the median is only 0.003. The values range from a minimum of 0 to a maximum of 0.569. These figures indicate significant variation in the level of equity-based incentives for executives in Chinese firms, with most executives holding relatively few shares (Shao, 2019).

BOARD is the natural logarithm of the number of directors. The average value is 2.128, with a standard deviation of 0.201. The median is 2.197, while the smallest and largest values observed are 1.609 and 2.708, respectively. These results align with the requirements of the *Company Law of the People's Republic of China*, which ensures that the BOARD meets the minimum standards for independence and diversity (Li et al., 2015). INDDIR has an average value of 0.380 and a standard deviation of 0.059. The median is 0.364. These data indicate that most firms in the sample adhere to the CSRC's regulatory threshold, which requires that at least one-third of the board be composed of independent directors (Liu et al., 2015). This structure improves the board's monitoring function over management (Fernández-Temprano & Tejerina-Gaite, 2020; Melville & Merendino, 2019). DUAL is also a dummy variable. The mean value is 0.278, indicating that the CEO also serves as the board chair in about 27.8% of the sample firms. These values align with the findings of Yeung & Lento (2020). When the CEO holds both roles, power centralization may reduce the board's capacity to supervise senior management

effectively, raising agency costs and potentially diminishing organizational performance (Fama & Jensen, 1983; Jensen & Meckling, 1976). SALARY is calculated by taking the natural logarithm of the total annual pay received by top executives. The average value is 14.743, the median is 14.698, the minimum is 13.129, and the maximum is 16.749. These values align with the results presented by Zhang et al. (2023). Compared with other countries, the level of SALARY in China is similar to that of Australian firms but generally lower than that of Japanese firms (Kayani & Gan, 2022). Including this variable helps to identify the differences in incentive practices between Chinese listed companies and firms in other countries.

Regarding external governance mechanisms, HHI is measured by the Herfindahl-Hirschman Index. The mean value is 0.213, with a standard deviation of 0.199. These results align with those reported by Zheng et al. (2021). The minimum value is 0.038, indicating that some industries are highly competitive. The maximum value is 1.000, suggesting that certain firms operate in oligopolistic or monopolistic markets. The median is 0.146, which is lower than the mean, further showing that most listed firms in China face a relatively competitive market environment (Zheng et al., 2021). PC is a dummy variable. The mean value is 0.139, indicating that about 13.9% of the firms in the sample have top executives with government backgrounds or direct ties to the government. This reflects China's unique corporate governance characteristics (Jiang & Kim, 2020). Such connections may give firms access to resources and favorable policies (Huang & He, 2020). However, they may also lead to multiple agency problems and weaken FP (Pang & Wang, 2021). External audit quality (BIG4) is also a dummy variable. The mean value is 0.094, suggesting that only about 9.4% of the sample firms engage one of the Big Four international accounting firms as their auditor. This finding is consistent with Yeung and Lento (2020). The average media attention (MEDIA) value is 5.238, with a standard deviation of 1.026. The minimum is 3.091, and the maximum is 8.266, indicating substantial variation in media exposure among sample firms. This result aligns with the findings of Chen et al. (2025). In the Chinese context, the media have been shown to play a supervisory role as an external governance mechanism. It can help reduce information asymmetry, increase transparency, and constrain managerial behavior (Bai & Yan, 2023).

The mediating variable in this study is SLACK. When the value of this indicator is greater than 0, the firm's budget growth rate is lower than its industry's

actual past growth rate, indicating budgetary slack. Otherwise, the budget is considered tight (Shu et al., 2023; Zheng et al., 2008). The mean value of SLACK is 0.19, and the median is 0.151, suggesting that most firms in the sample experience budgetary slack. This finding is consistent with the view among Chinese scholars that budgetary slack is common in Chinese listed firms (Shu et al., 2023; An & Ai, 2022; Bai & An, 2021).

Among the control variables, SIZE represents firm size and is calculated using the natural logarithm of total assets. The mean value is 22.823, with a standard deviation of 1.330. The minimum is 20.475, the median is 22.621, and the maximum is 26.847. This shows that the sample firms are generally large, but there are notable differences in size. This observation is consistent with Zhang et al. (2023). Leverage (LEV) is the ratio of total debt to total assets. It has a mean of 0.434 and a standard deviation of 0.192. This indicates that, overall, the firms have a moderate level of debt. However, the differences across firms are significant, which is in line with the conclusion of Shao (2019). The minimum value is 0.072, meaning some firms have very low debt levels. The median is 0.429, close to the mean, showing a symmetric distribution. The highest value recorded is 0.867, suggesting that some companies are significantly leveraged. Firm age (AGE) is measured by the years a company has operated since its establishment. The mean value is 11.598, with a standard deviation of 7.371. The minimum is 1, the median is 10, and the maximum is 33. This indicates that the sample includes newly established and long-standing companies, showing considerable variation in firm age. This result is consistent with the findings of Zeng et al. (2023).

The descriptive statistics show that the research sample includes Chinese A-share listed companies with diverse governance characteristics and operating conditions. The FP indicators display a wide range of variation, indicating that the sample contains highly efficient firms and those facing financial difficulties. Regarding internal governance, most firms exhibit a high level of TOP1. The proportion of independent directors generally meets regulatory requirements. However, managerial shareholding is typically low, and CEO duality remains a common practice. These features may affect the effectiveness of corporate governance.

Regarding external governance, differences in MEDIA, Political Connections (PC), and audit quality across firms reflect the diversity of external monitoring forces

within China's corporate governance system. The results on SLACK suggest that many firms tend to underestimate revenue growth expectations, indicating a clear presence of SLACK. All control variables show considerable variation, which supports their inclusion in the regression models as necessary control factors. Overall, the findings from this section provide a solid empirical foundation for the subsequent analysis, enhancing the robustness and explanatory power of the research conclusions.

## **5.5 Pearson's Correlation**

Pearson Correlation Analysis is commonly used to measure the strength and direction of linear relationships between two variables in quantitative research involving continuous variables. The Pearson correlation coefficient, denoted as  $r$ , ranges from -1 to +1. A coefficient close to -1 indicates a strong negative linear relationship, suggesting that the two variables move in opposite directions with near-perfect predictability. Conversely, a value approaching +1 implies a strong positive linear relationship, where the variables consistently increase or decrease. When the coefficient is close to zero, it suggests an absence of linear association. However, a nonlinear relationship may still exist (Kutner et al., 2005). In regression modeling, evaluating the correlation among independent variables is crucial. High linear correlations between independent variables may lead to multicollinearity, affecting the model's estimation efficiency and parameter significance. While it is challenging to avoid correlations between variables in actual research altogether, multicollinearity is generally considered within an acceptable range when correlation coefficients do not exceed 0.8 or 0.9 (Senaviratna & Cooray, 2019; Yoo et al., 2014; Siemsen et al., 2010; Kutner et al., 2005). In panel data models, the dual structure of cross-section and time series inherently has some capacity to mitigate multicollinearity (Baltagi, 2008). Nevertheless, ensuring that correlations between variables are not excessively high remains important to maintain the model's estimation efficiency. Correlation analysis serves to identify potential collinearity issues between variables and provide preliminary judgments for subsequent regression analysis.

Table 5.2  
Pearson Correlations

|        | ROA       | ROE       | TOP1      | SOE       | MSHARE    | BOARD     | INDDIR    | DUAL      | SALARY    | HHI       |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ROA    | 1.000     |           |           |           |           |           |           |           |           |           |
| ROE    | 0.907***  | 1.000     |           |           |           |           |           |           |           |           |
| TOP1   | 0.115***  | 0.126***  | 1.000     |           |           |           |           |           |           |           |
| SOE    | -0.057*** | 0.005     | 0.283***  | 1.000     |           |           |           |           |           |           |
| MSHARE | 0.067***  | 0.019**   | -0.081*** | -0.366*** | 1.000     |           |           |           |           |           |
| BOARD  | 0.019**   | 0.047***  | 0.040***  | 0.283***  | -0.193*** | 1.000     |           |           |           |           |
| INDDIR | 0.072***  | 0.047***  | 0.065***  | -0.018**  | 0.085***  | -0.507*** | 1.000     |           |           |           |
| DUAL   | 0.021***  | 0.002     | -0.079*** | -0.306*** | 0.499***  | -0.189*** | 0.107***  | 1.000     |           |           |
| SALARY | 0.181***  | 0.201***  | -0.008    | 0.033***  | -0.084*** | 0.070***  | 0.034***  | 0.014*    | 1.000     |           |
| HHI    | -0.059*** | -0.054*** | 0.065***  | 0.043***  | -0.055*** | 0.010     | 0.023***  | -0.045*** | -0.018**  | 1.000     |
| PC     | 0.042***  | 0.047***  | -0.032*** | -0.081*** | 0.105***  | -0.027*** | 0.081***  | 0.207***  | -0.025*** | 0.033***  |
| MEDIA  | 0.064***  | 0.082***  | 0.097***  | 0.130***  | -0.098*** | 0.107***  | 0.106***  | -0.036*** | 0.193***  | 0.042***  |
| BIG4   | 0.062***  | 0.082***  | 0.164***  | 0.155***  | -0.109*** | 0.082***  | 0.095***  | -0.058*** | 0.260***  | 0.034***  |
| SLACK  | -0.018**  | -0.013    | 0.024***  | 0.060***  | -0.070*** | 0.037***  | -0.031*** | -0.043*** | -0.041*** | -0.035*** |
| SIZE   | -0.019**  | 0.096***  | 0.236***  | 0.426***  | -0.320*** | 0.242***  | 0.047***  | -0.179*** | 0.423***  | 0.038***  |
| LEV    | -0.361*** | -0.187*** | 0.087***  | 0.271***  | -0.209*** | 0.119***  | 0.001     | -0.105*** | 0.133***  | 0.043***  |
| AGE    | -0.071*** | -0.005    | 0.078***  | 0.514***  | -0.408*** | 0.215***  | -0.007    | -0.235*** | 0.204***  | 0.038***  |

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

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|       | PC        | MEDIA    | BIG4     | SLACK    | SIZE     | LEV      | AGE   |
|-------|-----------|----------|----------|----------|----------|----------|-------|
| PC    | 1.000     |          |          |          |          |          |       |
| MEDIA | 0.053***  | 1.000    |          |          |          |          |       |
| BIG4  | -0.007    | 0.251*** | 1.000    |          |          |          |       |
| SLACK | -0.010    | -0.001   | -0.015*  | 1.000    |          |          |       |
| SIZE  | -0.038*** | 0.419*** | 0.370*** | 0.009    | 1.000    |          |       |
| LEV   | 0.003     | 0.205*** | 0.118*** | 0.004    | 0.545*** | 1.000    |       |
| AGE   | -0.071*** | 0.127*** | 0.160*** | 0.086*** | 0.515*** | 0.308*** | 1.000 |

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 5.2 reports the complete matrix of Pearson correlation coefficients. The correlation analysis results reveal clear relationships between internal governance variables and key firm performance metrics, including ROA and ROE. First, TOP1 is significantly and positively correlated with ROA and ROE, with coefficients of 0.115 and 0.126, respectively ( $p < 0.01$ ). This suggests that firms with a higher proportion of shares held by major shareholders tend to achieve better financial performance, supporting hypothesis 1a. Concentrated ownership structures may help reduce agency problems and improve decision-making efficiency, enhancing FP. SOE is significantly and negatively correlated with ROA ( $r = -0.057$ ,  $p < 0.01$ ), while showing no significant correlation with ROE ( $r = 0.005$ ,  $p > 0.1$ ). MSHARE is positively correlated with ROA ( $r = 0.067$ ,  $p < 0.01$ ) and ROE ( $r = 0.019$ ,  $p < 0.05$ ), supporting 1c. This suggests that when management owns equity, its interests align more closely with shareholders, motivating them to improve FP. BOARD exhibits significant positive correlations with ROA ( $r = 0.019$ ,  $p < 0.05$ ) and ROE ( $r = 0.047$ ,  $p < 0.01$ ), indicating that larger BOARD may be associated with better FP. This result supports Hypothesis 1d. The proportion of INDDIR shows a significant positive correlation with both ROA ( $r = 0.072$ ,  $p < 0.01$ ) and ROE ( $r = 0.047$ ,  $p < 0.01$ ), consistent with hypothesis 1e. This underscores independent directors' supervisory and advisory roles in improving firm decision-making and oversight. DUAL is significantly positively correlated with ROA ( $r = 0.021$ ,  $p < 0.1$ ), and not significantly correlated with ROE ( $r = 0.002$ ,  $p > 0.1$ ). SALARY exhibits strong positive correlations with both ROA ( $r = 0.181$ ,  $p < 0.01$ ) and ROE ( $r = 0.201$ ,  $p < 0.01$ ), highlighting it as a key internal governance factor. This supports hypothesis 1g and indicates that a well-designed incentive system can effectively enhance executive motivation and FP.

Among external governance mechanisms, HHI is significantly and negatively correlated with ROA ( $r = -0.059$ ,  $p < 0.01$ ) and ROE ( $r = -0.054$ ,  $p < 0.01$ ), consistent with hypothesis 1h. This implies that more competitive markets encourage better FP. PC shows significant positive correlations with both ROA ( $r = 0.042$ ,  $p < 0.01$ ) and ROE ( $r = 0.047$ ,  $p < 0.01$ ), in line with hypothesis 1i. This suggests that politically connected firms may benefit from preferential treatment, resource access, or favorable policies. BIG4 is significantly positively correlated with ROA ( $r = 0.062$ ,  $p < 0.01$ ) and ROE ( $r = 0.082$ ,  $p < 0.01$ ), supporting hypothesis 1j. High-quality audits contribute to stronger internal controls and higher-quality financial reporting, thus improving performance. MEDIA is significantly positively correlated with ROA ( $r =$

0.064,  $p < 0.01$ ) and ROE ( $r = 0.082$ ,  $p < 0.01$ ), consistent with 1j. This indicates that media supervision is constructive in disciplining management and enhancing transparency.

This study further investigates SLACK as a mediating variable. The SLACK indicator significantly correlates negatively with ROA ( $r = -0.018$ ,  $p < 0.1$ ). This suggests that greater SLACK may slightly reduce FP by encouraging inefficiency, waste, and complacency. The correlation with ROE is also negative but not statistically significant ( $r = -0.013$ ), indicating a consistent but weak pattern. TOP1 exhibits a significant positive correlation with SLACK ( $r = 0.024$ ,  $p < 0.01$ ), suggesting that firms with more concentrated ownership may be more prone to SLACK. SOE also shows a significant and positive association with SLACK ( $r = 0.060$ ,  $p < 0.01$ ), implying that SOEs are likelier to maintain slack in their budgeting processes. MSHARE negatively and significantly correlates with SLACK ( $r = -0.070$ ,  $p < 0.01$ ), suggesting that managerial ownership could discourage slack creation. BOARD is positively correlated with SLACK ( $r = 0.037$ ,  $p < 0.01$ ), indicating that firms with larger boards tend to exhibit higher levels of SLACK. INDDIR is negatively correlated with SLACK at a statistically significant level ( $r = -0.031$ ,  $p < 0.01$ ), indicating that a higher proportion of independent directors may help reduce slack. DUAL has a significant negative relationship with SLACK ( $r = -0.043$ ,  $p < 0.01$ ), which may reflect that CEO duality is a constraint on slack. SALARY demonstrates a significant negative correlation with SLACK ( $r = -0.031$ ,  $p < 0.01$ ), implying that more generous executive pay may align incentives and reduce slack. HHI negatively correlates with SLACK ( $r = -0.035$ ,  $p < 0.01$ ), indicating that firms in more competitive environments may be less likely to accumulate slack. PC is negatively correlated with SLACK ( $r = -0.010$ ), but this relationship is not statistically significant ( $p > 0.1$ ). BIG4 is weakly and negatively correlated with SLACK ( $r = -0.015$ ,  $p < 0.1$ ), suggesting that top-tier audit firms may be associated with slightly tighter budget control. MEDIA presents a small and insignificant negative correlation with SLACK ( $r = -0.001$ ,  $p > 0.1$ ).

It is important to note that the correlations among independent variables are relatively low. The highest correlation coefficient is only 0.507, between BOARD and the proportion of INDDIR. This suggests that serious multicollinearity problems likely do not exist in the regression models. For control variables, several variables show significant correlations with both FP and corporate governance indicators,

highlighting the necessity of including these factors as control variables. Specifically, SIZE has significant relationships with ROA ( $r = -0.019$ ,  $p < 0.05$ ) and ROE ( $r = 0.096$ ,  $p < 0.01$ ). LEV shows strong negative correlations with performance indicators (ROA:  $r = -0.361$ ,  $p < 0.01$ ; ROE:  $r = -0.187$ ,  $p < 0.01$ ), emphasizing its key role in financial performance. AGE significantly correlates with ROA ( $r = -0.071$ ,  $p < 0.01$ ) and several governance mechanisms. These relationships further demonstrate the necessity of including these control variables to accurately identify the actual effects of main governance mechanisms on FP and SLACK.

This study constructed a Pearson correlation matrix to examine the pairwise linear relationships among all major independent variables, providing preliminary evidence for understanding the associations between corporate governance, SLACK, and FP. The results show that the correlation coefficients among the independent variables are all below 0.8, with the vast majority even below 0.5, indicating relatively weak linear correlations among the explanatory variables and no evident multicollinearity problems. This result meets the judgment criteria used in studies by Senaviratna & Cooray (2019), Yoo et al. (2014), and Siemsen et al. (2010). In addition, this study further applies the Variance Inflation Factor (VIF) and tolerance to enhance the detection sensitivity and ensure that the model does not violate the assumptions of classical linear regression. VIF and tolerance analysis, as a follow-up step, helps more accurately identify potential multicollinearity risks and supports a robust regression analysis.

## **5.6 Diagnostic Test Analysis**

This section includes tests for multicollinearity, heteroskedasticity, and serial correlation to ensure the validity of regression results.

### **5.6.1 Multicollinearity**

In multiple linear regression analysis, multicollinearity is considered to exist when there is an approximate linear relationship among variables (Chandrasekhar et al., 2016). Theoretically, there are two extreme cases of multicollinearity: no multicollinearity and perfect multicollinearity (Adeboye et al., 2014; Alin, 2010). Most data fall somewhere between these two extremes (Alin, 2010). Although some

degree of multicollinearity is almost always present, the primary concern is whether the level of multicollinearity is severe enough to affect the results. Some researchers suggest that multicollinearity found in empirical data is often due to sampling variation and not necessarily a reflection of actual relationships in the population (Kmenta & Klein, 1971). Still, regardless of the cause of multicollinearity, regression analysis must take it seriously. This is because it can lead to several problems, such as unstable coefficient estimates that change significantly with minor changes in the data, signs of coefficients that contradict theoretical expectations, insignificant coefficients for theoretically important variables, and difficulty in determining the relative importance of correlated predictors (Adeboye et al., 2014).

Standard methods to diagnose multicollinearity include the Pearson correlation coefficient, VIF, and tolerance. The Pearson correlation coefficient measures the strength of the linear relationship between two variables. As a rule of thumb, a correlation above 0.8 is usually seen as a sign of serious multicollinearity (Senaviratna & Cooray, 2019). However, low Pearson correlation coefficients alone are insufficient to rule out multicollinearity. This is because correlation only reflects the linear relationship between two individual variables. At the same time, multicollinearity can occur between one variable and a combination of other variables (Alin, 2010). In this sense, correlation is a special case of multicollinearity. High correlation implies multicollinearity, but low correlation does not necessarily mean multicollinearity is absent. Therefore, multicollinearity may still exist even when all correlations appear low (Alin, 2010).

For this reason, it is also necessary to use tolerance and VIF to check for multicollinearity. Tolerance measures the percentage of variance in a predictor that cannot be explained by the other predictors (Senaviratna & Cooray, 2019). A tolerance value of 1 indicates little or no multicollinearity, while values of 0 suggest a potential multicollinearity problem. A tolerance value below 0.1 is generally seen as a sign of serious multicollinearity (Senaviratna & Cooray, 2019). VIF shows how much multicollinearity inflates the variance of a coefficient estimate. A VIF value above 10 often indicates multicollinearity (Senaviratna & Cooray, 2019). Table 5.3 reports the tolerance and VIF values for all predictors. According to the results in Table 5.3, all tolerance values range from 0.362556 to 0.986191, and all VIF values range from 2.76 to 1.01. These results confirm that there is no serious multicollinearity among the predictor variables in this study.

Table 5.3  
VIF and Tolerance Test for Variables

| Variable | VIF  | 1/VIF(Tolerance) |
|----------|------|------------------|
| SIZE     | 2.76 | 0.362556         |
| AGE      | 1.74 | 0.575936         |
| SOE      | 1.69 | 0.590042         |
| BOARD    | 1.59 | 0.628896         |
| MSHARE   | 1.56 | 0.642051         |
| LEV      | 1.48 | 0.677938         |
| INDDIR   | 1.47 | 0.682126         |
| DUAL     | 1.43 | 0.700816         |
| SALARY   | 1.32 | 0.75668          |
| MEDIA    | 1.27 | 0.789025         |
| BIG4     | 1.22 | 0.819351         |
| TOP1     | 1.16 | 0.859993         |
| PC       | 1.06 | 0.942197         |
| SLACK    | 1.02 | 0.983594         |
| HHI      | 1.01 | 0.986191         |

### 5.6.2 Heteroskedasticity and Serial Correlation

When conducting panel data regression analysis, it is necessary to test whether the data have heteroskedasticity and serial correlation problems (Baltagi, 2011; Gujarati & Porter, 2009). These tests help ensure that the standard errors of the model are robust enough and that the estimated regression coefficients are not affected by these issues (Bugenbayev et al., 2021; Torres-Reyna, 2007). This study uses the modified Wald test to check for heteroskedasticity (Torres-Reyna, 2007). If the p-value (Prob > chi2) from the test is below the 0.05 significance level, it indicates the presence of heteroskedasticity. The Wooldridge test is applied to detect serial correlation (Drukker, 2003). If the p-value (Prob > F) from this test is less than 0.05, serial correlation exists in the model.

Table 5.4  
Diagnostics Test Result for Model 1

| Heteroskedasticity | Serial Correlation |
|--------------------|--------------------|
|--------------------|--------------------|

|     |                       |                     |
|-----|-----------------------|---------------------|
| ROA | chi2 (3114) = 1.9e+32 | F(1, 2153) = 27.053 |
|     | Prob>chi2 = 0.0000    | Prob > F = 0.0000   |
| ROE | chi2 (3114) = 6.7e+11 | F(1, 2153) = 17.157 |
|     | Prob>chi2 = 0.0000    | Prob > F = 0.0000   |

Table 5.4 presents the diagnostic results for Model 1, using ROA and ROE as measures of firm performance. For the heteroskedasticity test, the chi-square statistic is 1.9e+32 for ROA and 6.7e+11 for ROE. Both p-values are 0.0000, which indicates that heteroskedasticity is present in the model. For the serial correlation test, the F-statistic is 27.053 for ROA and 17.157 for ROE, with p-values equal to 0.0000. This shows that there is a correlation among the error terms.

Taken together, these results suggest that Model 1 suffers from both heteroskedasticity and serial correlation. Therefore, it is necessary to use cluster-robust standard errors to improve the model's robustness to these two types of disturbances (Moody & Marvell, 2020; Thompson, 2011).

Table 5.5  
Diagnostics Test Result for Model 2

| <b>Heteroskedasticity</b> | <b>Serial Correlation</b> |
|---------------------------|---------------------------|
| chi2 (3114) = 5.2e+06     | F(1, 2153) = 10.025       |
| Prob>chi2 = 0.0000        | Prob > F = 0.0016         |

Table 5.5 shows the diagnostic test results for Model 2. For the heteroskedasticity test, the chi-square statistic is 5.2e+06 and the p-value is 0.0000, indicating the model has a heteroskedasticity problem. For the serial correlation test, the F-statistic is 10.025 with a p-value of 0.0016, well below the 0.05 level. This means that serial correlation exists in the model's error terms. Based on both test results, Model 2 faces problems of heteroskedasticity and serial correlation. Therefore, cluster-robust standard errors should improve the model's robustness to these two issues (Moody & Marvell, 2020; Thompson, 2011).

Table 5.6  
Diagnostics Test Result for Model 3

| <b>Heteroskedasticity</b> | <b>Serial Correlation</b> |
|---------------------------|---------------------------|
|---------------------------|---------------------------|

|     |                                             |                                           |
|-----|---------------------------------------------|-------------------------------------------|
| ROA | chi2 (3114) = 1.9e+32<br>Prob>chi2 = 0.0000 | F (1, 2153) = 27.694<br>Prob > F = 0.0000 |
| ROE | chi2 (3114) = 6.3e+13<br>Prob>chi2 = 0.0000 | F (1, 2153) = 17.585<br>Prob > F = 0.0000 |

Table 5.6 reports the diagnostic test results for Model 3, where firm performance is measured using both ROA and ROE. Regarding heteroskedasticity, the chi-square statistics are 1.9e+32 for ROA and 6.3e+13 for ROE, with p-values equal to 0.0000. These findings indicate a clear presence of heteroskedasticity in the model. As for serial correlation, the F-statistics are 27.694 for ROA and 17.585 for ROE, and both p-values are 0.0000. This suggests significant autocorrelation in the error terms. In summary, Model 3 exhibits both heteroskedasticity and serial correlation. To address these issues and enhance the robustness of the regression results, cluster-robust standard errors should be applied (Moody & Marvell, 2020; Thompson, 2011).

