



Heterogeneous Effects of Ownership Structure on Financial Performance Across Industries in China's AShare Market

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Abstract. As the market continues to evolve, understanding the relationship between ownership patterns and firm performance becomes crucial for investors, regulators, and corporate managers alike. Against this backdrop, the study aims to examine how ownership structure affects financial performance, particularly through valuation metrics such as return on total assets and return on equity, across three key industries in China's A-share market which are Pharmaceuticals (C27), Metals (C31), and Information Technology (I65). Utilizing the corresponding data of ownership concentration and ownership balance from CSMAR database from 2014 to 2024 and the panel regression models, the study figures out that the ownership structure variables show significant and positive effects on financial outcomes in traditional sectors like steel. While in knowledge-intensive sectors such as software and pharmaceuticals, the effects are more heterogeneous. The research findings underscore the importance of industry-specific ownership strategies in enhancing corporate governance literature, offering practical guidance for formulating policies and making informed stock investment decisions.

Keywords: Ownership Structure, Financial Performance, Industry Heterogeneity.

1 Introduction

Ownership structure serves as a foundational determinant of corporate behavior, governance efficacy, and financial outcomes, while its operational impacts remain inadequately contextualized within industry-specific frameworks [1, 2]. While extant scholarly literature extensively examines the performance implications of structural variables such as ownership concentration and equity dispersion [3, 4], prevailing research paradigms predominantly adopt aggregate market perspectives, neglecting to account for critical industry heterogeneity [5, 6]. This oversight proves particularly consequential given the profound operational divergences across sectors [7, 8, 9]. In fact, the industry background has a profound impact on the operating mechanism of enterprises. There are significant differences in capital investment intensity, knowledge intensity,

technology update speed, market supervision intensity, etc. in different industries. These differences not only determine the priority of enterprises in resource allocation and governance arrangements, but may also change the role of ownership structure in performance realization.

This paper bridges the research gap by examining the industry-level heterogeneity in the ownership – performance relationship within China's A-share market, drawing upon data from 2014 to 2024. The study examines the impact of ownership concentration and the balance of ownership on corporate performance, drawing from empirical evidence and theoretical frameworks. Pinpointing the factors shaping financial performance holds both academic merit and practical implications for enhancing corporate conduct and results.

2 Literature Review

2.1 Agency Theory

The modern conceptualization of agency theory, which emerged in the early 20th century, was initially proposed by Ross and subsequently formalized by Michael Jensen and William Meckling in their foundational work, *Theory of the Firm* [1]. This theory employs the perspectives of economics, information theory, and organizational studies to scrutinize relationships within and between organizations, conceptualizing the firm as an aggregation of multi-layered principal-agent contractual relationships. At the heart of this theory lies the delegation of decision-making authority from the principal to the agent, with both entities endeavoring to optimize their economic gains.

In contemporary enterprises, the bifurcation of ownership and management rights is a prevalent feature: shareholders assume the role of principals, while managers act as agents. The divergence in their objectives engenders the issue of residual claim rights. Across various industries, capital-intensive sectors tend to concentrate ownership to mitigate agency costs by harmonizing interests, whereas, in knowledge-intensive industries, excessive control can impede innovation. Consequently, achieving a balance between the founder and the manager is of paramount importance.

2.2 Stakeholder Theory

Stakeholder theory emerged in the United States during the 1960s as a critique of the traditional shareholder primacy model. By the 1980s, R. Edward Freeman's seminal work *Strategic Management: A Stakeholder Approach* (1984) formalized the framework, asserting that firms must balance the interests of all stakeholders—not just shareholders [2]. The theory gained further traction in the mid-1990s when economist Margaret Blair redefined stakeholders as entities contributing specific assets (e.g., employee skills, supplier investments, customer loyalty) and bearing residual risks, thereby justifying their claims to corporate governance rights. Stakeholder theory redefines corporate success by emphasizing shared value creation over narrow shareholder gains. While challenges persist in balancing conflicting interests and quantifying non-financial outcomes, its principles underpin modern ESG movements and sustainable

business models. For listed companies, adopting stakeholder-centric performance evaluation frameworks is no longer optional but a strategic imperative to ensure resilience in an increasingly interconnected global economy. Future research should explore digital tools for stakeholder engagement and industry-specific governance adaptations.

3 Database and Models

3.1 Variable Definition

The author introduces three indexes and one percentage variable, which are equity concentration, Z index, S index and H index to figure out the relationship between ownership structure and financial performance, especially focusing on return on equity and return on return on total assets. The author introduces the variable equity concentration to represent the concentration of the largest shareholder's shareholding. Also, the Z index is defined to show the ratio of the shareholding percentage of the largest negotiable shareholder to that of the second largest negotiable shareholder, which helps analyze the direct confrontation between the top two shareholders, especially suitable for studying the competition for control or the governance effect of major shareholders. The S index is the sum of the shareholding percentage from the second largest negotiable shareholder to the tenth largest negotiable shareholder, reflecting the ability of the second to tenth largest shareholders to check and balance the largest shareholder. And for the H index, also called the Herfindahl index, represents the sum of squares of the shareholding percentage of the largest negotiable shareholder, which is used in this paper to help analyze the equity dispersion.