## 5.7 Selection of Panel Data Regression Models

This study uses panel data analysis to examine the relationship between corporate governance, SLACK, and FP. Panel data analysis mainly includes three models: the Pooled Ordinary Least Squares (POLS) model, the Fixed Effects Model (FEM), and the Random Effects Model (REM) (Bugenbayev et al., 2021; Gujarati & Porter, 2009; Greene, 2003). Before running the regression, it is necessary to decide which model is the most suitable for the data in this study. Several statistical tests are used to choose the most appropriate model. The F-test is used to compare the fixed effects model with the POLS model; the Breusch and Pagan Lagrange Multiplier (LM) test is used to compare the pooled OLS model with the random effects model; the Hausman test is then used to decide between the fixed effects and random effects models (Bugenbayev et al., 2021; Alodat et al., 2021). These tests help guide the selection of the most suitable panel data model for the empirical analysis in this study.

Table 5.7

Model Selection Tests for Panel Data Regression (Model 1)

| F-Test | LM Test | Hausman Test |
|--------|---------|--------------|
|--------|---------|--------------|

|     |                                                                         |                                                  |                                           |
|-----|-------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------|
| ROA | F test that all $u_i=0$ :<br>F(3113, 12650) = 4.03<br>Prob > F = 0.0000 | chibar2(01) = 3916.59<br>Prob > chibar2 = 0.0000 | chi2(14) = 471.30<br>Prob > chi2 = 0.0000 |
| ROE | F test that all $u_i=0$ :<br>F(3113, 12650) = 3.22<br>Prob > F = 0.0000 | chibar2(01) = 1787.89<br>Prob > chibar2 = 0.0000 | chi2(14) = 595.70<br>Prob > chi2 = 0.0000 |

The results of the model selection tests for Model 1 are presented in Table 5.7. For ROA, the F-value is 4.03 with a p-value of 0.0000. For ROE, the F-value is 3.22, and the p-value is also 0.0000. Since both p-values are equal to zero, the null hypothesis (that all individual effects are zero) is rejected. This suggests that the fixed effects model outperforms the POLS model under both measures and that individual heterogeneity plays a significant role in the model. The LM statistic for ROA is 3916.59 with a p-value of 0.0000, while the statistic for ROE is 1787.89, also with a p-value of 0.0000. As both p-values are equal to or below 0.05, the significance level, the REM is preferred over the POLS model, suggesting that cross-sectional differences cannot be ignored. The Hausman statistic for ROA is 471.30 with a p-value of 0.0000, and for ROE it is 595.70, again with a p-value of 0.0000. Since both p-values are significantly below 0.05, the null hypothesis (that individual effects are uncorrelated with the explanatory variables) is rejected. This shows that the FEM is more appropriate. Based on the F-test, LM test, and Hausman test results, it is clear that whether ROA or ROE measures FP, the FEM performs better than the POLS and the REMs. Therefore, this study uses the FEM to estimate Model 1 in the following regression analysis.

Table 5.8  
Model Selection Tests for Panel Data Regression (Model 2)

| <b>F-Test</b>                                                           | <b>LM Test</b>                                | <b>Hausman Test</b>                       |
|-------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------|
| F test that all $u_i=0$ :<br>F(3113, 12650) = 1.33<br>Prob > F = 0.0000 | chibar2(01) = 3.24<br>Prob > chibar2 = 0.0359 | chi2(14) = 434.37<br>Prob > chi2 = 0.0000 |

Table 5.8 presents the test results for Model 2. The F-test shows a p-value of 0.0000, far below the 0.05 significance level. Therefore, the null hypothesis is rejected.

This means the data have significant individual heterogeneity, and the FEM is more appropriate than the POLS model. The LM test shows a p-value of 0.0359, which is also below the 0.05 threshold. This result rejects the null hypothesis of no panel effect, suggesting that the REM is preferred over the POLS model. The Hausman test yields a chi-square value of 434.37 with a p-value of 0.0000, far below the 0.05 significance level. Therefore, the null hypothesis is rejected. This indicates that the FEM should be chosen instead of the REM. Based on the F-test, LM test, and Hausman test results, the FEM should be used to estimate Model 2. It better captures individual heterogeneity in the data and is more appropriate than the POLS and REMs.

Table 5.9  
Model Selection Tests for Panel Data Regression (Model 3)

|     | <b>F-Test</b>                                                           | <b>LM Test</b>                                      | <b>Hausman Test</b>                       |
|-----|-------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------|
| ROA | F test that all $u_i=0$ :<br>F(3113, 12649) = 4.04<br>Prob > F = 0.0000 | chibar2(01) = 3917.55<br>Prob > chibar2 =<br>0.0000 | chi2(15) = 481.57<br>Prob > chi2 = 0.0000 |
| ROE | F test that all $u_i=0$ :<br>F(3113, 12649) = 3.22<br>Prob > F = 0.0000 | chibar2(01) = 1787.53<br>Prob > chibar2 =<br>0.0000 | chi2(15) = 605.60<br>Prob > chi2 = 0.0000 |

Table 5.9 presents the test results for Model 3, using ROA and ROE as alternative measures of FP. For ROA, the F-statistic is 4.04 with a p-value of 0.0000; for ROE, the F-statistic is 3.22, with a p-value of 0.0000. The null hypothesis is rejected since both p-values are equal to 0 and far below the 0.05 significance level. This suggests that the FEM is better than the POLS model under both measures. The LM statistic for ROA is 3917.55 with a p-value of 0.0000, and for ROE it is 1787.53 with a p-value of 0.0000. As both p-values are below 0.05, the random effects model is preferred over the POLS model. The Hausman test statistic is 481.57 for ROA and 605.60 for ROE, with p-values equal to 0.0000. Since both p-values are well below 0.05, the null hypothesis is rejected. This means the FEM is more appropriate than the REM. In conclusion, based on the F-test, LM, and Hausman test results, the FEM is more suitable than the POLS and REMs, whether ROA or ROE measures FP. Therefore, the FEM will be used to estimate Model 3 in the following regression analysis.

## 5.8 Multiple Regression Analysis

This section uses multiple regression analysis to examine the relationships among variables and to address the research questions by assessing the explanatory power of each variable. Based on the F-test, LM test, and Hausman test results, all models in this study use fixed effects. The fixed effects model captures individual-specific influences in the intercept term rather than in the variance of the error term. This model can effectively control for individual heterogeneity that may cause biased estimates (Wooldridge, 2016). In this study, firms may have unique and time-invariant characteristics. The fixed effects model reduces bias by removing the influence of these unchanging traits, which makes it suitable for this analysis. In addition, time-fixed effects are included to improve the model's accuracy. These control for macroeconomic shocks or policy changes that affect all individuals simultaneously (Dian, 2014). Such time factors usually influence FP indicators across all firms. If not controlled for, their effects may be wrongly attributed to the explanatory variables, leading to biased estimates. By including time fixed effects, the model can remove these common time-varying influences, making the regression results more reliable.

This subsection includes two panel analyses. First, it analyzes the impact of internal and external corporate governance mechanisms on FP. Second, it investigates the relationship between internal and external corporate governance and SLACK.

### 5.8.1 The Effect of Internal and External Corporate Governance on Firm Performance

The following regression model is designed to examine the relationship between internal and external corporate governance and FP (ROA and ROE):

$$\begin{aligned} ROA_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\ & \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\ & \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SIZE_{i,t} + \beta_{13} LEV_{i,t} + \beta_{14} AGE_{i,t} + \quad (5.1) \\ & \mu_i + \lambda_t + \varepsilon_{i,t} \end{aligned}$$

$$ROE_{i,t} = \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} +$$

$$\begin{aligned} & \beta_5 \text{INDDIR}_{i,t} + \beta_6 \text{DUAL}_{i,t} + \beta_7 \text{SALARY}_{i,t} + \beta_8 \text{HHI}_{i,t} + \beta_9 \text{PC}_{i,t} + \\ & \beta_{10} \text{MEDIA}_{i,t} + \beta_{11} \text{BIG4}_{i,t} + \beta_{12} \text{SIZE}_{i,t} + \beta_{13} \text{LEV}_{i,t} + \beta_{14} \text{AGE}_{i,t} + \\ & \mu_i + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (5.2)$$

Here, the subscripts  $i$  and  $t$  represent firm and year, respectively.  $\alpha_0$  is a constant term, and  $\beta$  denotes the regression coefficients for each variable. The dummy variables  $\mu_i$  and  $\lambda_t$  capture firm and year fixed effects, respectively, while  $\varepsilon_{i,t}$  represents the error term that varies across firms and over time. Standard errors are clustered at the firm level to control for serial correlation and heteroskedasticity.

Table 5.10  
Multiple Regression Results of Internal and External Corporate Governance on FP

| VARIABLES    | ROA         |             | ROE         |             |
|--------------|-------------|-------------|-------------|-------------|
|              | Coefficient | t-statistic | Coefficient | t-statistic |
| TOP1         | 0.0724***   | 6.06        | 0.1758***   | 5.91        |
| SOE          | 0.0003      | 0.05        | -0.0131     | -1.03       |
| MSHARE       | 0.0226**    | 2.00        | 0.0464**    | 1.99        |
| BOARD        | 0.0274***   | 3.56        | 0.0408**    | 2.32        |
| INDDIR       | 0.1516***   | 7.47        | 0.2351***   | 5.44        |
| DUAL         | -0.0036*    | -1.72       | -0.0088*    | -1.69       |
| SALARY       | 0.0184***   | 10.55       | 0.0413***   | 10.31       |
| HHI          | -0.0075     | -1.21       | -0.0252*    | -1.67       |
| PC           | 0.0143***   | 5.98        | 0.0384***   | 6.26        |
| BIG4         | 0.0153***   | 3.76        | 0.0200**    | 2.18        |
| MEDIA        | 0.0074***   | 7.77        | 0.0112***   | 4.86        |
| SIZE         | 0.0240***   | 10.12       | 0.0632***   | 10.73       |
| LEV          | -0.2130***  | -23.44      | -0.4216***  | -16.37      |
| AGE          | -0.0050***  | -13.12      | -0.0115***  | -12.39      |
| Firm Effect  | Yes         |             | Yes         |             |
| Year Effect  | Yes         |             | Yes         |             |
| Constant     | -0.8092***  | -15.48      | -1.7935***  | -15.44      |
| Observations | 15,786      |             | 15,786      |             |
| R-squared    | 0.2049      |             | 0.1668      |             |
| F-Statistic  | 55.02       | (0.0000)*** | 33.66       | (0.0000)*** |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.10 shows the multiple regression results of internal and external corporate governance on FP. Internal corporate governance is measured by TOP1, SOE, MSHARE, BOARD, INDDIR, DUAL, and SALARY. HHI, PC, BIG4, and MEDIA measure external governance. ROA and ROE measure firm performance. It also includes several control variables: SIZE, LEV, and AGE. The models include firm and year fixed effects, which means that firm-specific and time-related factors are controlled. According to the results in Table 5.10, the  $R^2$  of the ROA model is 0.2049, and the  $R^2$  of the ROE model is 0.1668. R-squared shows the proportion of variance in the dependent variable that can be explained by the regression model (Richardson, 2011). Its value ranges from 0 to 1. The F-statistics in both models are significant at the 1% level. This means the models are statistically meaningful, the independent variables can explain changes in the dependent variables, and the model fit is good (Richardson, 2011).

Among the internal governance variables, the coefficient of TOP1 on ROA is 0.0724 ( $t = 6.06$ ), and on ROE is 0.1758 ( $t = 5.91$ ), both statistically significant at the 1% level. A one percentage point increase in TOP1 is associated with a 7.24 percentage point increase in ROA and a 17.58 percentage point increase in ROE. These findings support Hypothesis 1a and suggest that higher equity concentration is linked to better FP.

The coefficient of SOE is 0.0003 for ROA ( $t = 0.05$ ) and -0.0131 for ROE ( $t = -1.03$ ), both statistically insignificant. This means that the performance difference between state-owned and non-state-owned firms is not statistically meaningful, and Hypothesis 1b is not supported.

MSHARE has a significant and positive effect on both ROA and ROE. The coefficient for ROA is 0.0226 ( $t = 2.00$ ), which is significant at the 5% level. For ROE, it is 0.0464 ( $t = 1.99$ ), which is also significant at the 5% level. This means that a one percentage point increase in MSHARE is associated with a 2.26 percentage point increase in ROA and a 4.64 percentage point increase in ROE. These results support Hypothesis 1c and suggest that aligning managerial and shareholder interests enhances firm outcomes.

BOARD is positively associated with both ROA and ROE. The coefficients are 0.0274 ( $t = 3.56$ ) and 0.0408 ( $t = 2.32$ ). An increase in BOARD by one member is associated with a 2.74 percentage point increase in ROA and a 4.08 percentage point

increase in ROE. These results support Hypothesis 1d, indicating that larger boards may enhance monitoring and decision-making.

INDDIR positively affects both ROA (coefficient = 0.1516,  $t = 7.47$ ) and ROE (coefficient = 0.2351,  $t = 5.44$ ). A one percentage point increase in INDDIR is linked to a 15.16 percentage point increase in ROA and a 23.51 percentage point increase in ROE. These results support Hypothesis 1e and highlight the importance of INDDIR in enhancing FP.

DUAL harms both ROA (coefficient = -0.0036,  $t = -1.72$ ) and ROE (coefficient = -0.0088,  $t = -1.69$ ), with both significant at the 10% level. This weakly supports Hypothesis 1f, suggesting that separating the roles of CEO and board chair may slightly improve performance.

SALARY is positively and significantly associated with ROA (coefficient = 0.0184,  $t = 10.55$ ) and ROE (coefficient = 0.0413,  $t = 10.31$ ). A one-unit increase in compensation is related to a 1.84 percentage point increase in ROA and a 4.13 percentage point increase in ROE, supporting Hypothesis 1g. More substantial monetary incentives may improve managerial effort and firm results.

Among the external governance variables, product market competition is measured by the HHI index. The coefficient for ROA is -0.0075 ( $t = -1.21$ ), which is not statistically significant. For ROE, the coefficient is -0.0252 ( $t = -1.67$ ), which is significant at the 10% level. Since a higher HHI value indicates lower competition, the negative sign suggests that increased market concentration is associated with weaker performance, while greater competition improves firm outcomes. Specifically, a one-unit increase in HHI leads to a 2.52 percentage point decrease in ROE. These findings suggest higher product market competition ROE and partially support Hypothesis 1h.

PC are positively and significantly associated with FP. The coefficient for ROA is 0.0143 ( $t = 5.98$ ) and ROE is 0.0384 ( $t = 6.26$ ), both significant at the 1% level. This implies that, on average, firms with political connections experience a 1.43 percentage point increase in ROA and a 3.84 percentage point increase in ROE, supporting Hypothesis 1i.

For external audit quality, the coefficient for BIG4 is 0.0153 ( $t = 3.76$ ) for ROA and 0.0200 ( $t = 2.18$ ) for ROE. Both are significant at the 1% level. These results indicate that being audited by a Big Four accounting firm is associated with a 1.53 percentage point increase in ROA and a 2.00 percentage point increase in ROE,

supporting Hypothesis 1j.

MEDIA also shows a significant positive association with FP. The coefficient for ROA is 0.0074 ( $t = 7.77$ ) and ROE is 0.0112 ( $t = 4.86$ ), both significant at the 1% level. These results suggest that a one-unit increase in MEDIA is associated with a 0.74 percentage point increase in ROA and a 1.12 percentage point increase in ROE, supporting Hypothesis 1k.

Among the control variables, SIZE shows a positive relationship with ROA (coefficient = 0.0240,  $t = 10.12$ ) and ROE (coefficient = 0.0632,  $t = 10.73$ ), both significant at the 1% level. Larger firms may benefit from economies of scale and resource advantages, contributing to higher performance.

LEV shows a strong negative relationship with both models. The coefficient is -0.2130 for ROA and -0.4216 for ROE, both significant at the 1% level. Higher debt levels may increase financial risk and reduce FP.

AGE is also negatively related to performance. The coefficient is -0.0050 ( $t = -13.12$ ) for ROA and -0.0115 ( $t = -12.39$ ) for ROE. Each additional year in firm age is associated with a 0.5 percentage point decline in ROA and a 1.15 percentage point decline in ROE, possibly due to reduced flexibility and innovation in older firms.

The regression results indicate that several internal corporate governance mechanisms—particularly TOP1, MSHARE, BOARD, INDDIR, and SALARY—significantly enhance FP. In contrast, DUAL is negatively associated with performance. Among the external governance variables, PC, BIG4, and MEDIA are positively and significantly related to ROA and ROE. Moreover, the negative coefficients on HHI suggest a positive relationship between HHI and ROE. Regarding the control variables, SIZE contributes positively to performance, while LEV and AGE exert significant adverse effects. These findings underscore the importance of internal and external governance mechanisms in shaping corporate performance.

### **5.8.2 The Effect of Internal and External Corporate Governance on Budgetary Slack**

The following regression model is designed to examine the relationship between internal and external corporate governance and SLACK:

$$\begin{aligned}
\text{SLACK}_{i,t} = & \alpha_0 + \beta_1 \text{TOP1}_{i,t} + \beta_2 \text{SOE}_{i,t} + \beta_3 \text{MSHARE}_{i,t} + \beta_4 \text{BOARD}_{i,t} + \\
& \beta_5 \text{INDDIR}_{i,t} + \beta_6 \text{DUAL}_{i,t} + \beta_7 \text{SALARY}_{i,t} + \beta_8 \text{HHI}_{i,t} + \beta_9 \text{PC}_{i,t} + \\
& \beta_{10} \text{MEDIA}_{i,t} + \beta_{11} \text{BIG4}_{i,t} + \beta_{12} \text{SIZE}_{i,t} + \beta_{13} \text{LEV}_{i,t} + \beta_{14} \text{AGE}_{i,t} + \quad (5.3) \\
& \mu_i + \lambda_t + \varepsilon_{i,t}
\end{aligned}$$

Here, the subscripts  $i$  and  $t$  represent firm and year, respectively.  $\alpha_0$  is a constant term, and  $\beta$  denotes the regression coefficients for each variable. The dummy variables  $\mu_i$  and  $\lambda_t$  capture firm and year fixed effects, respectively, while  $\varepsilon_{i,t}$  represents the error term that varies across firms and over time. Standard errors are clustered at the firm level to control for serial correlation and heteroskedasticity.

Table 5.11  
Multiple Regression Results of Internal and External Corporate Governance on SLACK

| VARIABLES    | SLACK       |             |
|--------------|-------------|-------------|
|              | Coefficient | t-statistic |
| TOP1         | -0.3419***  | -3.23       |
| SOE          | 0.1574***   | 3.87        |
| MSHARE       | -0.2709**   | -2.45       |
| BOARD        | -0.0947     | -1.49       |
| INDDIR       | -0.1308     | -0.80       |
| DUAL         | 0.0182      | 0.89        |
| SALARY       | -0.0735***  | -3.73       |
| HHI          | 0.0461      | 0.82        |
| PC           | -0.0430*    | -1.69       |
| BIG4         | -0.2477***  | -4.10       |
| MEDIA        | -0.0280***  | -2.91       |
| SIZE         | -0.1059***  | -5.43       |
| LEV          | -0.0356     | -0.53       |
| AGE          | -0.0248***  | -7.54       |
| Firm Effect  | Yes         |             |
| Year Effect  | Yes         |             |
| Constant     | 4.3915***   | 9.60        |
| Observations | 15,786      |             |
| R-squared    | 0.1088      |             |

|             |       |             |
|-------------|-------|-------------|
| F-Statistic | 72.59 | (0.0000)*** |
|-------------|-------|-------------|

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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.11 shows the multiple regression results of internal corporate governance on SLACK. Internal governance is measured by TOP1, SOE, MSHARE, BOARD, INDDIR, DUAL, and SALARY. HHI, PC, BIG4, and MEDIA measure external governance. ROA and ROE measure FP. It also includes several control variables: SIZE, LEV, and AGE. The model includes firm and year effects, meaning differences across firms and years have been controlled. According to the results in Table 5.11, the  $R^2$  of the model is 0.1088. The F-statistic is significant at the 1% level, which means the regression model is statistically significant. The independent variables can explain the changes in SLACK, and the model fit is good.

Among the internal governance variables, the coefficient of TOP1 on SLACK is -0.3419 and is significant at the 1% level ( $t = -3.23$ ). This suggests that a 1 percentage point increase in the shareholding of the largest shareholder leads to a 0.3419 unit decrease in SLACK. This shows a significant negative relationship between TOP1 and SLACK, supporting hypothesis 2a, which states that higher equity concentration is related to lower SLACK.

SOE has a positive and significant effect on slack. The coefficient is 0.1574 ( $t = 3.87$ ), significant at the 1% level, indicating that SOEs are more likely to exhibit higher levels of SLACK than non-SOEs. This result supports Hypothesis 2b.

MSHARE also has a significant negative association with SLACK. The coefficient is -0.2709 ( $t = -2.45$ ), significant at the 5% level. This implies that a one percentage point increase in MSHARE leads to a 0.2709 unit reduction in slack. The result supports Hypothesis 2c and highlights that managerial equity ownership may better align incentives and discourage slack behavior.

BOARD is negatively associated with slack, with a coefficient of -0.0947, but the relationship is not statistically significant ( $t = -1.49$ ). This suggests that BOARD does not clearly affect SLACK, and hypothesis 2d is not supported.

INDDIR also has a negative coefficient (-0.1308) but is not statistically significant ( $t = -0.80$ ). This also suggests that INDDIR does not clearly affect SLACK, and hypothesis 2e is not supported.

DUAL shows a positive but insignificant effect on slack, with a coefficient of

0.0182 ( $t = 0.89$ ). This suggests that combining the roles of CEO and board chair does not clearly influence slack in this model, and Hypothesis 2f is not supported.

SALARY is negatively and significantly related to slack, with a coefficient of -0.0735 ( $t = -3.73$ ), which is significant at the 1% level. This means that an increase in compensation is associated with a 0.0735 unit decrease in slack. The result supports Hypothesis 2g and suggests that appropriate incentives can align managerial interests with firm goals, thereby discouraging slack.

Among the external governance variables, the coefficient of HHI is 0.0461 ( $t = 0.82$ ), which is not statistically significant. This suggests that HHI does not significantly affect SLACK, and Hypothesis 2h is not supported.

PC shows a negative relationship with slack, with a coefficient of -0.0430 ( $t = -1.69$ ), which is significant at the 10% level. Specifically, a one-unit increase in the PC index reduces SLACK by 0.0430 units, supporting Hypothesis 2i.

BIG4 has a substantial adverse effect on SLACK. The coefficient is -0.2477 ( $t = -4.10$ ), significant at the 1% level. This indicates that being audited by a Big Four accounting firm is associated with a 0.2477 unit decrease in SLACK, supporting Hypothesis 2j and underscoring the role of audit quality in curbing opportunistic budgeting behavior.

MEDIA is negatively correlated with slack at the 1% significance level ( $t = -2.91$ ), with a regression coefficient of -0.0280. This result indicates that a one-unit increase in media exposure is associated with a 0.0280 unit reduction in slack, supporting hypothesis 2k.

Among the control variables, SIZE has a significant negative relationship with SLACK. The coefficient is -0.1059 and is significant at the 1% level ( $t = -5.43$ ), indicating that larger firms tend to have lower levels of SLACK. LEV has no significant effect on SLACK, with a coefficient of -0.0356 ( $t = -0.53$ ). This suggests that capital structure does not significantly influence slack in the sample used in this study. AGE is significantly negatively associated with slack, with a coefficient of -0.0248 ( $t = -7.54$ ), significant at the 1% level. This result suggests that older firms are more experienced and may maintain tighter control over budgetary practices, thus exhibiting lower levels of slack.

The regression results indicate that internal and external corporate governance mechanisms significantly influence SLACK. Among internal governance variables, higher TOP1, greater MSHARE, and more substantial SALARY are significantly

associated with lower levels of slack. In contrast, state ownership is positively associated with SLACK. BOARD, INDDIR, and DUAL do not show statistically significant effects. Regarding external governance, PC, BIG4, and MEDIA are significantly negatively related to SLACK. In contrast, HHI has no significant effect on slack. These findings underscore the importance of internal and external governance mechanisms in constraining SLACK.

## 5.9 Mediating Effect

This study uses the causal steps approach of Baron and Kenny (1986) to test the mediating effect of SLACK on the relationship between internal and external corporate governance and FP.

### 5.9.1 Mediation Effect Analysis of Budgetary Slack on the Relationship between Internal and External Corporate Governance and Firm Performance

In section 5.8.1, this study tests the total effects of various independent internal and external governance variables on the dependent variable of FP. Section 5.8.2 tests the effects of various internal and external governance independent variables on the mediating variable of SLACK. To further verify the mediating effect of SLACK on the relationship between internal and external corporate governance and FP (ROA and ROE), this study designed the following models:

$$\begin{aligned} ROA_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\ & \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\ & \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SLACK_{i,t} + \beta_{13} SIZE_{i,t} + \beta_{14} LEV_{i,t} + \\ & \beta_{15} AGE_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (5.4)$$

$$\begin{aligned} ROE_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\ & \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\ & \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SLACK_{i,t} + \beta_{13} SIZE_{i,t} + \beta_{14} LEV_{i,t} + \\ & \beta_{15} AGE_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (5.5)$$

Here, the subscripts  $i$  and  $t$  represent firm and year, respectively.  $\alpha_0$  is a

constant term, and  $\beta$  denotes the regression coefficients for each variable. The dummy variables  $\mu_i$  and  $\lambda_t$  capture firm and year fixed effects, respectively, while  $\varepsilon_{i,t}$  represents the error term that varies across firms and over time. Standard errors are clustered at the firm level to control for serial correlation and heteroskedasticity.

Based on the causal steps approach by Baron and Kenny (1986), this study tests the mediating role of SLACK in the relationship between internal and external corporate governance and FP in three steps. The internal governance variables considered include TOP1, SOE, MSHARE, BOARD, proportion of INDDIR, DUAL, and SALARY. HHI, PC, BIG4, and MEDIA measure external governance. It also includes several control variables: SIZE, LEV, and AGE. Table 5.12 presents the results of the mediation tests. The first set of columns shows the effects of each internal and external governance variable on the dependent variable, FP (ROA and ROE). The second set reports the effects of the internal and external governance variables on the mediating variable, SLACK. The third set presents the effects of internal and external governance and SLACK on FP (ROA and ROE).

Table 5.12

Mediation Effect Results of SLACK on the Relationship between Internal and External Corporate Governance and FP

| VARIABLES   | (1)         |             |             |             | (2)         |             | (3)         |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|             | ROA         |             | ROE         |             | SLACK       |             | ROA         |             | ROE         |             |
|             | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic |
| TOP1        | 0.0724***   | 6.06        | 0.1758***   | 5.91        | -0.3419***  | -3.23       | 0.0717***   | 6.02        | 0.1748***   | 5.88        |
| SOE         | 0.0003      | 0.05        | -0.0131     | -1.03       | 0.1574***   | 3.87        | 0.0006      | 0.12        | -0.0126     | -0.99       |
| MSHARE      | 0.0226**    | 2.00        | 0.0464**    | 1.99        | -0.2709**   | -2.45       | 0.0220**    | 1.96        | 0.0455*     | 1.95        |
| BOARD       | 0.0274***   | 3.56        | 0.0408**    | 2.32        | -0.0947     | -1.49       | 0.0272***   | 3.53        | 0.0406**    | 2.30        |
| INDDIR      | 0.1516***   | 7.47        | 0.2351***   | 5.44        | -0.1308     | -0.80       | 0.1514***   | 7.46        | 0.2347***   | 5.43        |
| DUAL        | -0.0036*    | -1.72       | -0.0088*    | -1.69       | 0.0182      | 0.89        | -0.0036*    | -1.70       | -0.0087*    | -1.68       |
| SALARY      | 0.0184***   | 10.55       | 0.0413***   | 10.31       | -0.0735***  | -3.73       | 0.0183***   | 10.44       | 0.0411***   | 10.22       |
| HHI         | -0.0075     | -1.21       | -0.0252*    | -1.67       | 0.0461      | 0.82        | -0.0074     | -1.19       | -0.0250*    | -1.66       |
| PC          | 0.0143***   | 5.98        | 0.0384***   | 6.26        | -0.0430*    | -1.69       | 0.0142***   | 5.93        | 0.0383***   | 6.22        |
| BIG4        | 0.0153***   | 3.76        | 0.0200**    | 2.18        | -0.2477***  | -4.10       | 0.0148***   | 3.64        | 0.0192**    | 2.10        |
| MEDIA       | 0.0074***   | 7.77        | 0.0112***   | 4.86        | -0.0280***  | -2.91       | 0.0074***   | 7.72        | 0.0111***   | 4.82        |
| SLACK       |             |             |             |             |             |             | -0.0020***  | -2.65       | -0.0031*    | -1.68       |
| SIZE        | 0.0240***   | 10.12       | 0.0632***   | 10.73       | -0.1059***  | -5.43       | 0.0238***   | 10.05       | 0.0629***   | 10.69       |
| LEV         | -0.2130***  | -23.44      | -0.4216***  | -16.37      | -0.0356     | -0.53       | -0.2131***  | -23.48      | -0.4217***  | -16.39      |
| AGE         | -0.0050***  | -13.12      | -0.0115***  | -12.39      | -0.0248***  | -7.54       | -0.0050***  | -13.27      | -0.0116***  | -12.46      |
| Firm Effect | Yes         |             | Yes         |             | Yes         |             | Yes         |             | Yes         |             |
| Year Effect | Yes         |             | Yes         |             | Yes         |             | Yes         |             | Yes         |             |

|              |            |           |            |            |           |            |            |           |            |           |
|--------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|-----------|
| Constant     | -0.8092*** | -15.48    | -1.7935*** | -15.44     | 4.3915*** | 9.60       | -0.8002*** | -15.28    | -1.9466*** | -15.30    |
| Observations | 15,786     |           | 15,786     |            | 15,786    |            | 15,786     |           | 15,786     |           |
| R-squared    | 0.2049     |           | 0.1668     |            | 0.1088    |            | 0.2054     |           | 0.1670     |           |
| F-Statistic  | 55.02      | (0.0000)* | 33.66      | (0.0000)** | 72.59     | (0.0000)** | 53.91      | (0.0000)* | 32.98      | (0.0000)* |
|              |            | **        |            | *          |           | *          |            | **        |            | **        |

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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression coefficient of SLACK on ROA is -0.0020 and is statistically significant at the 1% level ( $t = -2.65$ ). This means that a one-unit increase in SLACK is associated with an average 0.0020 percentage point decrease in ROA. Similarly, the effect of SLACK on ROE is also harmful and statistically significant at the 10% level, with a coefficient of -0.0031 ( $t = -1.68$ ). This means that each one-unit increase in slack corresponds to a 0.0031 percentage point decline in ROE. The result supports Hypothesis 3 and provides empirical evidence for the mediating role of SLACK in the relationship between internal corporate governance and FP.

For TOP1, the first step shows a significant positive effect on both ROA and ROE, with coefficients of 0.0724 ( $t = 6.06$ ) and 0.1758 ( $t = 5.91$ ), respectively. This indicates that higher equity concentration is associated with better FP. In the second step, TOP1 is significantly negatively related to SLACK, with a coefficient of -0.3419 ( $t = -3.23$ ), suggesting that an increase in the largest shareholder's equity by 1 percentage point reduces SLACK by 0.3419 units. In the third step, after adding the mediating variable SLACK, the coefficients of TOP1 on ROA and ROE decrease slightly to 0.0717 ( $t = 6.02$ ) and 0.1748 ( $t = 5.88$ ), but they remain significantly positive. At the same time, SLACK is negatively related to both ROA and ROE, with coefficients of -0.0020 ( $t = -2.65$ ) and -0.0031 ( $t = -1.68$ ), respectively. These results indicate that SLACK partially mediates the relationship between TOP1 and FP. Higher TOP1 can improve performance by reducing slack, supporting hypothesis 4a.

For SOE, its effects on ROA (0.0003,  $t = 0.05$ ) and ROE (coefficient = -0.0131,  $t = -1.03$ ) are not statistically significant. Although SOE significantly increases slack (coefficient = 0.1574,  $t = 3.87$ ), the lack of a direct effect on performance means the prerequisite for mediation analysis is unmet. Therefore, SLACK does not mediate the relationship between SOE and firm performance, and hypothesis 4b is unsupported.

For MSHARE, the first step shows a significant positive total effect on both ROA and ROE, with coefficients of 0.0226 ( $t = 2.00$ ) and 0.0464 ( $t = 1.99$ ), respectively. In the second step, the regression coefficient of MSHARE on SLACK is -0.2709 ( $t = -2.45$ ), which is significant at the 5% level. This indicates that higher MSHARE is associated with lower levels of SLACK. In the third step, after controlling for SLACK, the positive effects of MSHARE on ROA and ROE slightly decrease to 0.0220 ( $t = 1.96$ ) and 0.0455 ( $t = 1.95$ ), but both remain significant. At the same time, SLACK shows a negative relationship with ROA and ROE, with coefficients of -0.0020 ( $t = -2.65$ ) and -0.0031 ( $t = -1.68$ ), respectively. These results

suggest that SLACK partially mediates the relationship between MSHARE and FP, supporting hypothesis 4c.

For the BOARD, the first step regression shows a positive and statistically significant effect on both ROA (coefficient = 0.0274,  $t = 3.56$ ) and ROE (coefficient = 0.0408,  $t = 2.32$ ), indicating that larger boards are generally associated with improved FP. However, in the second step, BOARD does not show a statistically significant relationship with SLACK (coefficient = -0.0947,  $t = -1.49$ ). Since BOARD's effect on SLACK is insignificant, the necessary condition for establishing a mediation pathway is unmet. In the third step, although BOARD remains significantly associated with ROA and ROE after controlling for SLACK, the absence of a significant link between BOARD and SLACK means that no mediating effect of SLACK is present. Therefore, hypothesis 4d, which proposes that SLACK mediates the relationship between BOARD and FP, is not supported.

For INDDIR, the first step reveals a substantial positive impact on both ROA (coefficient = 0.1516,  $t = 7.47$ ) and ROE (coefficient = 0.2351,  $t = 5.44$ ), suggesting that a higher proportion of independent directors contributes to better firm outcomes. However, in the second step, the coefficient of INDDIR on SLACK is -0.1308 ( $t = -0.80$ ), which is not statistically significant. As a result, the mediation condition is not satisfied. In the third step, the coefficients of INDDIR on ROA and ROE remain significant even after including SLACK. However, there is no evidence of a mediating effect due to the lack of a significant relationship between INDDIR and SLACK. Therefore, hypothesis 4e is not supported by the empirical results.

For DUAL, the first-step regression shows an adverse effect on ROA (coefficient = -0.0036,  $t = -1.72$ ) and ROE (coefficient = -0.0088,  $t = -1.69$ ), which are significant at the 10% level. This result satisfies the condition for proceeding with the mediation analysis. In the second step, DUAL is not significantly associated with SLACK (coefficient = 0.0182,  $t = 0.89$ ). In the third step, the coefficients of DUAL on ROA and ROE remain negative and significant at the 10% level. However, the lack of a significant link between DUAL and SLACK indicates that the mediating condition is unmet. Therefore, SLACK does not mediate the relationship between DUAL and FP, and hypothesis 4f is not supported.

For SALARY, the first step shows a significant positive effect on ROA and ROE, with coefficients of 0.0184 ( $t = 10.55$ ) and 0.0413 ( $t = 10.31$ ), respectively. In the second step, SALARY is negatively related to SLACK, with a coefficient of

-0.0735 ( $t = -3.73$ ), indicating that increased compensation is linked to lower slack. In the third step, after controlling for SLACK, the SALARY coefficients on ROA and ROE slightly decrease to 0.0183 ( $t = 10.44$ ) and 0.0411 ( $t = 10.22$ ), respectively, but remain significant. SLACK maintains a negative and significant association with both performance metrics. These results support hypothesis 4g, suggesting that compensation incentives improve FP by reducing budgetary slack.

As for HHI, its effect on ROA is not statistically significant (coefficient = -0.0075,  $t = -1.21$ ), and it is also not significantly related to SLACK (coefficient = 0.0461,  $t = 0.82$ ). However, its effect on ROE is significant at the 10% level (coefficient = -0.0252,  $t = -1.67$ ). Despite this, the absence of a significant relationship between HHI and SLACK means that the condition for mediation is not satisfied. Therefore, SLACK does not mediate the relationship between HHI and FP, and hypothesis 4h is unsupported.

For PC, the first step reveals that this variable has a significantly positive impact on both ROA and ROE, with coefficients of 0.0143 ( $t = 5.98$ ) and 0.0384 ( $t = 6.26$ ), respectively, indicating that PC helps improve FP. In the second step, PC shows an adverse effect on SLACK, with a coefficient of -0.0430 ( $t = -1.69$ ), significant at the 10% level. This implies that PC are associated with reduced SLACK. In the third step, after controlling for the mediating variable SLACK, the positive coefficients of PC on ROA and ROE slightly decrease to 0.0142 ( $t = 5.93$ ) and 0.0383 ( $t = 6.22$ ), but remain significant at the 1% level. At the same time, the coefficients of SLACK on ROA and ROE are significantly negative, at -0.0020 ( $t = -2.65$ ) and -0.0031 ( $t = -1.68$ ), respectively. These results suggest that SLACK partially mediates the relationship between PC and FP, supporting hypothesis 4i.

For BIG4, the first-step regression results show that BIG4 is significantly and positively associated with ROA and ROE, with coefficients of 0.0153 ( $t = 3.76$ ) and 0.0200 ( $t = 2.18$ ), respectively. This indicates that higher BIG4 is linked to improved FP. In the second step, BIG4 has a significant adverse effect on SLACK, with a coefficient of -0.2477 ( $t = -4.10$ ), significant at the 1% level, suggesting that external auditing helps reduce SLACK. In the third step, after controlling for SLACK, the positive effects of BIG4 on ROA and ROE slightly decrease to 0.0148 ( $t = 3.64$ ) and 0.0192 ( $t = 2.10$ ), but remain statistically significant. At the same time, SLACK continues to significantly negatively affect ROA and ROE, with coefficients of -0.0020 ( $t = -2.65$ ) and -0.0031 ( $t = -1.68$ ). These results suggest that SLACK partially

mediates the relationship between external audit and FP, supporting hypothesis 4j.

For MEDIA, the first-step regression results show that MEDIA is positively and significantly related to both ROA and ROE at the 1% level, with coefficients of 0.0074 ( $t = 7.77$ ) and 0.0112 ( $t = 4.86$ ), indicating that media coverage contributes positively to FP. In the second step, MEDIA negatively affects SLACK, with a coefficient of -0.0280 ( $t = -2.91$ ), which is significant at the 1% level. This implies that MEDIA helps constrain SLACK. In the third step, after controlling for SLACK, MEDIA still has a significant positive effect on ROA and ROE, with coefficients of 0.0074 ( $t = 7.72$ ) and 0.0111 ( $t = 4.82$ ), respectively. Meanwhile, the coefficients for SLACK on ROA and ROE remain significantly negative, at -0.0020 ( $t = -2.65$ ) and -0.0031 ( $t = -1.68$ ). These findings indicate that SLACK partially mediates the relationship between MEDIA and FP, supporting hypothesis 4k.

The mediation analysis confirms that SLACK partially mediates the relationship between several corporate governance mechanisms and FP. Among internal governance variables, TOP1, MSHARE, and SALARY significantly affect performance and reduce SLACK, enhancing firm outcomes. However, no mediating effect is found for SOE, BOARD, INDDIR, or DUAL, as the conditions for mediation are not fully satisfied. Regarding external governance, the results indicate that PC, BIG4, and MEDIA influence FP directly and indirectly through their significant adverse effects on SLACK. The findings highlight that SLACK is an important transmission channel through which specific governance mechanisms improve FP.

### **5.10 Robustness Checks**

This study conducted two robustness tests to ensure the reliability and consistency of the empirical results. First, the dependent variable representing FP was replaced with earnings per share (EPS) to examine whether the regression results remain robust when using an alternative performance measure. Second, industry fixed effects were added to all regression models to control for possible structural differences across industries. Industry-level heterogeneity may influence the relationship between corporate governance, SLACK, and FP. Including industry dummy variables helps control for unobservable but relatively stable factors at the industry level, which improves both the explanatory power and robustness of the estimation results (DeHaan, 2021).

### 5.10.1 Alternative Measures of Firm Performance – EPS

In empirical research, a standard method to test the robustness of regression results is to change the measurement of key variables. By replacing variables, researchers can examine whether the model results are sensitive to the choice of indicators, which helps improve the credibility of the conclusions (Alodat et al., 2021). To test the robustness of the findings, this study replaces the original dependent variable of FP with an alternative measure: EPS, a key financial indicator that reflects a firm's profitability. It shows the net income allocated to each outstanding share of common stock. It is calculated by dividing net profit by the weighted average number of ordinary shares outstanding during the reporting period (Mardnly et al., 2018; Mashayekhi & Bazaz, 2008). EPS reflects the level of earnings and partly captures the effect of capital structure on performance. Therefore, it is considered one of the key indicators of FP (Al-Matari et al., 2014). Based on the studies of Mardnly et al. (2018) and Mashayekhi & Bazaz (2008), this paper uses EPS as a substitute dependent variable to examine whether the relationship among corporate governance, SLACK, and FP remains robust when the measure of performance changes.

First, the effects of internal and external governance variables on firm performance are tested separately. The following are the multiple regression models:

$$\begin{aligned} \text{EPS}_{i,t} = & \alpha_0 + \beta_1 \text{TOP1}_{i,t} + \beta_2 \text{SOE}_{i,t} + \beta_3 \text{MSHARE}_{i,t} + \beta_4 \text{BOARD}_{i,t} + \\ & \beta_5 \text{INDDIR}_{i,t} + \beta_6 \text{DUAL}_{i,t} + \beta_7 \text{SALARY}_{i,t} + \beta_8 \text{HHI}_{i,t} + \beta_9 \text{PC}_{i,t} + \\ & \beta_{10} \text{MEDIA}_{i,t} + \beta_{11} \text{BIG4}_{i,t} + \beta_{12} \text{SIZE}_{i,t} + \beta_{13} \text{LEV}_{i,t} + \beta_{14} \text{AGE}_{i,t} + \mu_i \\ & + \lambda_t + \varepsilon_{i,t} \end{aligned} \quad (5.6)$$

Table 5.13

The Effect of Internal and External Governance Variables on the Alternative Performance Measure - EPS

| VARIABLES | EPS         |             |
|-----------|-------------|-------------|
|           | Coefficient | t-statistic |
| TOP1      | 0.8253***   | 4.95        |
| SOE       | -0.0664     | -0.99       |
| MSHARE    | 0.1693      | 1.46        |
| BOARD     | 0.4556***   | 4.62        |

|              |             |             |
|--------------|-------------|-------------|
| INDDIR       | 2.4573***   | 8.49        |
| DUAL         | -0.0450*    | -1.94       |
| SALARY       | 0.2550***   | 10.86       |
| HHI          | 0.0687      | 1.06        |
| PC           | 0.1991***   | 6.81        |
| BIG4         | 0.2949***   | 4.30        |
| MEDIA        | 0.1165***   | 9.21        |
| SIZE         | 0.4813***   | 14.62       |
| LEV          | -1.8773***  | -18.30      |
| AGE          | -0.0459***  | -8.79       |
| Firm Effect  | Yes         |             |
| Year Effect  | Yes         |             |
| Constant     | -15.6473*** | -19.38      |
| Observations | 15,786      |             |
| R-squared    | 0.2019      |             |
| F-Statistic  | 40.93       | (0.0000)*** |

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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.13 presents the regression results examining the impact of internal and external corporate governance variables on FP, using EPS as an alternative performance measure. Overall, the findings are broadly consistent with the baseline regression results reported in Table 5.10 (which used ROA and ROE as performance indicators), proving the robustness and stability of the main empirical relationships.

TOP1 shows a significantly positive effect on EPS, with a coefficient of 0.8253 ( $t = 4.95$ ,  $p < 0.01$ ). This is consistent with the baseline results and provides robust support for Hypothesis 1a, indicating that concentrated ownership structure contributes to better FP.

SOE continues to show no statistically significant impact on EPS (coefficient = -0.0664,  $t = -0.99$ ), consistent with the findings for ROA and ROE. This result implies that state ownership does not provide performance advantages, and Hypothesis 1b is not supported.

BOARD is also positively and significantly associated with EPS (coefficient = 0.4556,  $t = 4.62$ ,  $p < 0.01$ ), in line with the findings for ROA and ROE. This

reinforces the argument that larger boards may facilitate better monitoring and enhance decision-making quality, improving performance.

INDDIR also shows a significantly positive effect in the robustness model, with a coefficient of 2.4573 ( $t = 8.49$ ,  $p < 0.01$ ), consistent with the baseline results. This confirms that INDDIR has a stable positive impact on FP.

DUAL has a negative and significant effect on EPS (coefficient = -0.0450,  $t = -1.94$ ,  $p < 0.1$ ), consistent with the baseline model. This weakly supports Hypothesis 1f, suggesting that separating the roles of CEO and chairperson may enhance performance.

SALARY remains significantly positive in the robustness test, with a coefficient of 0.2550 ( $t = 10.86$ ,  $p < 0.01$ ), supporting its positive effect on FP, in line with the baseline findings.

HHI remains statistically insignificant in the EPS model (coefficient = 0.0687,  $t = 1.06$ ), similar to its effect on ROA. This suggests that the influence of market competition on FP is not robust.

PC has a significantly positive effect on EPS, with a coefficient of 0.1991 ( $t = 6.81$ ,  $p < 0.01$ ). This result is consistent with the baseline regression and strongly supports Hypothesis 1i. It confirms a significant positive relationship between PC and FP.

BIG4 shows a significantly positive effect in all three models (ROA, ROE, and EPS). It passes the 1% significance level in each case. This supports Hypothesis 1j and indicates that high-quality audit services can improve FP.

MEDIA also has a significantly positive effect in the robustness model, with a coefficient of 0.1165 ( $t = 9.21$ ,  $p < 0.01$ ), consistent with the baseline results. This shows that MEDIA has a positive impact on FP.

MSHARE is statistically significant in the baseline models for ROA and ROE at the 5% level, indicating a positive association with FP. In the EPS model, although the coefficient remains positive (0.1693,  $t = 1.46$ ), it is not statistically significant. This suggests that the direction of the effect is consistent across models. However, the impact of MSHARE on EPS is weaker and less robust. One possible explanation is that EPS, as a per-share metric, is influenced by profitability, changes in the number of outstanding shares, capital structure, and other accounting adjustments (Mardnly et al., 2018). This may dilute or obscure the performance-enhancing effect of managerial shareholding. For example, share issuance, stock buybacks, or other equity-related

financing activities can significantly influence EPS, even if the firm's operational performance remains stable (Mashayekhi & Bazaz, 2008). In contrast, ROA and ROE are more directly tied to operational efficiency and return on capital (Liu et al., 2022), which are likely more sensitive to managerial incentives.

In addition, the signs and significance levels of the control variables (e.g., SIZE, LEV, AGE) are also largely stable, further supporting the validity of the results. The robustness check using EPS as an alternative dependent variable confirms that the core relationships identified in the main regressions are not sample-specific or performance-measure dependent, strengthening the overall reliability of the study's conclusions.

Next, this study uses EPS as an alternative performance measure to test the mediating effect of SLACK in the relationship between internal and external corporate governance and FP. The models are specified as follows:

$$\begin{aligned}
 \text{EPS}_{i,t} = & \alpha_0 + \beta_1 \text{TOP1}_{i,t} + \beta_2 \text{SOE}_{i,t} + \beta_3 \text{MSHARE}_{i,t} + \beta_4 \text{BOARD}_{i,t} + \\
 & \beta_5 \text{INDDIR}_{i,t} + \beta_6 \text{DUAL}_{i,t} + \beta_7 \text{SALARY}_{i,t} + \beta_8 \text{HHI}_{i,t} + \beta_9 \text{PC}_{i,t} + \\
 & \beta_{10} \text{MEDIA}_{i,t} + \beta_{11} \text{BIG4}_{i,t} + \beta_{12} \text{SLACK}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \beta_{14} \text{LEV}_{i,t} + \\
 & \beta_{15} \text{AGE}_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t}
 \end{aligned} \tag{5.7}$$

Table 5.14

Mediation Effect Results of SLACK on the Relationship between Internal and External Corporate Governance and Alternative Measures of FP - EPS

| VARIABLES | (1)<br>EPS  |             | (2)<br>SLACK |             | (3)<br>EPS  |             |
|-----------|-------------|-------------|--------------|-------------|-------------|-------------|
|           | Coefficient | t-statistic | Coefficient  | t-statistic | Coefficient | t-statistic |
| TOP1      | 0.8253***   | 4.95        | -0.3419***   | -3.23       | 0.8191***   | 4.92        |
| SOE       | -0.0664     | -0.99       | 0.1574***    | 3.87        | -0.0635     | -0.95       |
| MSHARE    | 0.1693      | 1.46        | -0.2709**    | -2.45       | 0.1644      | 1.42        |
| BOARD     | 0.4556***   | 4.62        | -0.0947      | -1.49       | 0.4538***   | 4.61        |
| INDDIR    | 2.4573***   | 8.49        | -0.1308      | -0.80       | 2.4549***   | 8.50        |
| DUAL      | -0.0450*    | -1.94       | 0.0182       | 0.89        | -0.0447*    | -1.92       |
| SALARY    | 0.2550***   | 10.86       | -0.0735***   | -3.73       | 0.2537***   | 10.79       |
| HHI       | 0.0687      | 1.06        | 0.0461       | 0.82        | 0.0696      | 1.07        |
| PC        | 0.1991***   | 6.81        | -0.0430*     | -1.69       | 0.1983***   | 6.77        |
| BIG4      | 0.2949***   | 4.30        | -0.2477***   | -4.10       | 0.2903***   | 4.23        |
| MEDIA     | 0.1165***   | 9.21        | -0.0280***   | -2.91       | 0.1160***   | 9.16        |
| SLACK     |             |             |              |             | -0.0183*    | -1.69       |
| SIZE      | 0.4813***   | 14.62       | -0.1059***   | -5.43       | 0.4794***   | 14.56       |
| LEV       | -1.8773***  | -18.30      | -0.0356      | -0.53       | -1.8780***  | -18.33      |

|              |             |             |            |             |             |             |
|--------------|-------------|-------------|------------|-------------|-------------|-------------|
| AGE          | -0.0459***  | -8.79       | -0.0248*** | -7.54       | -0.0464***  | -8.92       |
| Firm Effect  | Yes         |             | Yes        |             | Yes         |             |
| Year Effect  | Yes         |             | Yes        |             | Yes         |             |
| Constant     | -15.6473*** | -19.38      | 4.3915***  | 9.60        | -15.5672*** | -19.24      |
| Observations | 15,786      |             | 15,786     |             | 15,786      |             |
| R-squared    | 0.2019      |             | 0.1088     |             | 0.2021      |             |
| F-Statistic  | 40.93       | (0.0000)*** | 72.59      | (0.0000)*** | 39.52       | (0.0000)*** |

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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.14 reports the robustness test results for the mediating effect of SLACK between internal and external governance and EPS. The results in column (2) regarding the effect of internal and external governance variables on SLACK are derived from Section 5.8.2. Overall, the findings confirm the baseline results, indicating that the mediating role of SLACK is generally robust across different performance metrics.

First, SLACK shows a significant adverse effect on FP (EPS) in the robustness test, with a coefficient of -0.0183 ( $t = -1.69$ ), consistent with the baseline results.

Next, among the internal governance variables, TOP1 exhibits a significant adverse effect on SLACK (coefficient = -0.3419,  $t = -3.23$ ) and a significant positive effect on EPS before and after controlling for slack. The total effect remains strong (coefficient = 0.8191,  $t = 4.92$ ), supporting the partial mediation hypothesis 4a in line with the baseline results.

SOE does not show a significant relationship with EPS in either the total effect model (coefficient = -0.0635,  $t = -0.95$ ) or the direct effect model (coefficient = -0.0664,  $t = -0.99$ ). Although SOE significantly affects SLACK (coefficient = 0.1574,  $t = 3.87$ ,  $p < 0.01$ ), the absence of a significant total effect suggests no meaningful mediation relationship exists to examine. Therefore, there is no evidence of a significant mediation effect of SLACK that is consistent with the baseline results.

While the effect of MSHARE on EPS is not statistically significant (coefficient = 0.1693,  $t = 1.46$ ), the coefficient remains positive and directionally consistent with the baseline ROA and ROE models, which have shown significant positive effects. This suggests that although the direction of the mediating pathway remains consistent with baseline models, the mediation effect is not statistically significant under the EPS model. One possible reason is that EPS is a per-share measure. Therefore, it is affected by changes in the number of outstanding shares, changes in the capital structure, non-operational accounting treatments, and overall profitability (Mardnly et al., 2018).

For BOARD, INDDIR, and DUAL, the mediation analysis yields results consistent with the baseline regression findings. All three variables show significant direct and total effects on EPS. However, none of them is significantly associated with SLACK. Therefore, no mediating effect is observed. These findings suggest that while these governance mechanisms influence FP, they do not operate through the channel of SLACK.

SALARY again demonstrates a significant positive impact on EPS (coefficient

= 0.2550,  $t = 10.86$ ) and a significant adverse effect on slack (coefficient = -0.0735,  $t = -3.73$ ). After controlling for slack, the coefficient remains positive and significant (coefficient = 0.2537,  $t = 10.79$ ), while slack negatively affects EPS (coefficient = -0.0183,  $t = -1.69$ ). These results confirm the mediating role of slack in the link between SALARY and FP, which aligns with the baseline results.

Regarding external governance mechanisms, HHI shows no significant association with slack (coefficient = 0.0461,  $t = 0.82$ ) or EPS (coefficient = 0.0687,  $t = 1.06$ ). This suggests that SLACK does not mediate the effect of market competition on performance, and Hypothesis 4h is not supported.

PC are significantly positively related to EPS (coefficient = 0.1991,  $t = 6.81$ ) and significantly negatively related to SLACK (coefficient = -0.0430,  $t = -1.69$ ). After controlling for slack, PC significantly positively impacts EPS (coefficient = 0.1983,  $t = 6.77$ ), suggesting that political ties enhance FP. Additionally, SLACK remains negatively associated with EPS (coefficient = -0.0183,  $t = -1.69$ ). These results confirm that SLACK partially mediates the relationship between PC and FP. Therefore, Hypothesis 4i is supported.

BIG4 shows a significant adverse effect on slack (coefficient = -0.2477,  $t = -4.10$ ) and a robust positive effect on EPS (coefficient = 0.2949,  $t = 4.30$ ). After including budgetary slack, both the direct and indirect effects remain significant, confirming that slack partially mediates the relationship between audit quality and performance. This provides strong support for the baseline results.

MEDIA significantly reduces slack (coefficient = -0.0280,  $t = -2.91$ ) and positively affects EPS (coefficient = 0.1165,  $t = 9.21$ ). After controlling for slack, both the direct and indirect effects remain significant, confirming that slack partially mediates the relationship between MEDIA and performance. These findings confirm the mediating role of SLACK and support Hypothesis 4k.

### **5.10.2 Inclusion of Industry Fixed Effects**

To test the robustness of the research findings, this study further includes industry fixed effects as a second group of robustness checks. This helps control for potential biases in model estimation caused by systematic differences at the industry level. In corporate governance and firm behavior studies, industries often differ

significantly in governance structures, business models, and performance outcomes. Without proper controls, such differences may lead to spurious correlations between variables (MacKay & Phillips, 2005). Industry fixed effects, as a widely used method, can effectively control for unobservable but relatively stable industry-specific factors, thereby improving the reliability and external validity of the estimation results (DeHaan, 2021; Bhagat & Bolton, 2019; Wang et al., 2019).

First, this section examines the effects of internal and external governance variables on FP (ROA and ROE) after including industry fixed effects. The following are the multiple regression models:

$$\begin{aligned} ROA_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\ & \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\ & \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SIZE_{i,t} + \beta_{13} LEV_{i,t} + \beta_{14} AGE_{i,t} + \mu_i \\ & + \lambda_t + \delta_{industry} + \varepsilon_{i,t} \end{aligned} \quad (5.8)$$

$$\begin{aligned} ROE_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\ & \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\ & \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SIZE_{i,t} + \beta_{13} LEV_{i,t} + \beta_{14} AGE_{i,t} + \mu_i \\ & + \lambda_t + \delta_{industry} + \varepsilon_{i,t} \end{aligned} \quad (5.9)$$

Table 5.15  
Robustness Test with Industry Fixed Effects: Internal and External Corporate Governance and FP

| VARIABLES | ROA         |             | ROE         |             |
|-----------|-------------|-------------|-------------|-------------|
|           | Coefficient | t-statistic | Coefficient | t-statistic |
| TOP1      | 0.0736***   | 6.08        | 0.1790***   | 5.90        |
| SOE       | 0.0004      | 0.08        | -0.0125     | -0.95       |
| MSHARE    | 0.0207*     | 1.85        | 0.0440*     | 1.89        |
| BOARD     | 0.0268***   | 3.48        | 0.0395**    | 2.25        |
| INDDIR    | 0.1523***   | 7.43        | 0.2379***   | 5.38        |
| DUAL      | -0.0035*    | -1.67       | -0.0086*    | -1.65       |
| SALARY    | 0.0187***   | 10.70       | 0.0421***   | 10.41       |
| HHI       | -0.0071     | -1.20       | -0.0212     | -1.47       |
| PC        | 0.0140***   | 5.89        | 0.0374***   | 6.22        |
| BIG4      | 0.0156***   | 3.81        | 0.0204**    | 2.22        |

|                 |            |             |            |             |
|-----------------|------------|-------------|------------|-------------|
| MEDIA           | 0.0074***  | 7.73        | 0.0112***  | 4.85        |
| SIZE            | 0.0242***  | 10.20       | 0.0637***  | 10.88       |
| LEV             | -0.2129*** | -23.67      | -0.4214*** | -16.52      |
| AGE             | -0.0050*** | -13.12      | -0.0115*** | -12.49      |
| Firm Effect     | Yes        |             | Yes        |             |
| Year Effect     | Yes        |             | Yes        |             |
| Industry Effect | Yes        |             | Yes        |             |
| Constant        | -0.7872*** | -8.92       | -2.0116*** | -9.95       |
| Observations    | 15,786     |             | 15,786     |             |
| R-squared       | 0.2084     |             | 0.1710     |             |
| F-Statistic     | 30.94      | (0.0000)*** | 18.69      | (0.0000)*** |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.15 reports the regression results of internal and external corporate governance mechanisms on ROA and ROE, after controlling for industry fixed effects. The robustness test results are broadly consistent with those from the baseline regression, which further confirms the reliability of the relationship between corporate governance and FP. After including industry fixed effects, the direction of the coefficients remains the same, and the significance levels are primarily maintained, indicating that the empirical results are robust.

TOP1 significantly affects ROA and ROE, with coefficients of 0.0736 ( $t = 6.08$ ) and 0.1790 ( $t = 5.90$ ), respectively. This provides further support for the hypothesis.

SOE remains insignificant in both models. The coefficient for ROA is 0.0004 ( $t = 0.08$ ), and for ROE it is -0.0125 ( $t = -0.95$ ). These findings are consistent with the baseline results and suggest that SOE has no significant impact on performance.

MSHARE still positively affects ROA and ROE, with coefficients of 0.0207 ( $t = 1.85$ ) and 0.0440 ( $t = 1.89$ ), respectively. These results are significant at the 10% level, and the direction of the effect is consistent with that in the baseline model, supporting the hypothesis.

BOARD continues to affect both ROA and ROE positively. The coefficients are 0.0268 ( $t = 3.48$ ) and 0.0395 ( $t = 2.25$ ). These results are consistent with the baseline model, indicating robust findings.

INDDIR shows a significantly positive effect on ROA and ROE at the 1% level, with coefficients of 0.1523 ( $t = 7.43$ ) and 0.2379 ( $t = 5.38$ ), respectively. This provides

strong support for the hypothesis.

DUAL continues to exhibit an adverse effect, with coefficients of -0.0035 ( $t = -1.67$ ) for ROA and -0.0086 ( $t = -1.65$ ) for ROE, both significant at the 10% level. The direction of the effect is consistent with the baseline model, indicating a certain degree of robustness.

SALARY still strongly affects ROA and ROE, with coefficients of 0.0187 ( $t = 10.70$ ) and 0.0421 ( $t = 10.41$ ), respectively. These findings are consistent with the baseline regression and support the hypothesis.

HHI remains insignificant in both models. The coefficient for ROA is -0.0071 ( $t = -1.20$ ), and for ROE it is -0.0212 ( $t = -1.47$ ). These results align with the baseline model and do not support the hypothesis.

PC shows a significantly positive relationship with performance. The coefficients for ROA and ROE are 0.0140 ( $t = 5.89$ ) and 0.0374 ( $t = 6.22$ ), respectively, which are consistent with the baseline regression and confirm the robustness of the findings.

BIG4 significantly positively affects both ROA and ROE. The coefficients are 0.0156 ( $t = 3.81$ ) and 0.0204 ( $t = 2.22$ ). These results align with the baseline and support the robustness of this variable.

MEDIA also shows a significantly positive effect on ROA and ROE at the 1% level. The coefficients are 0.0074 ( $t = 7.73$ ) and 0.0112 ( $t = 4.85$ ). These results further confirm the media's role in monitoring and governance, and the findings are robust.

In conclusion, the robustness test results in Table 5.15 are highly consistent with the baseline regression in terms of both direction and significance. These findings demonstrate strong stability and consistency, further enhancing the credibility and explanatory power of the study's conclusions.

Next, the effects of internal and external governance variables on SLACK are tested. The regression model also includes Industry fixed effects to control for differences across industries that may influence budgeting behavior. The following are the multiple regression models:

$$\begin{aligned} \text{SLACK}_{i,t} = & \alpha_0 + \beta_1 \text{TOP1}_{i,t} + \beta_2 \text{SOE}_{i,t} + \beta_3 \text{MSHARE}_{i,t} + \beta_4 \text{BOARD}_{i,t} + \\ & \beta_5 \text{INDDIR}_{i,t} + \beta_6 \text{DUAL}_{i,t} + \beta_7 \text{SALARY}_{i,t} + \beta_8 \text{HHI}_{i,t} + \beta_9 \text{PC}_{i,t} + \\ & \beta_{10} \text{MEDIA}_{i,t} + \beta_{11} \text{BIG4}_{i,t} + \beta_{12} \text{SIZE}_{i,t} + \beta_{13} \text{LEV}_{i,t} + \beta_{14} \text{AGE}_{i,t} + \end{aligned} \quad (5.10)$$

$$\mu_i + \lambda_t + \delta_{\text{industry}} + \varepsilon_{i,t}$$

Table 5.16

Robustness Test with Industry Fixed Effects: Internal and External Corporate Governance and SLACK

| VARIABLES       | SLACK       |             |
|-----------------|-------------|-------------|
|                 | Coefficient | t-statistic |
| TOP1            | -0.3354***  | -3.17       |
| SOE             | 0.1593***   | 3.92        |
| MSHARE          | -0.2568**   | -2.33       |
| BOARD           | -0.0963     | -1.51       |
| INDDIR          | -0.1185     | -0.73       |
| DUAL            | 0.0203      | 0.99        |
| SALARY          | -0.0712***  | -3.61       |
| HHI             | 0.0764      | 1.42        |
| PC              | -0.0467*    | -1.84       |
| BIG4            | -0.2441***  | -4.03       |
| MEDIA           | -0.0276***  | -2.88       |
| SIZE            | -0.1046***  | -5.29       |
| LEV             | -0.0367     | -0.54       |
| AGE             | -0.0250***  | -7.57       |
| Firm Effect     | Yes         |             |
| Year Effect     | Yes         |             |
| Industry Effect | Yes         |             |
| Constant        | 4.0965***   | 8.14        |
| Observations    | 15,786      |             |
| R-squared       | 0.1108      |             |
| F-Statistic     | 40.07       | (0.0000)*** |

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.16 reports the effects of internal and external corporate governance mechanisms on SLACK after controlling for industry fixed effects. Compared to the baseline regression, the direction and significance of the coefficients remain unchanged after including industry controls. This further confirms the reliability of the empirical results and indicates that the main findings of this study are robust.

TOP1 continues to show a significant adverse effect on SLACK, among the internal governance variables. This further supports the hypothesis that higher TOP1 helps constrain slack behavior. SOE still has a significant positive effect on SLACK, with a coefficient of 0.1593 ( $t = 3.92$ ), which aligns with the baseline results. This suggests that state-owned firms are more prone to slack than non-state-owned firms. MSHARE remains negatively associated with slack, with a coefficient of -0.2568 ( $t = -2.33$ ), confirming that insider ownership helps mitigate SLACK. BOARD and INDDIR both show adverse but statistically insignificant effects on slack. These results align with the baseline regression and suggest that these two internal governance variables may have limited or unstable roles in reducing slack. DUAL remains positively related to slack, but the relationship is not statistically significant. This indicates that the dual role of CEO and board chair has limited influence on SLACK, consistent with earlier results. SALARY shows a significant negative association with slack, with a coefficient of -0.0712 ( $t = -3.61$ ), further confirming that SALARY reduces slack behavior.

Regarding the external governance variables, HHI still has an insignificant effect on SLACK (coefficient = 0.0764,  $t = 1.42$ ), which is consistent with the baseline regression and does not support the corresponding hypothesis. PC remains negatively related to slack, with a coefficient of -0.0467 ( $t = -1.84$ ), consistent with previous findings and supportive of the hypothesis. BIG4 continues to negatively impact slack significantly (coefficient = -0.2441,  $t = -4.03$ ). The direction and significance remain stable, indicating that high-quality audits help constrain managerial manipulation of budgets. MEDIA also shows a significant adverse effect on slack, with a coefficient of -0.0276 ( $t = -2.88$ ), further validating the governance role of media oversight in reducing slack. In summary, the regression results in Table 5.16 are highly consistent with the baseline findings regarding coefficient direction and significance levels. The empirical results remain robust after controlling for industry fixed effects, strengthening the explanatory power and reliability of this study's conclusions.

Finally, to examine whether the mediating effect of SLACK in the relationship between internal and external corporate governance variables and FP remains robust, the SLACK variable is included in the performance regression models with industry fixed effects:

$$\begin{aligned}
ROA_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\
& \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\
& \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SLACK_{i,t} + \beta_{13} SIZE_{i,t} + \beta_{14} LEV_{i,t} + \quad (5.11) \\
& \beta_{15} AGE_{i,t} + \mu_i + \lambda_t + \delta_{industry} + \varepsilon_{i,t}
\end{aligned}$$

$$\begin{aligned}
ROE_{i,t} = & \alpha_0 + \beta_1 TOP1_{i,t} + \beta_2 SOE_{i,t} + \beta_3 MSHARE_{i,t} + \beta_4 BOARD_{i,t} + \\
& \beta_5 INDDIR_{i,t} + \beta_6 DUAL_{i,t} + \beta_7 SALARY_{i,t} + \beta_8 HHI_{i,t} + \beta_9 PC_{i,t} + \\
& \beta_{10} MEDIA_{i,t} + \beta_{11} BIG4_{i,t} + \beta_{12} SLACK_{i,t} + \beta_{13} SIZE_{i,t} + \beta_{14} LEV_{i,t} + \quad (5.12) \\
& \beta_{15} AGE_{i,t} + \mu_i + \lambda_t + \delta_{industry} + \varepsilon_{i,t}
\end{aligned}$$

Table 5.17

Robustness Test with Industry Fixed Effects: Mediation Results of SLACK Between Internal and External Governance and FP

| VARIABLES   | (1)         |             |             |             | (2)         |             | (3)         |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|             | ROA         |             | ROE         |             | SLACK       |             | ROA         |             | ROE         |             |
|             | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic | Coefficient | t-statistic |
| TOP1        | 0.0736***   | 6.08        | 0.1790***   | 5.90        | -0.3354***  | -3.17       | 0.0729***   | 6.04        | 0.1778***   | 5.87        |
| SOE         | 0.0004      | 0.08        | -0.0125     | -0.95       | 0.1593***   | 3.92        | 0.0008      | 0.15        | -0.0120     | -0.91       |
| MSHARE      | 0.0207*     | 1.85        | 0.0440*     | 1.89        | -0.2568**   | -2.33       | 0.0201*     | 1.81        | 0.0431*     | 1.86        |
| BOARD       | 0.0268***   | 3.48        | 0.0395**    | 2.25        | -0.0963     | -1.51       | 0.0266***   | 3.46        | 0.0391**    | 2.23        |
| INDDIR      | 0.1523***   | 7.43        | 0.2379***   | 5.38        | -0.1185     | -0.73       | 0.1520***   | 7.43        | 0.2375***   | 5.37        |
| DUAL        | -0.0035*    | -1.67       | -0.0086*    | -1.65       | 0.0203      | 0.99        | -0.0035*    | -1.65       | -0.0085     | -1.64       |
| SALARY      | 0.0187***   | 10.70       | 0.0421***   | 10.41       | -0.0712***  | -3.61       | 0.0186***   | 10.59       | 0.0418***   | 10.32       |
| HHI         | -0.0071     | -1.20       | -0.0212     | -1.47       | 0.0764      | 1.42        | -0.0069     | -1.17       | -0.0209     | -1.45       |
| PC          | 0.0140***   | 5.89        | 0.0374***   | 6.22        | -0.0467*    | -1.84       | 0.0139***   | 5.84        | 0.0373***   | 6.18        |
| BIG4        | 0.0156***   | 3.81        | 0.0204**    | 2.22        | -0.2441***  | -4.03       | 0.0150***   | 3.68        | 0.0196**    | 2.12        |
| MEDIA       | 0.0074***   | 7.73        | 0.0112***   | 4.85        | -0.0276***  | -2.88       | 0.0074***   | 7.67        | 0.0111***   | 4.81        |
| SLACK       |             |             |             |             |             |             | -0.0022***  | -2.81       | -0.0035*    | -1.91       |
| SIZE        | 0.0242***   | 10.20       | 0.0637***   | 10.88       | -0.1046***  | -5.29       | 0.0240***   | 10.13       | 0.0633***   | 10.83       |
| LEV         | -0.2129***  | -23.67      | -0.4214***  | -16.52      | -0.0367     | -0.54       | -0.2129***  | -23.73      | -0.4216***  | -16.54      |
| AGE         | -0.0050***  | -13.12      | -0.0115***  | -12.49      | -0.0250***  | -7.57       | -0.0050***  | -13.28      | -0.0116***  | -12.57      |
| Firm Effect | Yes         |             | Yes         |             | Yes         |             | Yes         |             | Yes         |             |
| Year Effect | Yes         |             | Yes         |             | Yes         |             | Yes         |             | Yes         |             |

|                 |            |           |            |            |           |            |            |           |            |           |
|-----------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|-----------|
| Industry Effect | Yes        |           | Yes        |            | Yes       |            | Yes        |           | Yes        |           |
| Constant        | -0.7872*** | -8.92     | -2.0116*** | -9.95      | 4.0965*** | 8.14       | -0.7783*** | -8.79     | -1.9974*** | -9.84     |
| Observations    | 15,786     |           | 15,786     |            | 15,786    |            | 15,786     |           | 15,786     |           |
| R-squared       | 0.2084     |           | 0.1710     |            | 0.1108    |            | 0.2089     |           | 0.1713     |           |
| F-Statistic     | 30.94      | (0.0000)* | 18.69      | (0.0000)** | 40.07     | (0.0000)** | 30.86      | (0.0000)* | 18.63      | (0.0000)* |
|                 |            | **        |            | *          |           | *          |            | **        |            | **        |

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\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5.17 presents the regression results for the mediating effect of SLACK between corporate governance and FP after including industry fixed effects. Overall, the robustness test results are highly consistent with the baseline regression, further confirming the stability of the mediation paths and the reliability of the study's findings.

First, SLACK continues to harm both ROA and ROE, with coefficients of -0.0022 ( $t = -2.81$ ) and -0.0035 ( $t = -1.91$ ), respectively. These results align with the baseline model and support its role as a mediating variable.

Among the internal governance mechanisms, TOP1 still shows a significant negative impact on SLACK and a stable positive effect on ROA and ROE. After controlling for the mediating variable, the coefficients remain significant at 0.0729 ( $t = 6.04$ ) for ROA and 0.1778 ( $t = 5.87$ ) for ROE, consistent with the baseline results, confirming the robustness of the mediation path in hypothesis 4a.

SOE still has a significant positive relationship with SLACK, but its effect on ROA and ROE remains insignificant. This further confirms that although SOE can explain variations in slack, it does not significantly influence performance through this channel, indicating no valid mediating effect.

MSHARE remains positively associated with ROA and ROE at the 10% level, significantly reducing slack at the 5% level. After including slack, MSHARE continues to positively affect ROA and ROE, with coefficients of 0.0201 ( $t = 1.81$ ) and 0.0431 ( $t = 1.86$ ), respectively. These results are consistent with the baseline model, indicating that the direction of the mediation path remains unchanged, and hypothesis 4c is partially supported.

BOARD and INDDIR still do not show significant effects on SLACK. However, both variables maintain positive and significant impacts on ROA and ROE. Since their effects do not operate through SLACK, no mediation is found, consistent with the baseline regression.

DUAL continues negatively affecting FP, with coefficients near the 10% significance threshold. These results are consistent with the baseline model. However, its path through slack remains insignificant (coefficient = 0.0203,  $t = 0.99$ ), indicating that its effect on performance is not transmitted through SLACK, and no significant mediation is observed.

SALARY continues to reduce budgetary slack significantly and maintains strong positive effects on ROA and ROE after controlling for slack, with coefficients

of 0.0186 ( $t = 10.59$ ) and 0.0418 ( $t = 10.32$ ), respectively. Slack also has a significant adverse effect on performance. This consistent pattern confirms that compensation improves FP partly by reducing SLACK, supporting hypothesis 4g under the robustness test.

Regarding external governance, HHI still shows no significant relationship with SLACK, indicating that the mediation path does not hold, which aligns with the baseline result.

After controlling for slack, PC continues to significantly reduce slack and positively influence ROA (0.0139,  $t = 5.84$ ) and ROE (0.0373,  $t = 6.18$ ). Slack still plays a negative role in this path, supporting the mediating role of SLACK in the relationship between PC and performance, confirming the robustness of hypothesis 4i.

BIG4 maintains a significant negative impact on slack and a positive effect on ROA and ROE, with coefficients of 0.0150 ( $t = 3.68$ ) and 0.0196 ( $t = 2.12$ ), respectively. These results suggest that the mechanism through which audit quality enhances performance by reducing slack remains valid.

MEDIA also reduces slack significantly and shows a strong positive effect on ROA (coefficient = 0.0074,  $t = 7.67$ ) and ROE (coefficient = 0.0111,  $t = 4.81$ ) after controlling for slack. These findings consistently support the conclusion that media oversight enhances performance by reducing SLACK.

In conclusion, the robustness test results in Table 5.17 are highly consistent with the baseline regression in both coefficient direction and significance level. This confirms that the mediating role of SLACK is stable and credible, providing strong support for this study's theoretical framework and empirical findings.

## 5.11 Summary of Results based on Hypotheses

This section presents a summary of the findings in relation to each hypothesis. It helps to assess whether the hypotheses are supported or not. A detailed overview of the results for each hypothesis is provided in Table 5.18.

Table 5.18  
The Summary of Results based on Hypotheses

| No. | Hypotheses                                                         | Results |
|-----|--------------------------------------------------------------------|---------|
| H1a | Ownership concentration is positively related to firm performance. | Support |

|     |                                                                                                          |                   |
|-----|----------------------------------------------------------------------------------------------------------|-------------------|
| H1b | State ownership is negatively related to firm performance.                                               | Not Support       |
| H1c | Managerial ownership is positively related to firm performance.                                          | Support           |
| H1d | Board size is positively related to firm performance.                                                    | Support           |
| H1e | Board dependence is positively related to firm performance.                                              | Support           |
| H1f | CEO duality is negatively related to firm performance.                                                   | Support           |
| H1g | Executive compensation incentives are positively related to firm performance.                            | Support           |
| H1h | Product market competition is positively related to firm performance.                                    | Partially Support |
| H1i | Political connections are positively related to firm performance.                                        | Support           |
| H1j | External audit quality is positively related to firm performance.                                        | Support           |
| H1k | Media attention is positively related to firm performance.                                               | Support           |
| H2a | Ownership concentration is negatively related to budgetary slack.                                        | Support           |
| H2b | Budgetary slack is greater in state-owned listed companies relative to non-state-owned listed companies. | Support           |
| H2c | Managerial ownership is negatively related to budgetary slack.                                           | Support           |
| H2d | Board size is negatively related to budgetary slack.                                                     | Not Support       |
| H2e | The proportion of independent directors on the board is negatively related to budgetary slack.           | Not Support       |
| H2f | CEO duality is positively related to budgetary slack.                                                    | Not Support       |
| H2g | Executive compensation incentives are negatively related to budgetary slack.                             | Support           |
| H2h | Product market competition is negatively related to                                                      | Not Support       |

|     |                                                                                                                                  |             |
|-----|----------------------------------------------------------------------------------------------------------------------------------|-------------|
|     | budgetary slack.                                                                                                                 |             |
| H2i | Political connections are negatively related to budgetary slack.                                                                 | Support     |
| H2j | External audit quality is negatively related to budgetary slack.                                                                 | Support     |
| H2k | Media attention is negatively related to budgetary slack.                                                                        | Support     |
| H3  | Budgetary slack is negatively related to firm performance.                                                                       | Support     |
| H4a | Budgetary slack plays a mediating role in the relationship between ownership concentration and firm performance.                 | Support     |
| H4b | Budgetary slack plays a mediating role in the relationship between state ownership and firm performance.                         | Not Support |
| H4c | Budgetary slack plays a mediating role in the relationship between managerial ownership and firm performance.                    | Support     |
| H4d | Budgetary slack plays a mediating role in the relationship between board size and firm performance.                              | Not Support |
| H4e | Budgetary slack plays a mediating role in the relationship between the proportion of independent directors and firm performance. | Not Support |
| H4f | Budgetary slack plays a mediating role in the relationship between CEO duality and firm performance.                             | Not Support |
| H4g | Budgetary slack plays a mediating role in the relationship between executive compensation incentives and firm performance.       | Support     |
| H4h | Budgetary slack plays a mediating role in the relationship between product market competition and firm performance.              | Not Support |

|     |                                                                                                                 |         |
|-----|-----------------------------------------------------------------------------------------------------------------|---------|
| H4i | Budgetary slack plays a mediating role in the relationship between political connections and firm performance.  | Support |
| H4j | Budgetary slack plays a mediating role in the relationship between external audit quality and firm performance. | Support |
| H4k | Budgetary slack plays a mediating role in the relationship between media attention and firm performance.        | Support |

## 5.12 Summary of the Chapter

This chapter presents the data analysis of this study. First, reliability tests were conducted to show the stability and accuracy of the collected data. Consequently, the treatment of normality assumptions was explained. Descriptive statistics and Pearson's correlation analysis were used to describe the sample characteristics and identify relationships between variables. After that, a multicollinearity test was performed, showing no multicollinearity problem among the variables. To address heteroskedasticity and serial correlation in the panel data, the models used clustered robust standard errors to improve the robustness of the estimates. The fixed effects model was selected for estimation based on the F-test, LM test, and Hausman test results. The study then developed regression models to examine the effects of internal and external corporate governance on firm performance, and the effects of internal and external governance on budgetary slack. This chapter also explored the mediating role of budgetary slack in the relationship between internal and external governance and firm performance. Alternative performance measures and industry fixed effects were introduced to verify the robustness. Finally, the regression results were summarized according to the proposed hypotheses of the study.

## **CHAPTER SIX**

### **DISCUSSION**

#### **6.1 Introduction**

This chapter presents the empirical findings of the regression analysis, grounded in relevant theories and existing literature. Section 6.2 presents the research results in detail, organized according to the research objectives and hypotheses. Section 6.3 presents the conclusions of this chapter.

#### **6.2 Discussion of Findings**

This section presents the regression results in relation to the objectives and hypotheses of this study. This study has four research objectives, which are as follows:

1. To examine the influence of internal and external corporate governance on firm performance.
2. To examine the influence of internal and external corporate governance on budgetary slack.
3. To examine the influence of budgetary slack on firm performance.
4. To investigate the mediating effect of budgetary slack in the relationship between internal and external corporate governance and firm performance.

##### **6.2.1 Discussion of Results for Hypothesis 1a**

The empirical results of this study strongly support hypothesis 1a, which states that ownership concentration (TOP1) is positively related to firm performance. Specifically, the regression analysis shows that the shareholding ratio of the largest shareholder has a significant positive relationship with ROA and ROE at the 1% significance level. This finding is consistent with the expectations of agency theory (Jensen & Meckling, 1976). As Alkurdi et al. (2021) noted, when large shareholders

hold a significant portion of a company's shares, they have more substantial incentives to monitor managerial behavior, as they bear a larger share of the costs associated with management inefficiency. This enhanced monitoring helps reduce agency conflicts between managers and shareholders, improving firm performance. These findings are significant in China, where ownership structures are more concentrated than in developed economies such as the United States (Jiang & Kim, 2020). The results confirm the view of Ma et al. (2010), who argued that ownership concentration has a greater impact on firm performance than any other type of ownership structure in Chinese listed companies. Controlling shareholders play a key role in preventing the management from expropriating resources and optimizing resource allocation (Bhakar et al., 2024).

At the same time, the findings of this study are consistent with a large number of previous empirical studies (Claessens & Djankov, 1999; Mak & Kusnadi, 2005; Cho & Kim, 2007; Young et al., 2008; Zhang et al., 2014; Puni & Anlesinya, 2020). The results align with those of Claessens and Djankov (1999), who discovered that firms' profitability in the Czech Republic increases as ownership concentration rises. Similarly, the results supported the findings of Mak and Kusnadi (2005) in Malaysia and Singapore, Haniffa and Hudaib (2006) in Malaysia, Cho and Kim (2007) in South Korea, Young et al. (2008) in Taiwan, and Puni and Anlesinya (2020) in Ghana. These studies reported a significant positive relationship between large shareholder ownership and firm performance.

In the Chinese context, the results are also consistent with the findings of Ali et al. (2018), who found that the shareholding of the top ten shareholders in Chinese A-share listed companies is significantly and positively related to ROE. This study also supports the findings of Zhang et al. (2014), who examined companies in China's IT industry and found a significant positive relationship between ownership concentration and firm performance. In addition, the significant coefficients for both ROA and ROE suggest that large shareholders contribute to improving asset utilization efficiency (as indicated by ROA) and increasing returns to equity holders (as indicated by ROE). This aligns with the findings of Kao et al. (2019) and Boshnak (2024). The results of this study further strengthen the conclusion drawn by Paniagua et al. (2018), who found that firms with concentrated ownership tend to perform better than those with dispersed ownership, based on data from 59 countries. Notably, the coefficient of ownership concentration on ROE (0.174) is significantly higher than

that on ROA (0.068), suggesting that ownership concentration has a more substantial effect on ROE than on ROA. This difference may reflect that large shareholders pay special attention to maximizing shareholder returns, which directly affects their wealth.

However, the findings of this study differ from some prior research that reported a negative relationship (Lefort & Urzúa, 2008; Ducassy & Montandrou, 2015; Ongore, 2011; Queiri et al., 2021) or a nonlinear relationship (McConnell & Servaes, 1990; Chen et al., 2007) between ownership concentration and firm performance. China's unique governance environment may explain this divergence. Unlike in developed markets, large shareholders may strengthen managerial entrenchment (Fama & Jensen, 1983). In Chinese listed companies, controlling shareholders often act to prevent asset expropriation and the misappropriation of resources by managers, thereby indirectly protecting the interests of minority shareholders (Bhakar et al., 2024).

### **6.2.2 Discussion of Results for Hypothesis 1b**

The empirical results of this study show that the relationship between state ownership and firm performance does not reach statistical significance. This finding does not support hypothesis 1b, which proposed a negative relationship. Specifically, the coefficient of state ownership with ROA is positive. In contrast, its coefficient with ROE is negative, and neither is statistically significant. These results indicate that in the sample of this study, SOE does not have a clearly positive or negative effect on firm performance, reflecting a mixed and uncertain pattern.

Theoretically, this outcome highlights the multifaceted and nuanced nature of SOE's influence on firm performance. On one hand, existing literature often argues that SOE may reduce firm efficiency because government entities prioritize political goals over commercial objectives when determining corporate strategies. This can lead SOEs to deviate from profit-maximizing behavior (Iwasaki et al., 2022). Government intervention may aim to maximize social welfare or serve political interests, which increases agency costs and introduces additional political costs (Qian, 1996). On the other hand, institutional theory offers a different view, suggesting that SOEs can play a positive role. Chhibber and Majumdar (1998) argued that the presence of state ownership can help reduce agency costs and address problems

caused by information asymmetry. Furthermore, SOEs often benefit from stable funding sources, which help lower financial risk (Bhakar et al., 2024). The coexistence of these contrasting theoretical perspectives may explain why SOE in this study does not significantly impact firm performance.

The insignificant results of this study are partly consistent with findings from existing literature. Abdulsamad and Yusoff (2016) listed companies in Malaysia and found that government ownership was not significantly related to firm performance in most of the years examined. Similarly, Ali et al. (2018) analyzed listed companies across different regions in mainland China. They found that state ownership had no significant impact on ROE. These conclusions are closely aligned with the findings of this study. Although many studies, such as Lin et al. (2009), Ongore (2011), and Iwasaki et al. (2022), reported a negative relationship between state ownership and firm performance, the regression results of this study do not support such a negative link. One possible explanation is that China's SOEs have undergone mixed ownership reform in recent years, such as bringing in strategic investors and improving corporate governance. These reforms may have enhanced firm performance and weakened the adverse effects of state ownership (Zhang et al., 2021).

On the other hand, some studies, such as Mugobo et al. (2016) and Al-Matari and Al-Arussi (2016), found a positive relationship between state ownership and firm performance. However, this study does not find evidence to support that positive relationship either. This suggests that state ownership may still have negative implications for shareholder returns. SOEs are often required to achieve financial goals and take on multiple public roles, such as maintaining employment, delivering social services, and supporting industrial policy. These non-profit goals may reduce the focus on maximizing shareholder value (Iwasaki et al., 2022). Overall, the insignificant results of this study highlight the complexity of state ownership under China's unique institutional environment. State ownership may simultaneously generate both positive and negative effects on firm performance.

It is worth noting that Yang (2014), based on a study of Chinese listed companies, proposed an inverted U-shaped nonlinear relationship between state ownership and firm performance. This finding suggests that the impact of state ownership on firm performance may not be purely linear, but instead depends on the specific level of state ownership. At a moderate level of state ownership, the positive and negative effects may offset each other, resulting in an overall insignificant effect.

When state ownership is too low, it may not fully leverage its resource advantages and monitoring role (Queiri et al., 2021). On the other hand, when the state ownership level is too high, it may lead to problems such as prioritizing political goals and softening budget constraints (Iwasaki et al., 2022).

### **6.2.3 Discussion of Results for Hypothesis 1c**

The empirical results of this study provide strong support for hypothesis 1c. The analysis shows that managerial ownership has a positive and statistically significant effect on ROA and ROE at the 5% significance level. This finding indicates that a higher level of managerial ownership contributes to improved profitability across different performance measures.

The significant positive relationship between managerial ownership and firm performance supports the agency theory proposed by Jensen and Meckling (1976). According to this theory, when managers hold shares in the firm, their personal interests become more aligned with those of other shareholders. This alignment encourages managers to act in ways that benefit the firm and its shareholders, which helps reduce agency costs and improve overall performance. In addition, this result supports Cho's (1992) argument that managerial ownership reduces managers' tendency to avoid risk and motivates them to make decisions that maximize shareholder value.

The findings of this study are consistent with those reported in the existing literature. In corporate governance, Bhagat and Bolton (2019) highlighted the positive role of managerial ownership in strengthening governance structures. Ongore (2011) also argued that managerial ownership is central to value creation. In the context of emerging markets, this study's results align with those of Alabdullah (2018) in Jordan and Boshnak (2024) in Saudi Arabia, both of which confirm the positive impact of managerial ownership on firm performance. Similarly, empirical studies focusing on China, such as Qin and Deng (2009) and Ali et al. (2018), also found a positive link between managerial ownership and firm performance. This study further confirms the stability of this relationship.

This finding has special significance in the Chinese institutional context. Due to institutional constraints, managerial ownership in Chinese listed companies is generally low, and equity incentives are primarily provided in the form of

performance-based restricted stock options (Iwasaki et al., 2022). Despite these constraints, managerial ownership still shows a significant positive effect on firm performance. This suggests that even at relatively low levels, ownership-based incentives can directly impact managerial behavior and business outcomes.

The results confirm that managerial ownership functions as an effective internal governance mechanism. Its positive effect on ROA and ROE shows that aligning managerial and shareholder interests can help resolve goal conflicts between the parties. In China's specific institutional environment, managerial ownership is important in corporate governance. It offers a valuable tool for improving firm performance.

#### **6.2.4 Discussion of Results for Hypothesis 1d**

The results of this study show a significant positive relationship between board size and firm performance. A larger board size helps improve a firm's financial performance. It supports the hypothesis that firms with larger boards perform better. The findings align with agency theory, which suggests that a larger board can strengthen management supervision, reduce agency costs, and improve performance (Abor, 2007). The results also agree with resource dependence theory. According to this theory, a larger board can access key resources and bring more experience, knowledge, and skills, which help provide better advice and viewpoints for improving firm performance (Pfeffer & Salancik, 1978). The board acts as a provider of resources. New board members can contribute more human and social capital, increase the board's access to information, and improve its understanding of firm-specific knowledge. This helps raise the quality of strategic decisions and leads to better performance (García-Ramos & Díaz, 2021; Hillman & Dalziel, 2003).

This finding is consistent with the study by Khatib and Abdalnaser (2021) on the Malaysian market and with the results of Puni and Anlesinya (2020) on listed firms in Ghana. The consistency across countries may suggest that the benefits of a larger board are obvious in emerging markets. In countries like China, where the economy is in transition and the business environment is complex and uncertain, board members' diverse knowledge and experience may be beneficial in responding to uncertainty. It is also important to note that in this study, ROA and ROE are significantly and positively related to board size. However, the significance levels are

different. This may mean that board size affects performance through more than one pathway. It may improve performance by increasing operational efficiency and by improving capital structure. This multiple mechanism is consistent with Hermalin and Weisbach's (2003) view on diversifying board functions.

### **6.2.5 Discussion of Results for Hypothesis 1e**

The empirical results of this study show that the proportion of independent directors on the board is significantly and positively related to both ROA and ROE, supporting hypothesis 1d. This finding provides strong evidence for the governance effectiveness of independent directors in Chinese listed companies. This result is consistent with the view of agency theory. According to agency theory, independent directors serve as a monitoring mechanism that helps reduce agency conflicts between shareholders and management (Jensen & Meckling, 1976). Because independent directors are not controlled by the company's internal management, they are more objective and independent. This allows them to strengthen the board's oversight function, restrain managerial opportunism, improve corporate governance, and enhance financial performance (Fama & Jensen, 1983). The findings of this study confirm these expectations. Besides the monitoring role emphasized by agency theory, the results also support the view of resource dependence theory. This theory suggests that independent directors play an important role in accessing resources. Through their professional background, industry experience, and external connections, they can offer strategic advice and external support, which helps firms integrate resources and build competitive advantage (Hillman & Dalziel, 2003; García-Ramos & Díaz, 2021; Alodat et al., 2021). Therefore, the positive impact of independent directors on firm performance may come not only from their monitoring function but also from their role as resource providers.

At the same time, these findings are consistent with many existing empirical studies. For example, Kao et al. (2019) in Taiwan, Cho and Kim (2007) in South Korea, and Puni and Anlesinya (2020) in Ghana all found a positive relationship between the proportion of independent directors and firm performance. It is also worth noting that in the context of governance reforms in China, Liu et al. (2015), using data from companies listed on the Shanghai and Shenzhen stock exchanges between 1999 and 2012, found that board independence significantly increased firm performance.

Wang et al. (2019) stated that data from 1,974 A-share listed companies in China, spanning from 2010 to 2016, also confirmed the positive effect of the independent directors proportion on firm performance. This study further confirms the consistency of that conclusion. This suggests that since implementing *the Guidelines for Establishing Independent Director System for Listed Companies* in 2001, the independent director system has indeed played its intended role in China's corporate governance framework. The significant positive impact of the proportion of independent directors on firm performance may reflect its unique value under China's specific governance environment. Independent directors are an important counterbalance in governance structures dominated by controlling shareholders (Jiang & Kim, 2020). At the same time, their professional expertise and external perspective also contribute to firm performance.

#### **6.2.6 Discussion of Results for Hypothesis 1f**

The empirical results of this study support Hypothesis 1d, confirming a negative relationship between CEO duality and firm performance. The analysis shows that CEO duality harms ROA and ROE; both effects are statistically significant at the 10% level. This result shows that firm performance usually declines when a CEO serves as the board's chairman.

This finding is consistent with the basic views of agency theory. Agency theory suggests that separating the CEO and chairman positions helps establish effective monitoring mechanisms (Jensen and Meckling, 1976; Fama and Jensen, 1983). The CEO is mainly responsible for strategy implementation and daily operations in a proper governance structure. At the same time, the chairman takes on the duty of monitoring and evaluating management work. When the same person holds both positions, excessive concentration of power may weaken the board's ability to check management and increase the risk that the CEO makes decisions based on personal interests (Khan et al., 2021). In this situation, the board's independent monitoring ability is limited, the possibility of removing poorly performing managers decreases, and the quality of strategic decisions may also be affected (García-Ramos and Díaz, 2021).

Existing empirical research supports the negative impact of CEO duality on firm performance. Kao et al. (2019) studied Taiwanese listed companies, indicating

that company performance is better when the CEO and chairman positions are separated. Khan et al. (2021) used data from Malaysian non-financial companies. Additionally, they found that CEO duality has a significantly negative impact on firm performance, primarily due to weakened board monitoring functions. Chin and Amran (2014) studied Malaysian family manufacturing companies and reached similar conclusions.

In China's institutional context, the impact of CEO duality shows complex characteristics. On one hand, as Dian (2014) pointed out, there is often power competition among top executives in Chinese firms, and combining the roles of CEO and board chair may help reduce internal conflicts and improve strategic alignment. On the other hand, it is common for listed companies in China to suffer from weak board governance and decision-making dominated by the board chair. In such cases, CEO duality may further strengthen individual power, limit the supervisory role of other directors, and harm the overall quality of corporate governance (Wang et al., 2019). Therefore, although CEO duality may offer coordination advantages in the short term, its potential adverse effects deserve more attention when considering long-term governance improvement and sustainable firm performance.

#### **6.2.7 Discussion of Results for Hypothesis 1g**

This study's empirical results show that executive compensation incentives have a significant positive relationship with firm performance. This result supports the research hypothesis that executive compensation incentives can help improve firm performance. It is also consistent with the prediction of agency theory, which suggests a positive link between managerial incentives and firm performance (Kayani & Gan, 2022). Jensen and Meckling (1976) pointed out that there is a conflict of interest between shareholders and managers. As rational economic agents, executives focus on maximizing their interests, which can lead to agency problems such as moral hazard. To reduce this conflict, building reasonable executive incentive systems is seen as an important tool for corporate governance (Aguilera et al., 2015; Sheng & Che, 2016). The findings of this study suggest that increasing compensation levels can align the interests of managers with those of shareholders, which helps improve firm performance.

This study's findings are consistent with many previous empirical studies.

Early studies that focused on developed countries, such as Aggarwal and Samwick (1999), Conyon and Schwalbach (2000), and Sapp (2008), all found significant positive relationships between executive compensation incentives and firm performance. Al Farooque et al. (2019) and Raithatha and Komera (2016) also reached similar conclusions in emerging market countries. In particular, in transition economies where formal institutions are poorly developed, performance-based compensation may become an important way to control management opportunistic behavior (Richardson et al., 2018). This finding supports Cao et al.'s (2019) theory that compensation incentives can reduce information asymmetry problems. In the context of China, related studies by Zhang et al. (2014), Sheng and Che (2016), and Chen et al. (2023), based on data from listed firms in different periods and industries, also found that executive compensation incentives play a positive role in enhancing firm performance. This study further confirms that executive compensation incentives in Chinese listed company governance can effectively coordinate manager and shareholder interests and make executives choose value-maximizing decisions. This study's high significance level indicates that executive compensation incentives have stronger performance sensitivity in China's unique institutional environment.

#### **6.2.8 Discussion of Results for Hypothesis 1h**

This study hypothesizes that product market competition positively affects firm performance. The empirical results show that the regression coefficients of the HHI for ROA and ROE are -0.0075 and -0.0252, respectively. The effect of HHI on ROE is statistically significant at the 10% level. In contrast, its effect on ROA is not statistically significant. Since a higher HHI value indicates greater market concentration and lower competition, the negative coefficients suggest that stronger competition is associated with better firm performance. Based on these results, hypothesis 1h receives partial support in the case of ROE.

This finding is theoretically consistent with the expectations of agency theory. Hart (1983) suggested that product market competition is an important external governance mechanism that can discipline managerial behavior and enhance performance. Agency theory argues that conflicts between owners and managers arise from information asymmetry (Jensen & Meckling, 1976). Product market competition helps reduce this asymmetry and limits managerial opportunism (Lee et al., 2019). In

highly competitive environments, firms face tighter financial constraints and limited pricing power, which push managers to improve operational efficiency and disclose more information to investors. Through this process, managerial and shareholder interests become more aligned, leading to efforts to maximize firm value (Liu et al., 2018; Hart, 1983). Existing empirical studies support this view. Obembe and Soetan (2015) determined that external competition and good governance quality positively affect productivity in Nigerian non-financial firms. Similarly, Sheikh (2018) and Liu et al. (2022) reported that product market competition improves firm performance, with this effect being more pronounced in emerging markets such as China.

The different effects of HHI on ROA and ROE may reflect the distinct features of these two performance indicators. ROE mainly reflects returns to shareholders and is more likely to be influenced by governance improvements under competitive pressure. When competition intensifies, managers are more motivated to increase shareholder returns to maintain investor confidence (Liu et al., 2022). In contrast, ROA measures the efficiency of total asset use and may be affected by rising costs or investment needs brought by competition, making it less sensitive to changes in market competition (Abdullah et al., 2019).

In addition, the insignificant effect of product market competition on ROA and the weak significance of ROE may be related to China's institutional environment. In emerging markets, managerial labor markets often lack sufficient competition and efficiency, which weakens the effectiveness of incentive and constraint mechanisms (Liu et al., 2018). When competition in the executive labor market is limited, managers may have weaker motivation to improve firm performance, even under intense product market competition, which reduces the disciplining effect of market forces (Liu et al., 2018).

#### **6.2.9 Discussion of Results for Hypothesis 1i**

The empirical results of this study provide strong support for hypothesis 1i and confirm a significant positive relationship between political connections and firm performance. This finding is consistent with the expectations of resource dependence theory. As Pfeffer and Salancik (1978) pointed out, firms often depend on external resource supplies, and governments usually control the key resources that firms need for development. The results of this study show that by building political connections,

firms can effectively reduce the uncertainty caused by this external dependence and improve their operating performance. This positive effect may come from the fact that politically connected firms can more easily obtain financing facilities, tax benefits, and government contracts, as Faccio (2006) discussed. It is worth noting that the empirical results of this study show that the impact coefficient of political connections on ROE (0.0392) is significantly higher than its impact on ROA (0.0156). This result may reflect the multiple channels through which political connections work: it improves performance by enhancing daily operational efficiency and, more importantly, creates shareholder value by acquiring strategic resources. Firms actively seeking and building political connections have become an important strategic choice (Ling et al., 2016).

The findings of this study are consistent with the conclusions of many existing empirical studies. In their study of the US market, Goldman et al. (2009) found that politically connected boards can increase company value. Wu et al. (2012) also confirmed in their study based on Chinese listed companies that private firms with politically connected managers perform better. Wong and Hooy (2018) similarly found in their study in Malaysia that firms with politically connected board members show a positive correlation with performance. This cross-national evidence shows that the positive role of political connections is not limited to specific institutional environments. However, it has some universality in different markets and political systems.

The results of this study are particularly significant in the context of China's transitional economy. In an environment where formal institutions are not yet fully developed, political connections serve as a helpful supplement and substitute mechanism for formal institutions, enabling firms to cope with institutional uncertainty and resource constraints (He et al., 2019). As Huang and He (2020) emphasized, when market systems are imperfect, firms are more likely to use political connections as a key means to obtain scarce resources and enhance competitive advantages. The significant positive results of this study confirm this theoretical expectation and show that in China's institutional environment, political connections can indeed bring performance improvements to firms.

### **6.2.10 Discussion of Results for Hypothesis 1j**

The empirical results of this study provide strong support for the hypothesis that external audit quality is positively related to firm performance. They confirm that high-quality external audits can improve a firm's financial performance. This finding offers important evidence on the governance role of external auditing in China's transitional economy. It supports the agency theory view, arguing that high-quality external audits help reduce information asymmetry and limit managerial opportunism, increasing firm value (Aguilera et al., 2015; Yeung & Lento, 2020). The likelihood of detecting and revealing managerial misconduct increases when audit quality improves. This deterrent effect pushes managers to focus more on maximizing shareholder value than personal interests, improving overall operational efficiency, and firm performance (Al-ahdal & Hashim, 2022).

The results of this study are consistent with many existing empirical findings. Enekwe et al. (2020) found a significant positive effect of external auditing on firm performance in Nigeria. Rahman et al. (2019) reported a similar result in Bangladesh, showing a strong positive relationship between audit quality and firm performance. Al-ahdal and Hashim (2022) also found the same effect using panel data from India. These international findings suggest that the positive impact of high-quality external audits is widespread across different regions. This study's evidence from the Chinese market further supports the positive effect of external audit quality on firm performance. It also shows that the reform and internationalization of China's auditing system have produced the expected governance outcomes. High-quality audits play an important governance role in the Chinese market.

In addition, external audit quality has a significant positive effect on ROA and ROE. This shows that the governance effect of external auditing provides a foundation for operational efficiency and improves shareholder returns by building trust in the capital market. It is important to note that the coefficient for the Big Four's effect on ROE (0.0259) is higher than that on ROA (0.0190). This suggests that the value of audit quality is more evident in improving capital allocation efficiency. As Zhang and Guo (2024) found, high-quality audits help reduce financing costs, improve the efficiency of capital allocation, and increase returns to shareholders.

### **6.2.11 Discussion of Results for Hypothesis 1k**

The empirical results of this study provide strong support for the hypothesis that media attention is positively related to firm performance. The analysis shows that media attention significantly and positively correlated with ROA and ROE. The results are statistically significant at the 1%, indicating a robust association between media attention and firm performance.

The research results support the basic view of agency theory. Media can transmit information between companies and external stakeholders as an important external governance mechanism. This reduces the degree of information asymmetry, thus reducing agency problems and improving company performance (Liu & McConnell, 2013; Bushee et al., 2010; Hassan et al., 2023). Specifically, the media improves company transparency by widely spreading company behavior. This creates external supervision pressure on management and limits their possible self-interested behavior. It encourages them to make decisions that meet social norms and public expectations (Dai et al., 2015; Dyck et al., 2008; Dyck & Zingales, 2002). Also, the media plays a supervisory role through its investigative function. As an independent external governance force, it effectively monitors the behavior and decisions of board members. This reduces moral hazard problems in corporate decision-making processes (Tajvidi & Karami, 2021). The significant positive coefficients observed in this study further confirm this theoretical mechanism. This shows that increased media attention helps improve the company's information environment and strengthens external supervision. It controls management's short-term behavior and pushes companies to conduct business activities that benefit shareholder value maximization, thus improving performance.

These findings are consistent with results from several prior empirical studies. Dang et al. (2021), using data from 41 developed and emerging markets, found a significant positive relationship between media attention and firm value. Similarly, Chih and Chih (2014) utilized a sample of financial holding companies listed on the Taiwan Stock Exchange and found that media coverage of corporate social activities was positively related to firm performance. In the Chinese context, based on a sample of China's top 500 firms, Bai and Yan (2023) provided empirical evidence that social media positively affects firm performance. The results of this study add further empirical support to the existing literature and strengthen the evidence that media can

play a positive role in enhancing firm performance.

#### **6.2.12 Discussion of Results for Hypothesis 2a**

The empirical results of this study support hypothesis 2a. Ownership concentration is negatively related to budgetary slack. This finding is consistent with previous research, which suggests that higher ownership concentration strengthens monitoring incentives and helps reduce managers' opportunistic behavior during the budgeting process (Bai & An, 2021; An et al., 2019; Pan et al., 2008). More specifically, when the controlling shareholder holds many shares, their interests align more closely with the company's long-term goals. As a result, they are more motivated to monitor managers effectively (Alkurdi et al., 2021). In this case, managers need to gain the trust and support of the controlling shareholder in order to keep their positions. If the company performs poorly, the controlling shareholder will likely replace the management team quickly. This pushes managers to consider controlling shareholders' expectations when preparing the budget (Shao, 2019). As a result, the budgeting objectives of managers become more aligned with those of the controlling shareholder, and their motivation to create slack is reduced.

This result also supports the idea that ownership concentration can help solve agency problems caused by the “free-rider” issue under dispersed ownership structures (Ahmed Sheikh et al., 2013; Berle & Means, 1932). When ownership is spread across many small shareholders, they often lack the ability and incentive to monitor management. This weakens shareholder control, increases information asymmetry, and raises the risk of budgetary slack (Pan et al., 2008). The results of this study are consistent with existing empirical research. An et al. (2019) used panel data from Shanghai and Shenzhen A-share listed companies from 2010-2017 and found that increased ownership concentration constrained opportunistic behavior by management and reduced the possibility of budgetary slack. This study further supports that ownership concentration effectively reduces budgetary slack by strengthening monitoring mechanisms and better coordinating interests between controlling shareholders and management.

### **6.2.13 Discussion of Results for Hypothesis 2b**

The empirical results of this study support hypothesis 2b. They show a significant positive relationship between state ownership and budgetary slack. This finding confirms that SOEs tend to have more budgetary slack than non-state-owned firms, consistent with existing research (Bai & An, 2021; Xiong, 2014).

The results of this study can be explained in several ways. First, the public property rights characteristics of SOEs mean that the government is not the final beneficiary of enterprise surplus returns (Yang et al., 2021). This institutional arrangement leads to the government lacking regulatory capacity and incentives. In this situation, SOEs commonly have serious "insider control" problems (Bai & An, 2021), and management can more easily create budgetary slack for their own interests in an environment of information asymmetry. Second, SOEs are often required to take on social responsibilities, such as promoting economic growth and increasing employment. These multiple goals weaken the incentive and discipline mechanisms that usually guide firms focused on maximizing profit (Lin et al., 2020). Soft budget constraints give SOEs managers more space to adjust the budget to their advantage, increasing the likelihood of slack. Third, in China, most listed companies are still dominated by state shareholders (Jiang & Kim, 2020), which makes this problem more serious. Since state shareholders tend to supervise daily operations less actively (Beck & Brødsgaard, 2022), managers may pursue personal benefits at the cost of the state and minority shareholders. This lack of supervision makes insider control more serious in SOEs. It creates conditions that allow managers to build budgetary slack.

The findings of this study provide new evidence for understanding the formation mechanism of budgetary slack under China's special institutional environment. The characteristics of public property rights, multiple-objective orientation, and lack of supervision mechanisms in SOEs form institutional incentives for budgetary slack. This conclusion supports theoretical predictions about budgetary slack problems in SOEs from existing literature. It provides important empirical evidence for future research.

### **6.2.14 Discussion of Results for Hypothesis 2c**

This study finds a significant negative relationship between managerial

ownership and budgetary slack. This result supports the hypothesis that managerial ownership can effectively reduce budgetary slack. The finding is consistent with agency theory. It shows that when managers hold shares in the company, their interests align with those of shareholders, which helps reduce opportunistic behavior during budget setting (Li & Zhao, 2020). The negative relationship suggests that a higher level of managerial ownership can serve as an effective corporate governance mechanism that helps ease agency problems in budget management.

This result aligns with the findings of Xiong (2014), who studied listed companies in China and confirmed the constraining effect of managerial ownership on budgetary slack. In this study's sample, the incentive effect of interest alignment is more noticeable. Managers who own shares tend to focus on improving resource allocation instead of using slack to pursue personal gain. This study provides new empirical evidence on the incentive role of managerial ownership in emerging markets and adds to the existing literature. At the same time, this study also considers the observation by Shleifer and Vishny (1986), who noted that very high levels of managerial ownership may lead to entrenchment effects. When ownership becomes too concentrated, the governance benefits may decrease or even reverse.

#### **6.2.15 Discussion of Results for Hypothesis 2d**

This study hypothesizes that board size is negatively related to budgetary slack. The regression results show that the coefficient of board size on slack is -0.0947, suggesting a negative relationship between the two. However, this result is not statistically significant ( $t = -1.49$ ), indicating that the effect of board size on budgetary slack is unclear. Therefore, hypothesis 2d is not supported.

This hypothesis is based on the assumptions of agency theory. According to agency theory, the board of directors is a crucial governance mechanism for mitigating conflicts between shareholders and managers (Jensen & Meckling, 1976). In modern corporate governance, the board represents the interests of shareholders. It is expected to monitor managerial behavior, especially in areas with high information asymmetry, such as budget management. Larger boards are believed to have more resources, a wider range of expertise, and stronger monitoring capacity (Abor, 2007). In the budget setting process, this stronger oversight should help identify and prevent opportunistic behavior by managers, such as intentionally overestimating costs or

underestimating revenues, leading to budgetary slack (Liu et al., 2022).

Although the coefficient aligns with theoretical expectations, the lack of statistical significance suggests that the relationship between board size and budgetary slack is not robust in this sample. One possible explanation is that while larger boards may have greater capacity to monitor, they may also face challenges related to coordination and responsibility-sharing. Agency theory also suggests that large boards may suffer from governance inefficiencies. For example, some directors may rely on others to perform oversight duties, leading to a “free-rider” problem that reduces the overall effectiveness of supervision (Ahmed Sheikh et al., 2013; Lipton & Lorsch, 1992). In addition, having too many members may cause communication problems, making it harder for the board to promptly detect potential issues in the budgeting process, which weakens its ability to limit budgetary slack (Luo, 2010).

In summary, although the direction of the estimated coefficient supports the idea that larger boards may help reduce budgetary slack, the lack of statistical significance means that this effect cannot be confirmed. This finding suggests that while the board may contribute to improved monitoring in theory, its effectiveness may depend on how well it functions in practice.

#### **6.2.16 Discussion of Results for Hypothesis 2e**

This study hypothesizes that the proportion of independent directors on the board is negatively related to budgetary slack. The regression results show that the coefficient of the proportion of independent directors is -0.1308, indicating a negative relationship. However, this result is not statistically significant ( $t = -0.80$ ). This suggests that, although the direction of the relationship is consistent with theoretical expectations, there is no clear evidence that a higher proportion of independent directors significantly reduces budgetary slack. Therefore, hypothesis 2e is not supported. This finding is consistent with the study by Xiong (2014), which also found no significant relationship between board independence and budgetary slack. This indicates that the effect of independent directors on corporate budgeting behavior remains uncertain.

Agency theory argues that independent directors play a key role in reducing information asymmetry and enhancing monitoring, thereby helping to mitigate conflicts of interest between shareholders and management (Fama & Jensen, 1983).

Since they do not participate in daily operations and have no direct employment or financial ties with the management, independent directors are generally more objective and independent in their oversight role (Fogel et al., 2021). Prior studies suggest that independent directors can improve governance effectiveness and provide meaningful supervision (Fernández-Temprano & Tejerina-Gaite, 2020; Melville & Merendino, 2019; Dahya et al., 2002; Weisbach, 1988). From this perspective, more independent directors should help strengthen budget oversight, limit managerial discretion, and reduce budgetary slack (Liu et al., 2022).

However, the insignificant result in this study suggests that the expected governance effect of board independence may not be fully realized in practice. One possible explanation is that independent directors face practical constraints in fulfilling its roles. Bhagat and Black (2001) pointed out that outside directors often lack the time and expertise needed for adequate supervision. This is particularly problematic in budgeting, which requires financial knowledge and operational insight. In addition, the governance role of independent directors may be limited by institutional and contextual factors. In many emerging markets, including China, independent directors often lack absolute authority, access to internal information, and motivation to engage in detailed budget oversight (Queiri et al., 2021). Management and finance departments usually dominate the budget process, with limited involvement from independent directors (Sun & Li, 2018). This restricted access to information weakens their ability to detect and address budgetary slack.

The findings of this study suggest that the relationship between board independence and budgetary slack is more complex than theory predicts. Although agency theory provides a strong foundation for monitoring independent directors, its effectiveness in practice may depend on specific conditions, such as professional expertise and access to relevant information. In the Chinese institutional context, increasing the proportion of independent directors alone may not be sufficient to control budgetary slack. Further improvements in institutional arrangements and governance mechanisms are needed to enhance their actual impact.

#### **6.2.17 Discussion of Results for Hypothesis 2f**

This study hypothesizes that CEO duality is positively related to budgetary slack. The regression results show that the coefficient of CEO duality is 0.0182, with a

positive sign. However, the result is not statistically significant ( $t = 0.89$ ). This suggests that, in this study, the combination of the CEO and board chair roles does not clearly impact budgetary slack. Therefore, hypothesis 2f is not supported.

This hypothesis is based on agency theory. Agency theory argues that managerial power may become overly concentrated when the CEO also serves as board chair. This concentration can weaken board independence and reduce its ability to monitor management, which increases agency costs (Fama & Jensen, 1983; Jensen & Meckling, 1976). In the budget-setting process, high power concentration may reduce transparency, making it easier for managers to control the budgeting process and create slack. From this perspective, CEO duality may encourage managerial opportunism and lead to higher budgetary slack (Xiong, 2014).

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In addition, the board chair leads strategic decisions in many Chinese companies. It plays an active role in day-to-day operations. The board chair's and the CEO's responsibilities often overlap, and sometimes even conflict (Wu, 2023; Dian, 2014). Therefore, separating the roles may not effectively reduce managerial control over the budget process. On the contrary, when internal oversight mechanisms are weak, managers may still have considerable discretion over budgeting, and information asymmetry may remain high. This can lead to the persistence of budgetary slack, regardless of whether the two roles are combined (Wu, 2023; Xiong, 2014).

At the same time, some scholars suggest that CEO duality may bring certain governance benefits. Krause et al. (2017) argued that separating the CEO and board chair roles may increase communication barriers, making it harder for the chair to obtain timely information about firm operations. Guillet et al. (2013) further suggested that CEO duality can reduce agency costs, improve communication efficiency, and speed up the firm's response to external changes. From this view, combining the two

roles may reduce information transmission layers and communication costs, which could help limit budgetary slack to some extent (Wu, 2023).

The insignificant result in this study may indicate that the positive and negative effects of CEO duality cancel each other out across the sample firms. This finding suggests that the relationship between CEO duality and budgetary slack is more complex than agency theory predicts. It may be influenced by institutional context and the effectiveness of governance mechanisms.

#### **6.2.18 Discussion of Results for Hypothesis 2g**

The empirical results of this study show that executive compensation has a significant negative relationship with budgetary slack, and this finding supports the research hypothesis. The significant negative relationship result of this study strongly confirms the interest alignment effect of executive incentive mechanisms. As Chulkov and Barron (2023) pointed out, executive incentives can reduce agency costs by aligning executive interests with company interests and reduce agency conflicts under the decentralized system of enterprises. Executives, as rational economic actors, will weigh personal benefits against costs and choose behaviors that maximize personal interests (Kayani & Gan, 2022). The results show that when executive compensation is higher, conflicts between executives and shareholders are reduced. Executives are more likely to adopt budgeting practices that match shareholder interests. They are also more likely to report budgets honestly and avoid opportunistic behavior that creates budgetary slack.

This finding is consistent with the empirical conclusions of An et al. (2018), who studied listed A-share companies in Shanghai and Shenzhen from 2010 to 2015. Their results also confirm the effectiveness of executive compensation as a corporate governance mechanism in reducing budgetary slack. This study provides new empirical evidence supporting the positive role of executive pay incentives in reducing agency problems during the budgeting process.

#### **6.2.19 Discussion of Results for Hypothesis 2h**

The results of this study show that product market competition has no significant effect on budgetary slack, and the research hypothesis is not supported.

This result differs from theoretical expectations. From a theoretical perspective, competition should help reduce information asymmetry and ease agency problems (Lee et al., 2019). Hart (1983) pointed out that in highly competitive markets, the motivation for external monitoring increases, and shareholders are more likely to take an active role in management to prevent actions that could harm firm value. Product market competition also encourages enterprises to pay more attention to effective resource allocation, reduce waste and redundant budget arrangements, and further compress the space for budgetary slack (Laksmana & Yang, 2015).

However, the non-significant empirical results suggest that the impact of product market competition on budget management behavior is mixed. Intense competition might also lead to unexpected opposite effects. In highly competitive environments, managers may face more performance pressure. To deal with uncertainty and risk, they might keep more slack in the budget as a buffer to protect against market shocks (Frihatn & Abbas, 2020). Because of this, product market competition may have two opposing effects on budgetary slack. On one hand, it may reduce slack by increasing external pressure on managers. On the other hand, it may lead managers to adopt more cautious budgeting strategies, which increases slack. These two effects work in opposite directions and finally lead to an overall non-significant effect.

#### **6.2.20 Discussion of Results for Hypothesis 2i**

The empirical results of this study show that political connection is significantly negatively related to budgetary slack. This finding supports the research hypothesis. It suggests that, in the context of China's economic environment, political connections have a significant influence on corporate budgeting behavior and help reduce the occurrence of budgetary slack.

The results are consistent with the view of resource dependence theory. This theory argues that firms establish relationships with key external resource providers to gain needed resources and reduce the impact of environmental uncertainty (Pfeffer & Salancik, 1978). In China's transitional economic environment, political connections become an important channel for enterprises to obtain resources. As Faccio (2006) pointed out, politically connected firms often receive various forms of support from the government, such as easier access to financing, tax reductions, and government

contracts. These resource advantages lower the difficulty of achieving budget goals. When firms can more easily obtain financial and policy support, the performance pressure on management is reduced. As a result, managers have less need to set overly relaxed budget targets to ensure that budget tasks are met (Liu, 2019). The findings of this study are consistent with Liu (2019), further confirming that politically connected firms are more effective in controlling budgetary slack.

#### **6.2.21 Discussion of Results for Hypothesis 2j**

The results of this study show that external audit quality has a negative relationship with budgetary slack, supporting the research hypothesis. The results of this study are consistent with the view of agency theory. According to agency theory, external auditing helps improve the quality of accounting information disclosure by reducing information asymmetry between principals and agents, which reduces the possibility of management manipulating information or improperly obtaining benefits (Yeung & Lento, 2020; Aguilera et al., 2015).

As Sulaiman (2023) pointed out, high-quality auditors often encourage audited enterprises to voluntarily and timely disclose more specific information related to company operations. The findings of this study further show that better information disclosure increases corporate transparency. This gives shareholders more power to monitor management behavior and reduces managers' motivation to create budgetary slack for personal gain. In addition, Guedhami et al. (2014) found that large audit firms can effectively limit management's discretionary space over financial reporting and reduce their possibility of hiding resource misappropriation through accounting methods. This study extends this finding to the budget management field. It proves that high-quality auditing also significantly constrains management budget behavior. The results of this study are consistent with the findings of Fang et al. (2018) in the Chinese market. Fang et al. (2018) found through panel data analysis of Chinese listed companies that high-quality auditors help reduce management's excessive use of enterprise resources, which is reflected in reduced slack.

#### **6.2.22 Discussion of Results for Hypothesis 2k**

The results of this study show that media attention is significantly negatively

related to budgetary slack. This means that firms with higher levels of media attention tend to have lower levels of budgetary slack. This finding strongly supports the research hypothesis and is consistent with the view of agency theory. According to agency theory, media helps reduce information asymmetry between firms and their various stakeholders by sharing information with the public (Liu & McConnell, 2013; Bushee et al., 2010; Hassan et al., 2023). Higher media attention often pushes firms to disclose more detailed and timely information about their operations (He et al., 2024; Bushee et al., 2010). Better disclosure helps stakeholders, including shareholders, to better understand management behavior and reduces managers' motivation to use budgetary slack for personal gain.

The findings also confirm that media monitoring can effectively constrain management behavior (Dyck & Zingales, 2002). This study finds that greater media attention limits management's discretion in the budgeting process and lowers the risk that they will use slack to benefit themselves. In addition, Wiesenfeld et al. (2008) pointed out that the media acts as a "social arbitrator" by shaping public opinion and putting pressure on management. When managers know their budget decisions may be exposed by the media and attract public attention, they are more likely to act in line with shareholders' interests and reduce budgetary slack. This study provides new empirical evidence for the role of media in budget management. It shows that media works as an effective external governance mechanism that helps reduce budgetary slack.

### **6.2.23 Discussion of Results for Hypothesis 3**

The empirical results of this study provide strong support for hypothesis 3. The findings show that a higher level of budgetary slack is linked to lower firm performance, confirming the theoretical expectation that budgetary slack harms performance.

This result is consistent with prior studies based on agency theory. From this perspective, the negative relationship between budgetary slack and firm performance can be explained by the opportunistic behavior of agents during the budgeting process (Mao & Zhu, 2009). Agents, driven by self-interest, often underestimate revenues or overestimate costs to gain more room for operational flexibility and personal benefits (Mohanna & Sponem, 2020). The empirical findings also support the view that

budgetary slack is a dysfunctional practice (Shu et al., 2023; Lukka, 1988) and an unethical behavior (Pramudiati et al., 2022; Douglas & Wier, 2000), which should be constrained (Fisher et al., 2000). The results confirm the theoretical expectation that budgetary slack leads to waste of resources and lower management efficiency (Otalor & Oti, 2017). When budget targets are set below the actual capacity of the organization, employees can achieve their goals easily. This situation does not help them reach their full potential and allows them to hide mistakes, which lowers management efficiency (Islami & Nahartyo, 2019; Yee, 2014). Poor resource allocation caused by budgetary slack can lead to many ineffective costs, negatively affecting firm performance.

The findings of this study are highly consistent with previous empirical evidence. Otalor and Oti (2017) surveyed 247 employees from 177 listed companies on the Nigerian Stock Exchange. They found a significant negative relationship between budgetary slack and performance. Similarly, Pan et al. (2008) used ROA and ROE as accounting performance indicators. They confirmed that budgetary slack is negatively related to the performance of listed companies. More recently, An et al. (2020) examined China's A-share listed companies from 2011 to 2017 and also found a significant negative relationship between budgetary slack and firm performance. The consistent results across different performance measures (ROA and ROE) in this study increase the reliability of the findings and further confirm the significant negative impact of budgetary slack on firm performance.

#### **6.2.24 Discussion of Results for Hypothesis 4a**

This study uses a three-step regression test and finds that ownership concentration significantly improves firm performance (ROA and ROE) and significantly reduces budgetary slack. In addition, budgetary slack has a significant adverse effect on firm performance. Further mediation tests show that budgetary slack partially mediates the concentration of ownership and firm performance. That is, ownership concentration improves firm performance directly and indirectly by reducing budgetary slack. This result provides strong empirical support for hypothesis 4a.

In the first step of the mediation test, the results show that ownership concentration significantly positively affects firm performance. This suggests that

large shareholders in China's corporate governance system can help improve business performance. This finding indicates that large shareholders can effectively supervise and motivate managers, which helps to reduce their opportunistic behavior, improve operational efficiency, and enhance performance (Bhakar et al., 2024; Alkurdi et al., 2021). This result is consistent with the basic view of agency theory. Berle and Means (1932) pointed out that when ownership is highly dispersed, the separation of ownership and control increases agency problems. Ownership concentration helps strengthen supervision and thus improves performance.

In the second step, the empirical results further show that ownership concentration significantly negatively affects budgetary slack. This means that large shareholders with higher ownership stakes have more ability and stronger motivation to supervise managers, which helps prevent managers from underestimating budget targets to achieve their own goals. This finding points to an important governance mechanism: the role of large shareholders is not only in improving performance directly but also in strengthening the management process. Other than that, this result is also consistent with previous studies. For example, An et al. (2019) and Alkurdi et al. (2021) found that large shareholders can use their ownership to restrict managerial opportunism, reducing budgetary slack.

In the third step, when budgetary slack is included in the regression model as a mediating variable, the positive effect of ownership concentration on ROA and ROE remains significant. At the same time, the coefficient of budgetary slack on firm performance is significantly negative. This shows that budgetary slack partly mediates the relationship between ownership concentration and firm performance. In other words, ownership concentration directly and indirectly improves performance by reducing budgetary slack.

This result adds to the existing literature in several ways. First, it confirms the important role of ownership concentration in corporate governance. It also provides more evidence supporting the view that ownership concentration can reduce agency problems and improve performance (Welch, 2003; Mak & Kusnadi, 2005; Zhang et al., 2014; Bhakar et al., 2024; Alkurdi et al., 2021). Second, this study identifies a new mechanism—budgetary slack. While most previous research has focused on the effects of ownership structure on earnings management, investment efficiency, or firm value (e.g., Claessens & Djankov, 1999; Kao et al., 2019), this study brings budgetary slack into the governance analysis framework. It shows that large shareholders

influence firm decisions through traditional channels and play a role in budget management by limiting managerial opportunism, which helps improve resource allocation and performance.

#### **6.2.25 Discussion of Results for Hypothesis 4b**

This study tests the hypothesis that state ownership affects firm performance through budgetary slack. However, the empirical results show that the direct effects of state ownership on firm performance, measured by ROA and ROE, are not statistically significant. This result does not meet a basic condition for testing mediation effects: the independent variable must have a significant effect on the dependent variable (Baron & Kenny, 1986). Therefore, the mediation effect of budgetary slack in the relationship between state ownership and firm performance is not supported, and hypothesis 4b is not confirmed.

In the first step of the mediation test, state ownership shows a weak positive correlation with ROA and a weak negative correlation with ROE, but neither relationship is statistically significant. This lack of significance may be due to the multiple and opposing mechanisms through which state ownership affects firm performance. On one hand, state ownership may reduce efficiency, as governments often prioritize political goals over business interests, leading SOEs away from profit maximization (Iwasaki et al., 2022). On the other hand, state ownership may improve performance by providing stable funding and reducing financial risk (Bhakar et al., 2024). These conflicting effects may cancel each other out, resulting in an insignificant impact.

It is worth noting that there is a significant positive correlation between state ownership and budgetary slack. There is also a significant negative correlation between budgetary slack and firm performance. This means that state ownership increases budgetary slack in separate paths, and budgetary slack reduces firm performance. These findings are consistent with agency theory (Mohanna & Sponem, 2020; Mao & Zhu, 2009) and the dysfunctional behavior hypothesis (Shu et al., 2023; Lukka, 1988). However, because SOE does not directly affect firm performance, the mediation path cannot be established, and the logical chain is incomplete.

This finding may reflect China's SOE reform's complexity and transitional nature. As Zhang et al. (2021) pointed out, the performance of Chinese SOEs has

improved in recent years due to mixed-ownership reforms, and the overall effect of SOEs has become more neutral. Although state ownership still harms performance through increased budgetary slack, it may also have positive effects through other channels. As a result, the overall effect of state ownership on firm performance is insignificant.

#### **6.2.26 Discussion of Results for Hypothesis 4c**

This study proposed that budgetary slack mediates the relationship between managerial ownership and firm performance. The empirical results support this hypothesis. Specifically, managerial ownership has a significant positive effect on firm performance. At the same time, managerial ownership is significantly negatively related to budgetary slack, indicating that managers with higher ownership tend to reduce slack behavior. After including budgetary slack as a mediating variable, the positive effects of managerial ownership on ROA and ROE remain significant, although the coefficients become smaller. In addition, budgetary slack is significantly negatively associated with firm performance. These results show that budgetary slack partially mediates the effect of managerial ownership on firm performance, thus supporting hypothesis 4c.

According to agency theory, when managers hold shares, their personal interests align with the company's. This alignment helps to reduce opportunistic behavior and improve firm value (Jensen & Meckling, 1976). Later studies have also provided empirical support for this view (e.g., Bhagat & Bolton, 2019; Ongore, 2011; Qin & Deng, 2009). This study further finds that even after controlling for budgetary slack, the positive coefficients of managerial ownership on firm performance remain significant, and the negative relationship between managerial ownership and slack remains strong. These findings suggest that equity incentives help to reduce slack behavior and improve firm performance, confirming that slack plays a partial mediating role in this process. This pathway reflects the core idea of agency theory, which suggests that equity-based incentives help to resolve agency conflicts and enhance managerial efficiency (Morgan & Poulsen, 2001).

Previous studies have pointed out that budgetary slack is a form of managerial opportunism in the budgeting process, harming firm performance (Mao & Zhu, 2009; An et al., 2020). However, when managers become shareholders, the inefficiencies

and resource waste caused by slack directly affect the value of their ownership. As a result, they are motivated to reduce such behavior. This is consistent with Xiong (2014), who found that managerial ownership helps constrain budgetary slack. When managers hold company shares, their interests are more closely aligned with those of shareholders. This incentive mechanism encourages them to focus more on creating shareholder value. Therefore, reducing slack becomes a key transmission path through which managerial incentives improve firm performance.

#### **6.2.27 Discussion of Results for Hypothesis 4d**

This study proposed the hypothesis that budgetary slack mediates the relationship between board size and firm performance, meaning that larger boards could improve performance by reducing budgetary slack. However, the empirical results do not support this hypothesis. Although board size shows a significant positive effect on ROA and ROE, its relationship with budgetary slack is negative but not statistically significant. Therefore, the conditions for establishing a mediation pathway are unmet, and hypothesis 4d is unsupported.

The significant positive total effect of board size on firm performance is consistent with both agency theory and resource dependence theory. From the agency theory perspective, larger boards help strengthen oversight functions, reduce agency costs, and improve firm performance (Abor, 2007; Jensen & Meckling, 1976). At the same time, resource dependence theory suggests that larger boards bring critical resources and diverse expertise to the firm, which can enhance strategic decision-making and governance quality (Pfeffer & Salancik, 1978; García-Ramos & Díaz, 2021; Hillman & Dalziel, 2003).

However, this study finds no significant relationship between board size and budgetary slack. Although the regression coefficient is negative, it is not statistically significant. This suggests that the theoretical supervisory advantage of a larger board may not translate into effective budget control in practice. One possible explanation is the complexity of internal board governance. While having more members may offer diverse knowledge and experience, it can also increase coordination costs, dilute responsibility, and reduce communication efficiency (Lipton & Lorsch, 1992; Ahmed Sheikh et al., 2013; Luo, 2010). This may weaken the board's ability to constrain managerial behavior, especially in budgeting. This result indicates that larger boards

may improve firm performance through resource integration. However, their influence on budgetary slack remains unclear. In practice, the board's ability to reduce budgetary slack depends on its internal functioning, members' expertise, and actual involvement in budget-related decisions. Moreover, in Chinese listed companies, controlling shareholders often dominate strategic decisions and executive appointments (Jiang & Kim, 2020), which may limit the board's actual influence in budget oversight.

In conclusion, this study finds that the board size positively affects firm performance. However, this effect is not transmitted through budgetary slack. The mediation mechanism does not hold. Although theory suggests that larger boards may reduce slack by enhancing oversight, in reality, the effectiveness of this governance role may be constrained by internal processes and institutional context.

#### **6.2.28 Discussion of Results for Hypothesis 4e**

This study hypothesizes that budgetary slack mediates the relationship between the proportion of independent directors and firm performance. A higher proportion of independent directors may enhance firm performance by reducing budgetary slack. However, the empirical results do not support this hypothesis. Although the proportion of independent directors shows a significant positive effect on ROA and ROE, its relationship with budgetary slack, while negative in direction, is not statistically significant. As a result, the key condition required to establish a mediating effect is not met, and hypothesis 4e is not supported.

The significant and positive effect of board independence on firm performance is consistent with the predictions of agency theory and resource dependence theory. From the agency theory perspective, independent directors serve as a governance mechanism that helps reduce agency conflicts between shareholders and managers (Jensen & Meckling, 1976). Since independent directors do not participate in daily operations and has no direct economic ties with management, it can perform its supervisory role with greater objectivity and independence. This monitoring function helps to curb managerial opportunism, thereby improving corporate governance and financial outcomes (Alodat et al., 2021). In addition, the findings also support the view of resource dependence theory. This theory suggests that independent directors can provide firms with valuable external resources through their professional

backgrounds, industry expertise, and external networks, which in turn enhances strategic decision-making and competitive advantage (Hillman & Dalziel, 2003; García-Ramos & Díaz, 2021; Alodat et al., 2021). Therefore, the positive effect of board independence on firm performance may stem from its supervisory function and its role in providing strategic resources.

Agency theory suggests that independent directors can strengthen budget review and accountability mechanisms. These improvements help increase budget transparency and compliance. As a result, they may reduce managerial behaviors that lead to budgetary slack, such as overstating costs or understating revenues (Liu et al., 2022). However, this study finds no significant relationship between board independence and budgetary slack. One possible explanation is that independent directors face several practical limitations in its governance duties. As Bhagat and Black (2001) noted, external directors often lack the time and expertise necessary to carry out effective oversight, particularly in budget matters requiring financial knowledge. Moreover, the governance effectiveness of independent directors may be constrained by institutional environments and internal company mechanisms. In many emerging markets, independent directors often lack real power, internal information access, and motivation to monitor budgetary processes (Queiri et al., 2021). Since budgeting is usually led by management and financial departments in China (Niu, 2018), independent directors are less involved, and this limited access to information reduces their ability to detect and prevent budgetary slack.

In conclusion, although the proportion of independent directors significantly positively affects firm performance, reducing budgetary slack cannot achieve this effect. The mediation mechanism is not supported, suggesting that while independent directors may theoretically reduce slack by enhancing oversight, its governance effectiveness may be constrained by internal board operations and institutional factors.

#### **6.2.29 Discussion of Results for Hypothesis 4f**

This study proposes that budgetary slack mediates the relationship between CEO duality and firm performance. However, the empirical findings do not support this hypothesis. In the first-step regression, CEO duality shows an adverse effect on ROA (coefficient = -0.0036,  $t = -1.72$ ) and ROE (coefficient = -0.0088,  $t = -1.69$ ), which are significant at the 10% level. This meets the initial condition for conducting

mediation analysis. In the second step, however, the relationship between CEO duality and budgetary slack is insignificant (coefficient = 0.0182,  $t = 0.89$ ). In the third step, the coefficients of CEO duality on ROA and ROE remain negative and significant. However, the mediation pathway has not been established due to the absence of a significant association between CEO duality and budgetary slack. Therefore, budgetary slack does not mediate the relationship between CEO duality and firm performance, and hypothesis 4f is not supported.

This finding highlights the complexity of the relationship between CEO duality and budgetary slack, which is shaped by two competing theoretical logics. According to agency theory, when the CEO also serves as board chair, power becomes overly concentrated, which weakens the board's monitoring function and increases agency costs (Fama & Jensen, 1983; Jensen & Meckling, 1976). From this perspective, CEO duality may encourage managerial opportunism, leading to higher budgetary slack (Xiong, 2014). In contrast, resource dependence theory offers an alternative explanation. It suggests that CEO duality can enhance coordination and communication, especially in contexts requiring rapid decision-making and efficient resource integration. A CEO who also chairs the board may convey knowledge and experience more directly, improving board efficiency (Hillman & Dalziel, 2003). Guillet et al. (2013) further argued that CEO duality can reduce agency costs, improve communication, and enhance the firm's responsiveness to environmental changes. From this viewpoint, the efficiencies gained from power consolidation and improved communication may help reduce unnecessary budget slack and thus mitigate slack-related problems (Wu, 2023). The insignificant result in this study may reflect the offsetting effects of these two opposing mechanisms among the sample firms.

Under the institutional setting of Chinese listed companies, this relationship becomes even more complex. In many Chinese firms, ownership is highly concentrated, and controlling shareholders often hold substantial authority over key decisions, including appointing CEOs and board chairs (Jiang & Kim, 2020). In this environment, even when the CEO and chair roles are formally separated, the CEO's independence may still be constrained, and the board's oversight function may be limited. Moreover, in many Chinese companies, the board chair sets strategic direction. It is also heavily involved in day-to-day operations, resulting in considerable overlap in responsibilities with the CEO (Dian, 2014). This overlap may further weaken the distinct impact of CEO duality.

In conclusion, the mediation analysis in this study shows that budgetary slack does not mediate the relationship between CEO duality and firm performance. The mechanism through which CEO duality affects budgetary slack appears to be more complex than predicted. The opposing effects of weakened oversight and improved efficiency may cancel each other out, making the impact of CEO duality on budgetary slack statistically insignificant. It is worth noting that although budgetary slack does not serve as a mediator, the direct adverse effect of CEO duality on firm performance remains marginally significant. This suggests that CEO duality may affect firm performance through other mechanisms that require further investigation.

#### **6.2.30 Discussion of Results for Hypothesis 4g**

This study proposes that budgetary slack mediates the relationship between executive compensation incentives and firm performance. That is, executive compensation incentives improve firm performance by reducing budgetary slack. The empirical results strongly support this hypothesis.

In the first step of the mediation analysis, executive compensation significantly positively affects both ROA and ROE. This finding supports agency theory. According to agency theory, firms can reduce opportunistic behavior by designing effective executive compensation incentives systems that align the interests of managers and owners (Kayani & Gan, 2022). Consequently, this helps ease agency problems caused by the separation of ownership and control (Morgan & Poulsen, 2001; Aguilera et al., 2015). Many empirical studies have confirmed the positive link between executive compensation incentives and firm performance (Conyon & Schwalbach, 2000; Aggarwal & Samwick, 1999; Raithatha & Komera, 2016; Zhang et al., 2014).

In the second step, executive compensation incentives significantly negatively affect budgetary slack. This shows that incentive mechanisms help limit managerial opportunism. Managers may deliberately underestimate revenues or overestimate costs during budgeting to obtain more resources or reduce workload (Lukka, 1988; Fisher et al., 2000). However, executive compensation incentives increase managers' focus on performance outcomes and their sense of responsibility. This reduces their motivation to manipulate the budget for personal gain, thus effectively curbing budgetary slack (An et al., 2018; Chulkov & Barron, 2023).

In the third step, regression analysis further confirms the mediating effect of budgetary slack. When budgetary slack is included in the model, the positive effect of executive compensation incentives on both ROA and ROE remains significant. At the same time, budgetary slack significantly negatively affects firm performance. This finding provides important evidence for understanding how executive compensation incentives affects performance. Prior studies show that budgetary slack leads to inefficient resource allocation and distorted information flows, which harm performance (Otalor & Oti, 2017; Islami & Nahartyo, 2019). The results of this study suggest that executive compensation incentives helps reduce budgetary slack, improves the effectiveness of budget management, and enhances resource efficiency. With proper incentives, managers focus on creating firm value rather than pursuing short-term personal gains.

In conclusion, this study confirms the direct positive effect of executive compensation on firm performance and reveals an indirect path through reduced budgetary slack. This provides further insight into how incentive mechanisms influence performance by shaping managerial behavior in the budgeting process.

#### **6.2.31 Discussion of Results for Hypothesis 4h**

This study proposed that budgetary slack mediates the relationship between product market competition and firm performance. In other words, stronger market competition may reduce budgetary slack and thereby improve performance. However, the empirical results do not support this hypothesis. There is no significant association between the HHI and budgetary slack, which means the key condition for mediation is not met. As a result, budgetary slack does not serve as an effective mediating channel between product market competition and firm performance, and Hypothesis 4h is not supported.

First, the lack of a significant negative relationship between product market competition and budgetary slack suggests that managers may not actively reduce budget buffers in response to competitive pressure. This result may be related to the performance uncertainty faced by managers in competitive environments. Although intense market competition is expected to reduce agency problems by limiting managerial discretion (Giroud & Mueller, 2011; Babar & Habib, 2021), it may also increase managerial concern over external risks. To deal with potential profit

fluctuations and operational pressures, managers might choose to retain higher levels of budgetary slack as a cushion to ensure target achievement and performance evaluations (Frihatn & Abbas, 2020). This behavior weakens the disciplining effect of competition on slack creation.

In sum, budgetary slack does not mediate the relationship between product market competition and firm performance. Although competition may directly affect performance, especially ROE, its impact on budgetary behavior is more complex. Managers may adopt conservative budgeting strategies to cope with external risks, which in turn reduces the potential of competition to limit budgetary slack.

#### **6.2.32 Discussion of Results for Hypothesis 4i**

This study proposes the hypothesis that budgetary slack plays a mediating role between political connections and firm performance. In other words, political connections improve firm performance by reducing budgetary slack. The empirical results support this hypothesis.

In the first step of the mediation test, political connections are found to have a significant positive effect on firm performance. This result is consistent with previous studies that emphasize the strategic value of political connections in a transitional economy. Many scholars agree that political connections serve as an important external governance mechanism (Liu, 2024). When formal institutions are not well-developed, political connections can act as a useful supplement or substitute (He et al., 2019). They help firms obtain key resources (Faccio, 2006), reduce environmental uncertainty (Pang & Wang, 2021), and strengthen investor confidence (Longwei et al., 2021). Therefore, based on resource dependence theory, political connections are generally seen as a factor that improves firm performance (Al-Delawi et al., 2023; Pang & Wang, 2021; Guo et al., 2019; Goldman et al., 2009).

In the second step of the regression, political connections are found to have a significant negative effect on budgetary slack. According to resource dependence theory, firms with political connections can access various forms of resource support, such as easier financing, tax reductions, and government contracts (Faccio, 2006). As shown in Liu's (2019) empirical research, this support lowers the difficulty of meeting budget targets and weakens managers' motivation to rely on budgetary slack. When firms can secure stable resources through political connections, managers do not need

to leave too much buffer space in the budget to handle uncertainty.

In the third step, after including budgetary slack in the model, the positive coefficients of political connections on ROA and ROE remain significant at the 1% level. In addition, budgetary slack has a significant negative effect on firm performance. These results confirm that budgetary slack partially mediates the relationship between political connections and firm performance. This means that one way political connections improve performance is by effectively reducing budgetary slack. The findings of this study offer a new theoretical perspective on understanding the relationship between political connections and firm performance. They also add to the research on budgetary slack. Existing literature generally sees budgetary slack as a dysfunctional or even unethical management behavior (Shu et al., 2023; Douglas & Wier, 2000; Pramudiati et al., 2022) that should be controlled (Fisher et al., 2000). Budgetary slack can lead to wasted resources, lower management efficiency, and even hide managerial mistakes (Otalor & Oti, 2017; Islami & Nahartyo, 2019). Therefore, by reducing budgetary slack, political connections help improve internal management efficiency and discipline, which becomes a key mechanism through which they enhance firm performance.

#### **6.2.33 Discussion of Results for Hypothesis 4j**

This study proposes that budgetary slack plays a mediating role between external audit quality and firm performance. In other words, high-quality external audits can improve firm performance by reducing budgetary slack. The empirical results of this study support this hypothesis.

In the first step of the regression analysis, the results show that external audit quality is positively and significantly related to both ROA and ROE. This means that higher audit quality is linked to better firm performance. This finding is consistent with previous research. Based on agency theory, external audits are an important part of external corporate governance. They help reduce the information gap between principals and agents, improve the quality of financial reporting, and limit opportunistic behavior by managers (Yeung & Lento, 2020; Aguilera et al., 2015). As a result, audits help align managers' actions with shareholders' interests and improve operational efficiency and firm performance (Al-ahdal & Hashim, 2022; Guedhami et al., 2014).

In the second step of the regression, external audit quality shows a significant negative effect on budgetary slack. This suggests that high-quality audits help reduce slack. Budgetary slack refers to the deliberate underestimation of revenues or overestimation of costs by managers during the budgeting process. This often happens when monitoring is weak and information is not equally shared (Kepramareni et al., 2019). Because external auditors are independent, professional, and credible, they are more likely to detect and report problems such as budget manipulation or inefficiency. This creates a deterrent effect that discourages managers from engaging in slack behavior. Previous research has shown that high-quality audits limit managerial discretion in financial reporting (Guedhami et al., 2014) and promote more accurate and disciplined budgeting practices, which increases financial transparency (Fan & Wong, 2005).

In the third step of the regression, after adding budgetary slack as a variable, external audit quality still shows a significant positive effect on ROA and ROE. At the same time, budgetary slack has a significant negative effect on both performance measures. This indicates that budgetary slack partially mediates the relationship between external audit quality and firm performance. In other words, one way in which high-quality audits improve performance is by reducing slack and improving the efficiency of resource allocation.

These results add to the existing literature in several ways. First, they confirm the important role of external audits in corporate governance as a tool for monitoring and control. Michas (2011) pointed out that external audits increase the reliability of financial information and strengthen internal controls, making them a key part of governance structures. Second, this study introduces a new pathway—budgetary slack—through which external audits can influence firm outcomes. While most prior research has focused on the impact of audits on financial reporting quality or earnings management (Habib et al., 2019; Alves, 2013), this study shows that high-quality audits can also affect the budgeting process by reducing waste and inefficiency within the firm.

#### **6.2.34 Discussion of Results for Hypothesis 4k**

This study proposes that budgetary slack plays a mediating role in the relationship between media attention (MEDIA) and firm performance (ROA and

ROE). That is, media attention can help improve firm performance by reducing budgetary slack. The empirical results support this hypothesis.

In the first step of the mediation test, media attention has a significant positive effect on firm performance. This suggests that media attention does help improve firm performance. This result aligns with previous studies. As an important external governance mechanism, media helps spread information, which reduces the information gap between firms and external stakeholders and helps ease agency problems (Bushee et al., 2010; Liu & McConnell, 2013; Hassan et al., 2023). Media exposure makes firm behavior more open and transparent, which limits self-interested actions by managers and guides them to make decisions that better match shareholder interests (Dyck et al., 2008; Dai et al., 2015). In addition, many empirical studies have found a positive link between media attention and firm performance (Chih & Chih, 2014; Dang et al., 2021; Tajvidi & Karami, 2021; Bai & Yan, 2023). This study confirms that trend again and provides further support for the role of media in corporate governance.

In the second step of the regression, media attention shows a significant negative effect on budgetary slack. This means that media attention can effectively reduce slack behavior inside firms. As an information intermediary and “social arbiter” (Wiesenfeld et al., 2008), strong media attention pushes managers to disclose more detailed information related to budgets and operations, which reduces the room for hiding information (He et al., 2024). When managers know that their budget decisions might be observed by the public and reported by the media, they are more careful in making and carrying out budgets. They are more likely to set realistic and challenging goals, which leads to lower levels of slack (Hassan et al., 2023; Dai et al., 2015).

In the third step of the regression, after controlling for budgetary slack, the positive effect of media attention on ROA and ROE remains significant. This shows the key path through which media affects firm performance. At the same time, budgetary slack continues to have a significant negative effect on ROA and ROE, which further confirms its harmful impact on performance. Previous studies have widely noted that budgetary slack is a common dysfunctional behavior in internal management. It leads to inefficient use of resources and lowers management efficiency (Shu et al., 2023; Otalor & Oti, 2017; Pramudiati et al., 2022). Slack not only reduces the challenge of meeting budget goals but also allows employees to meet

performance standards without fully using their potential, which weakens overall performance (Lukka, 1988; Islami & Nahartyo, 2019).

The results support the hypothesis that budgetary slack partly mediates the relationship between media attention and firm performance. This finding also expands the understanding of how media governance can improve firm outcomes. Most existing research focuses on how media affects information disclosure, financial transparency, or external reputation (Bushee et al., 2010; Solomon et al., 2014). This study provides a new view: media can also affect the budgeting process and, in that way, help improve performance. It offers both theoretical and empirical support for understanding the pathway of media governance.

### **6.3 Summary of the Chapter**

This chapter provides a comprehensive analysis of the relationships among internal and external corporate governance variables, budgetary slack, and firm performance. The study finds that internal governance variables (such as ownership concentration, managerial ownership, board size, board independence, CEO duality and executive compensation incentives) and external governance variables (such as political connections, media attention, and external audit quality) all have significant effects on firm performance.

With respect to budgetary slack, the results show that ownership concentration, managerial ownership, political connections, external audit quality, and media attention all significantly reduce budgetary slack. In contrast, state ownership is found to significantly increase budgetary slack. The study also confirms that budgetary slack has a significant negative effect on firm performance, supporting the view that budgetary slack, as a form of dysfunctional behavior, harms organizational resource allocation and managerial efficiency. In addition, the mediation analysis reveals that budgetary slack plays a partial mediating role in the relationships between several corporate governance variables and firm performance.

Overall, the findings of this chapter highlight the important role of corporate governance mechanisms in improving firm performance and controlling budgetary slack within the context of China's institutional environment.

## **CHAPTER SEVEN**

### **CONCLUSION**

#### **7.1 Introduction**

This chapter presents the conclusion of the study. Section 7.2 reviews the main content of the previous chapters. Section 7.3 summarizes the key empirical findings on the relationships among corporate governance, budgetary slack, and firm performance. Section 7.4 discusses the contributions of this study from both theoretical and practical perspectives. Section 7.5 discusses the limitations of the research. Section 7.6 proposes directions for future research and offers suggestions for further exploration. Section 7.7 presents the summary of this chapter.

#### **7.2 Summary of thesis**

This study consists of seven chapters. Chapter One explains the background and the research problem. Although corporate governance is widely believed to improve firm performance, existing theories and empirical evidence have not reached a consistent conclusion, especially in emerging markets like China. Chinese A-share listed companies have unique institutional backgrounds, such as highly concentrated ownership structure, state control, and political connections. These factors create a governance environment different from Western countries. In this context, budgetary slack, as a dysfunctional behavior in budget management, may reflect the limitations of governance mechanisms in terms of incentives and monitoring. Budgetary slack represents managerial opportunism and weakens budget management effectiveness. It may also negatively affect firm performance. Therefore, it is necessary to revisit the issue of budgetary slack from the perspective of corporate governance. This study aims to examine how internal and external corporate governance mechanisms influence budgetary slack and firm performance, and to investigate the mediating role of budgetary slack in the governance–performance relationship. The research objectives include: (1) examining the impact of corporate governance on firm performance; (2) examining the effect of corporate governance on budgetary slack; (3)

examining the impact of budgetary slack on performance; (4) investigating the mediating role of budgetary slack in the governance-performance relationship.

Chapter Two and Three review relevant literature and theories to build the theoretical foundation of the study and to develop the research hypotheses. Chapter Two reviews the basic concepts and influencing factors of budgetary slack. It pointed out that budgetary slack, as managers' behavior to manipulate the budget process, may result from information asymmetry and incentive mechanism failure. This affects firm resource allocation and performance. It also analyzes how corporate governance influences both firm performance and budgetary slack. In terms of internal governance, ownership concentration, state ownership, managerial ownership, board size, independent director ratio, CEO duality, and executive compensation are identified as key factors. External governance includes product market competition, political connections, media attention, and audit quality. These variables are considered to play important roles in affecting budget behavior and firm performance. The research hypotheses discussed in Chapter Three are mainly based on two theories. First is agency theory, which emphasizes that effective governance mechanisms can reduce managerial opportunism and agency costs. This can suppress budgetary slack and improve firm performance. This theory supports the role paths of internal governance variables and external governance mechanisms such as product market competition, external audit and media attention. Second is resource dependence theory, which explains how political connections help firms obtain key resources to stabilize operations and affect budgeting and performance. These chapters establish the logical relationship among the three key variables: corporate governance may influence performance directly or indirectly through the mediating effect of budgetary slack. Together, these two chapters provide the theoretical support and logical foundation for the empirical models and hypothesis testing.

Chapter Four details the methodology design used in this study. The chapter clearly states that the research adopts quantitative research methods. Sample selection uses purposive sampling. The primary inclusion criterion is that companies disclose next year's budget revenue data in their financial reports (Shu et al., 2023; Tang et al., 2020; An et al., 2020). To further ensure data quality, this study follows existing research (Fang et al., 2018; Shao, 2019; Xiao, 2022; He et al., 2024) to further screen the sample: (1) Exclude companies with delisting risk; (2) Exclude financial companies; (3) Exclude companies with missing or unavailable data. The data comes

from secondary data of Chinese A-share listed companies from 2014 to 2023. It includes corporate governance variables, budgetary slack indicators, financial performance metrics, and control variables, ensuring representativeness and reliability. To avoid the impact of extreme values on regression results, the data is winsorized at the 1st and 99th percentiles, following methods used by He et al. (2024), Liu et al. (2023), Pang & Wang (2021), and Shao (2019). Panel data is used for the empirical analysis.

Chapter Five presents the empirical results. This chapter first performs descriptive statistical analysis and correlation testing. It analyzes the distribution characteristics and preliminary relationships of variables, providing a foundation for subsequent regression analysis. Based on the results of the F-test, LM test, and Hausman test, the fixed effects model is selected to control for firm-level and time-level heterogeneity. Cluster-robust standard errors are used to address issues of heteroskedasticity and autocorrelation in panel data, improving the reliability of estimation results (Moody & Marvell, 2020; Thompson, 2011). Then, the study builds regression models to examine the impact of internal governance and external governance on firm performance, and the impact of internal governance and external governance on budgetary slack. It further constructs mediation models to test whether budgetary slack mediates the relationship between internal and external governance mechanisms and performance. Robustness checks are conducted by replacing the dependent variable with an alternative performance measure (EPS) and by including industry fixed effects.

Chapter Six systematically discusses each research hypothesis based on the empirical results from the previous chapter. The chapter combines previous research and theoretical frameworks to analyze the impact of internal governance variables (ownership concentration, state ownership, managerial ownership, board size, independent director ratio, CEO duality, and executive compensation) on firm performance (ROA and ROE) and budgetary slack. It also examines the impact of external governance variables (product market competition, political connections, external audit quality, and media attention) on firm performance (ROA and ROE) and budgetary slack. At the same time, this chapter discusses the impact of budgetary slack on firm performance. Furthermore, it explores its mediating role between internal and external governance mechanisms and firm performance. The discussion highlights theoretical explanations and compares the findings with prior studies to

enhance the interpretation of empirical results.

Chapter Seven summarizes the entire study. It outlines the main research findings and clarifies the contributions of this study at theoretical and practical levels. It highlights the limitations of the research and proposes future research directions that can be explored.

### **7.3 Summary of Research Findings**

This study uses panel data from 3,114 Chinese A-share listed companies as the research sample and employs fixed effects models to conduct empirical analysis on the relationships among corporate governance, budgetary slack, and firm performance. The research focuses on four main objectives. It analyzes the impact of internal and external corporate governance mechanisms on firm performance, the impact of internal and external corporate governance mechanisms on budgetary slack, the impact of budgetary slack on firm performance. Furthermore, explores the mediating role of budgetary slack between corporate governance and performance.

Among internal governance mechanisms, ownership concentration significantly improves firm performance and effectively reduces budgetary slack. This finding supports the view of agency theory that large shareholders, as major investors, have strong incentives to monitor and can effectively constrain managerial opportunistic behavior. This improves resource allocation efficiency and firm performance (Jensen & Meckling, 1976; Alkurdi et al., 2021; Bhakar et al., 2024).

Regarding state ownership, although theory suggests that state control has problems such as low efficiency and lack of regulatory incentives (Lin et al., 2020; Sun and Tong, 2003), this study finds that it does not significantly affect firm performance. This indicates that China's state-owned enterprise reform has reduced traditional governance problems to some extent (Zhang et al., 2021). However, state ownership still significantly increases budgetary slack, showing that insider control problems and soft budget constraints still exist (Yang et al., 2021; Bai & An, 2021).

Managerial ownership has a positive impact on firm performance and also helps reduce budgetary slack. This supports agency theory by showing that when managers hold company shares, their interests align more closely with those of shareholders (Bhagat & Bolton, 2019; Jensen & Meckling, 1976). This reduces the likelihood of opportunistic behavior in the budgeting process (Li & Zhao, 2020).

Board size is positively associated with firm performance. This supports both agency theory and resource dependence theory, as larger boards may provide better oversight and bring in more diverse expertise (García-Ramos & Díaz, 2021). However, its effect on budgetary slack is not significant. This may be due to higher coordination costs and lower communication efficiency within larger boards, which weakens their actual monitoring power (Ahmed Sheikh et al., 2013; Luo, 2010).

The proportion of independent directors also has a significant positive effect on firm performance. This supports the view that independent directors help reduce agency conflicts by providing effective oversight (Puni & Anlesinya, 2020; Fama & Jensen, 1983). However, their effect on budgetary slack is not significant. This may be due to practical limitations. Independent directors often face time pressure and may lack financial expertise. These factors reduce their ability to detect and address slack-related behavior. In addition, their access to internal information during the budgeting process is limited, which further weakens their monitoring capacity (Bhagat & Black, 2001; Queiri et al., 2021).

CEO duality has a significant negative impact on firm performance, which confirms the view that separating the CEO and board chair roles helps establish an effective oversight structure (Khan et al., 2021; Fama & Jensen, 1983). However, its positive effect on budgetary slack is not significant. This may suggest a balance between reduced board oversight and improved communication efficiency, resulting in a neutral net effect.

Executive compensation significantly improves performance and reduces slack. This aligns with agency theory, as higher pay links managerial interests with those of shareholders, encouraging better firm outcomes (Jensen & Meckling, 1976; Kayani & Gan, 2022). Well-compensated executives are more likely to align with shareholder goals and avoid slack-generating behavior (An et al., 2018).

For external governance mechanisms, product market competition shows mixed results. It has no significant impact on ROA, but is positively associated with ROE at the 10% level. This indicates that competition may improve shareholder returns by increasing external pressure on managers, consistent with agency theory (Liu et al., 2022). However, it does not significantly reduce budgetary slack. On the one hand, competition may limit managerial discretion (Giroud & Mueller, 2011). On the other, it may encourage managers to build in slack as a buffer against uncertainty (Frihatn & Abbas, 2020). These two effects may cancel each other out.

Political connections have a significant positive effect on firm performance and help reduce budgetary slack. Based on resource dependence theory, political ties give firms access to essential resources, such as financing, tax benefits, and government support, which help reduce uncertainty and improve performance (Faccio, 2006; Huang & He, 2020; Al-Delawi et al., 2023). Political ties may also reduce the need for managers to inflate budget slack in response to external pressures (Liu, 2019).

External audit quality has significant impacts on both firm performance and budgetary slack. This supports agency theory, showing that high-quality audits reduce information asymmetry and restrict managerial opportunism, enhancing firm value (Aguilera et al., 2015; Yeung & Lento, 2020). In budgeting, high-quality audits limit managerial discretion and reduce slack (Guedhami et al., 2014; Fang et al., 2018).

Media attention positively affects performance and negatively affects slack, showing its role as an external monitor in corporate governance (Dyck & Zingales, 2002; Bushee et al., 2010). Media reduces information gaps between firms and stakeholders, which helps reduce agency problems and improve performance (Liu & McConnell, 2013; Bushee et al., 2010; Hassan et al., 2023). Note that better information disclosure makes managerial behavior more transparent, lowering their motivation to manipulate budgets.

The study also confirms that budgetary slack has a negative effect on firm performance. Slack reflects opportunistic behavior, leading to inefficiency and wasted resources, which harms performance (Mao & Zhu, 2009; Otalor & Oti, 2017; An et al., 2020; Pramudiati et al., 2022).

In the mediation analysis, budgetary slack is found to mediate the relationship between several governance variables and firm performance. Specifically, internal mechanisms such as ownership concentration, managerial ownership, and executive compensation incentives, and external mechanisms such as political connections, audit quality, and media attention, not only affect performance directly but also improve it indirectly by reducing budgetary slack. These results highlight an important mechanism: corporate governance enhances firm performance partly by shaping managerial behavior in the budgeting process.

Table 7.1

## Summary of Research Findings

| <b>Governance Mechanism</b> | <b>Effect on Firm Performance</b>                                                                          | <b>Effect on Budgetary Slack</b>                                                            | <b>Mediation Effect</b>                                       |
|-----------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Ownership concentration     | Significantly improves performance because large shareholders have strong monitoring incentives            | Significantly reduces slack by constraining managerial opportunism                          | Yes. Slack partly mediates the positive effect on performance |
| State ownership             | No significant impact, indicating that governance problems have been partially alleviated after reforms    | Significantly increases slack due to insider control and soft budget constraints            | No                                                            |
| Managerial ownership        | Improves performance by aligning managers' interests with shareholders                                     | Reduces slack by limiting opportunistic budgeting behavior                                  | Yes. Slack partly mediates the relationship                   |
| Board size                  | Improves performance by providing oversight and diverse expertise                                          | No significant impact, possibly due to higher coordination costs                            | No                                                            |
| Independent directors       | Improves performance by reducing agency conflicts                                                          | No significant impact, limited by information access and expertise                          | No                                                            |
| CEO duality                 | Reduces performance, supporting the separation of the CEO and chair roles to establish effective oversight | No significant impact, as weaker oversight and improved communication may offset each other | No                                                            |
| Executive compensation      | Improves performance by mitigating                                                                         | Reduces slack by discouraging                                                               | Yes. Slack partly mediates the                                |

|                            |                                                                             |                                                                                           |                                             |
|----------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------|
|                            | conflicts of interest between executives and shareholders                   | opportunistic behavior                                                                    | relationship                                |
| Product market competition | Mixed results: no effect on ROA, slight positive effect on ROE              | No significant impact, as monitoring pressure and buffer incentives may offset each other | No                                          |
| Political connections      | Improves performance by providing access to critical resources              | Reduces slack by alleviating external uncertainty                                         | Yes. Slack partly mediates the relationship |
| Audit quality              | Improves performance by reducing information asymmetry                      | Reduces slack by constraining managerial discretion                                       | Yes. Slack partly mediates the relationship |
| Media attention            | Improves performance by enhancing transparency                              | Reduces slack by strengthening external monitoring                                        | Yes. Slack partly mediates the relationship |
| Budgetary slack            | Negatively affects performance by reducing efficiency and wasting resources | —                                                                                         | —                                           |

## **7.4 Contribution of the Study**

This section outlines the main contributions of this study, which is divided into theoretical and practical perspectives. First, the theoretical contributions are explained, with a focus on how this research expands existing knowledge and frameworks. Consequently, the practical implications are presented, offering insights for both policymakers and corporate managers.

### **7.4.1 Theoretical Contribution**

This study makes several theoretical contributions to the research on the relationship between corporate governance, budgetary slack, and firm performance, especially in the context of China as an emerging market. It addresses key gaps in the existing literature and deepens the understanding of how governance mechanisms influence performance.

First, this study expands the scope of corporate governance theory by including external governance mechanisms—such as product market competition, political connections, audit quality, and media attention—to examine how governance affects firm performance. Previous studies have mainly focused on internal governance factors like ownership structure, board characteristics, and executive incentives (Alodat et al., 2021; Al-Shaer et al., 2024; Bhagat & Bolton, 2019; Puni & Anlesinya, 2020; Shao, 2019). This research highlights the important role of external mechanisms in shaping managerial behavior and performance. This broader view helps build a more complete framework for understanding governance and performance.

Second, this study introduces a new perspective by analyzing the impact of corporate governance on budgetary slack. Unlike previous studies that viewed budgetary slack as an individual behavioral deviation caused by information asymmetry (Pramudiati et al., 2022; Sanjiwani & Suryanawa, 2020; Mohanna & Sponem, 2020; Kepramareni, 2019), this study analyzes budgetary slack within the corporate governance framework. It shows the systematic impact of governance structure on managerial budget behavior. Under effective governance mechanisms, managers' budget behavior is subject to stricter supervision and constraints, resulting

in a relatively low degree of budgetary slack. In contrast, in firms with weak governance mechanisms, managers are more likely to protect their own interests by creating budgetary slack. This view enriches the theoretical foundation of budgetary slack and provides support for integrated research between corporate governance and management accounting fields (Bhimani, 2009; Seal, 2006).

Third, this study further develops existing theoretical foundations by constructing and empirically testing a mediation path model of corporate governance-budgetary slack-firm performance. By introducing budgetary slack as a mediating variable, it reveals that corporate governance not only directly affects performance but also indirectly works through budget behavior. Previous studies usually viewed corporate governance and firm performance as a direct linear relationship (Alodat et al., 2021; Bhakar et al., 2024; Puni & Anlesinya, 2020), ignoring the important role of intermediate links. This study finds that the impact of governance mechanisms on performance is often realized through specific management practices. Budget management, as an important component of internal control, plays a key mediating role in this process. This integrated framework deepens the understanding of how governance mechanisms translate into business operation results and emphasizes the mediating role of budget behavior in the transmission process.

Fourth, this study adopts a dual theoretical perspective by combining agency theory and resource dependence theory. Agency theory (Jensen & Meckling, 1976; Fama & Jensen, 1983) provides basic logic for analyzing internal governance structures and some external supervision mechanisms. It believes that effective governance can reduce agency costs and constrain managerial opportunistic behavior, including the formation of budgetary slack. Resource dependence theory is used to explain the mechanism of political connections. It believes that firms can obtain key resources and reduce external uncertainty by building relationships with the government, thereby affecting budget preparation and performance results (Pang & Wang, 2021; Pfeffer & Salancik, 1978). The combination of these two theories enables this study to more comprehensively explain the role of governance mechanisms and expands the applicability and explanatory power of corporate governance in emerging market contexts. It provides a richer theoretical foundation for related research.

Fifth, this study tests corporate governance theories in the institutional context

of emerging economies. Using Chinese listed companies as research samples, it reveals the applicable boundaries of Western governance theory in local environments and emphasizes that theoretical assumptions need to be adjusted and expanded in combination with specific institutional contexts (Ali et al., 2018). Western developed countries' governance theories are mainly based on mature market economy environments and complete legal institutional frameworks (Jiang & Kim, 2020). However, emerging market countries often have different institutional characteristics, and these institutional differences affect the effects and working methods of governance mechanisms (Peng et al., 2021). These findings provide valuable cross-cultural comparisons for this research field and show the unique characteristics of these relationships in the Chinese market. This study provides strong empirical evidence for the contextual development of corporate governance.

In summary, this study develops a comprehensive conceptual and empirical framework that combines internal and external governance mechanisms. It redefines the function of budgetary slack within governance structures and positions it as a key mediating factor in the relationship between governance and firm performance. These contributions deepen the understanding of how governance shapes managerial behavior and financial outcomes. They also extend the literature on corporate governance and budgetary practices by offering new perspectives for studying organizational behavior in emerging economies.

## **7.4.2 Practical Contribution**

### ***7.4.2.1 Implications for Regulators and Policymakers***

This study shows that various internal and external governance variables play important roles in reducing budget slack and improving firm performance. These findings provide targeted policy recommendations for regulators and policymakers.

First, optimize ownership structure governance mechanisms. Chinese listed companies generally have concentrated ownership structures where one shareholder holds the majority stake. Large shareholders still serve an important monitoring function (Wang et al., 2019). Moreover, large shareholders have incentives to prevent management from misusing resources and manipulating budgets, which improves resource allocation efficiency (Alkurdi et al., 2021; Bhakar et al., 2024). Regulators

should use rules to guide companies. They should protect the reasonable monitoring rights of large shareholders while preventing tunneling effects and abuse of control rights. Specifically, regulators can strengthen protection mechanisms for minority shareholders and establish rules that constrain large shareholder behavior. This will ensure that large shareholders play a positive monitoring role.

Second, deepen the reform of state-owned enterprise (SOE) governance. In China, SOEs still dominate the listed company landscape. Although they account for about one-third of listed firms, they represent two-thirds of total market value (Jiang & Kim, 2020). To improve governance in SOEs, the government should continue to promote mixed-ownership reform by bringing in non-state capital and encouraging diverse ownership structures (Zhang et al., 2021). It is also important to enhance performance evaluation systems, improve incentive mechanisms, and reduce administrative interference in budget decisions through better budget management systems.

Third, strengthen board governance effectiveness. In the context of strategic transformation and high external uncertainty faced by Chinese companies, regulators can encourage firms to improve board structure. It is important to set stronger standards for real board independence, promote greater transparency in information disclosure, and enhance board diversity and professionalism. These measures can help improve the board's ability to integrate resources and provide strategic direction (Alodat et al., 2021; García-Ramos & Díaz, 2021).

Fourth, advance executive governance mechanism reform. When the same individual serves as both the CEO and the board chair, this can lead to confusion between supervision and execution, weaken accountability mechanisms, and increase opportunities for information opacity and budget manipulation (Krause et al., 2017). Regulators should promote the separation of the two roles by requiring clear corporate charters and transparent appointment mechanisms. In addition, rules on executive pay disclosure should be improved, and stock incentive plans should be carefully designed to avoid distorted incentives that could lead to slack creation.

Fifth, government-business relationship governance framework must be improved. Political connections can reduce resource uncertainty, decrease budgetary slack, and improve performance in specific institutional environments. Government should build transparent and standardized government-business cooperation mechanisms while preventing rent-seeking and corruption. This will enhance

institutional environment stability and improve resource allocation efficiency.

Sixth, deepen market-oriented reform processes. This study finds that product market competition does not significantly affect performance or slack. The result shows that the institutional foundation for market-oriented reform still needs strengthening. Regulatory authorities should break implicit monopolies and administrative barriers, and create fair market competition environments for companies. This will enable markets to play a more effective role in resource allocation. It is also crucial to enhance the market-based mobility of managers and strengthen the connection between product and labor markets, allowing competition to influence managerial evaluation and incentives more directly (Liu et al., 2018).

Seventh, strengthen external supervision governance systems. Among external governance mechanisms, both external audit quality and media attention have significant positive effects on improving firm performance and reducing budgetary slack. This shows that corporate governance effectiveness in China's institutional environment depends not only on internal governance but also on external supervision. Regulators should strengthen audit supervision and promote audit independence and professional standards, especially in relation to budget processes. Additionally, authorities should continue to advance the construction of media information platforms and strengthen public opinion management to encourage professional media to play intermediary and external supervision roles (Bai & Yan, 2023).

#### ***7.4.2.2 Implications for Management***

The findings of this study have important practical guidance for corporate management, especially in improving budget management practices and enhancing firm performance. Management should establish scientific and transparent budget processes and avoid artificially manipulated budget targets. Budget target setting should be based on objective market analysis and actual corporate capabilities, ensuring alignment with the company's long-term strategic objectives. A dynamic monitoring system for budget implementation should also be in place, with regular evaluations and timely adjustments to improve the efficiency and effectiveness of resource allocation.

Regarding executive incentive mechanisms, companies should abandon short-term oriented incentive models and optimize executive compensation incentive

structures based on long-term value creation. A multi-level and multi-dimensional performance evaluation system is needed to avoid excessive focus on budget achievement rates, which can lead to manipulation. When using equity-based incentives, firms should carefully assess their governance effects to prevent power entrenchment by executives (Abdul et al., 2015).

Management should also respect the board's supervisory role in the budgeting process. The board should review budget plans independently to avoid soft budget constraints driven by managerial interests. In addition, communication with independent directors should be strengthened to maximize the use of their expertise and monitoring function, fostering a constructive relationship between management and the board

## **7.5 Limitations of the Study**

Although this study has made efforts to ensure scientific rigor and reliability, several limitations remain that may affect the interpretation of the results.

First, there are limitations in how budgetary slack is measured. While many scholars have attempted to define and quantify budgetary slack, there is still no unified standard (Zhuang et al., 2025; Tang, 2020). This study adopts a widely used measure of budgetary slack: the difference between a firm's budgeted revenue growth rate and the industry average revenue growth rate. (Shu et al., 2023; Tang et al., 2020; An et al., 2020; Zheng et al., 2008). Although this measure offers a certain level of feasibility and reference value, it is still a relative measure. It may be influenced by industry fluctuations, market conditions, and other external factors, making it challenging to accurately capture companies' actual budget manipulation behaviors. Therefore, the measurement method of the budget slack variable may affect the interpretation strength of the results.

Second, this study employs purposive sampling, selecting listed firms from China's A-share market during the period from 2014 to 2023. Only firms that disclosed budgeted revenue data for the following year in their financial reports were included. This means the sample may lean toward companies with more structured budgeting systems or stronger external oversight. Firms that do not disclose budget data were excluded. In particular, under an institutional setting where budget disclosure is not mandatory, firms that choose to disclose this information may

systematically differ in terms of governance quality and financial transparency. Therefore, the universality of this study's conclusions still needs verification.

Third, this study builds upon existing research (Alodat et al., 2021; Al-Shaer et al., 2024; An et al., 2020) and employs static panel fixed effects models to estimate the relationship between governance mechanisms and firm performance. The models are cluster-robust, with treatment of standard errors to address heteroscedasticity and serial correlation issues. Although this method can effectively control for time-invariant individual heterogeneity, its static nature prevents it from capturing possible temporal effects and dynamic adjustment paths between variables. In practice, adjustments to corporate governance structures, changes in budget management behaviors, and performance formation processes often have lag effects and dynamic characteristics. Static models cannot fully reveal how governance variables gradually affect performance through budget mechanisms.

## **7.6 Recommendations for Future Research**

This study systematically examined the relationship among corporate governance mechanisms, budgetary slack, and firm performance. It used panel data to empirically test the effects of both internal and external governance mechanisms, providing new evidence for understanding the corporate governance–budgetary slack–firm performance chain. However, some limitations remain, and future research may expand and refine the findings in the following ways.

First, the measurement of budgetary slack can be improved further. This study used the difference between a firm's budgeted revenue growth rate and the industry's average actual revenue growth rate as a proxy. Although this measure is comparable and practical, it remains an indirect indicator that may not fully capture the complex nature of budgetary slack. Future studies may consider developing more comprehensive or multidimensional tools, such as incorporating managerial disclosures, changes in administrative cost structure, transparency in the budgeting process, and budget achievement ratios. These improvements could enhance the theoretical validity and empirical accuracy of the slack variable.

Second, this study employs static panel models to analyze linear relationships between variables. However, time lag effects, path dependence, or dynamic adjustments of governance mechanisms have not yet been considered. Future research

can use dynamic panel models, system Generalized Method of Moments (GMM), or structural equation modeling methods to deeply analyze the long-term impact of governance structure evolution on budget behavior and performance, and identify potential feedback mechanisms and lag effects.

Third, as digital transformation, green governance, and social responsibility increasingly become important components of corporate governance, future research can also incorporate emerging governance variables, such as Environmental, Social, and Governance (ESG), digital governance, and investor engagement, into the analysis framework. This would evaluate their impact paths on budget behavior and firm performance, thereby expanding corporate governance research's theoretical scopes and practical applicability.

## **7.7 Summary of the Chapter**

This chapter first summarizes the main findings of the study and then presents its contributions from both theoretical and practical perspectives. In terms of theory, the study expands the traditional corporate governance framework by including external governance mechanisms and by identifying budgetary slack as a key mediating variable between governance and performance. It integrates agency theory and resource dependence theory to explain how governance mechanisms influence corporate outcomes through behavioral pathways, especially in the context of emerging markets. On the practical side, the study provides policy recommendations for both regulators and corporate managers. These include optimizing ownership structures, strengthening board independence, promoting the separation of CEO and board chair roles, improving audit supervision quality, and enhancing media oversight. The study also identifies several limitations, such as the constraints of the budgetary slack measurement method, the limited sample scope, and the static nature of the model design. Finally, it proposes directions for future research. In summary, this chapter brings together the key findings, theoretical and practical contributions, and future research outlook. It offers a clear guide for advancing research and practice in the fields of corporate governance and budget management.

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