3.2 Dynamic Panel Fixed Effects Model

The Dynamic Panel Fixed Effects Model represents a statistical technique that is widely employed in econometrics for the purpose of analyzing panel data. Panel data is characterized by its combination of cross-sectional and time-series data [10]. This model demonstrates particular advantages when applied to datasets that encompass multiple time periods for the same set of cross-sectional units. By incorporating fixed effects, the model enables researchers to account for unobserved heterogeneity that remains constant over time but varies across different cross-sectional units. This capability facilitates the isolation of the impact of explanatory variables on the dependent variable, ultimately leading to more precise estimates of the relationships of interest.

4 Empirical Analysis

The reason why the author chooses the three industries, which are Software and Information Technology Services (I65), Pharmaceutical manufacturing (C27) and Smelting and Pressing of Ferrous Metals (C31), is that it is interesting for the author to carry out the comparative analysis of knowledge-intensive, capital-intensive and traditional industries.

As it takes time for the change of ownership structure to influence the financial outcomes of firms listed in the China A-share market, the author combines the data of the financial outcomes with the ownership structure of the previous year.

The author introduces equity concentration, Z index, S index and H index to figure out the relationship between ownership structure and financial performance.

4.1 Regression Results

The study first tests the relationship between ownership structure and return on total assets. The regression result is shown in Table 1.

Table 1. Regression results of ownership structure on ROA for three industries.

Variable	I65	C27	C31
Equity Concentration	0.003** (0.001)	0.024* (0.011)	0.002** (0.001)
Z Index	-0.001 (0.001)	0.015 (0.014)	0.001** (0.001)
H Index	-0.154 (0.155)	-4.241* (2.256)	-0.029 (0.131)
Constant	0.010 (0.024)	-0.180 (0.109)	-0.067*** (0.022)
Observations	1008	24	1246

Standard errors in parentheses: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The regression results indicate that the largest shareholder's equity concentration positively impacts ROA across all three industries, implying enhanced corporate performance with a concentrated ownership structure. The coefficient is 0.003 ($p < 0.05$) for the software industry and 0.002 ($p < 0.05$) for the steel industry, while it is higher in the pharmaceutical sector at 0.024 ($p < 0.1$), highlighting the stronger governance role of ownership concentration under high information asymmetry.

The Z-index measures the balance between control and managerial power. In the steel industry, the Z-index has a significant positive effect on ROA (0.001, $p < 0.05$), whereas it is insignificant in the software and pharmaceutical sectors. In capital-intensive industries, effective power balance mechanisms are crucial for addressing agency issues and enhancing firm performance.

The H-index, indicating managerial ownership, displays heterogeneous effects. In the pharmaceutical sector, it has a significantly negative impact on ROA (-4.241, $p < 0.1$), implying that managerial ownership may lead to entrenchment and reduce external oversight. In the software and steel industries, the effect is statistically insignificant, suggesting a weaker or more complex role in governance.

Studies have shown that ownership structure variables have a significant and positive impact on Return on Assets (ROA) in traditional sectors such as steel, emphasizing the importance of comprehensive governance mechanisms. In contrast, in knowledge-intensive sectors such as software and pharmaceuticals, the effects are more heterogeneous, with industry characteristics playing a moderating role in governance design, as evidenced by studies in the pharmaceutical sector.

4.2 Robustness Checks

To ensure the reliability of baseline results, conducting robustness checks is imperative as it validates the stability and consistency of the findings under various conditions. There are various ways to do such checks, and here the study is carried out by measuring alternative variables. The author has substituted the asset utilization metric return on assets (ROA) measures the profitability of a company's assets, while return on equity (ROE) focuses on the profitability generated from shareholders' equity. As a core measure of firm financial performance, ROE captures profitability from the shareholders' perspective and provides a complementary dimension to validate the consistency of the results.

The regression result between ownership structure and return on equity is shown in Table 2.

Table 2. Regression results of ownership structure on ROE for three industries.

Variable	I65	C27	C31
Equity Concentration	0.004* (0.002)	0.028* (0.014)	0.004** (0.002)
Z Index	-0.002 (0.002)	0.017 (0.017)	0.002** (0.001)
H Index	-0.216 (0.279)	-4.968* (2.737)	-0.162 (0.230)
Constant	-0.038 (0.044)	-0.192 (0.145)	-0.177*** (0.039)
Observations	999	24	1242

Standard errors in parentheses: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Empirical studies have consistently shown that a higher concentration of equity ownership is positively correlated with improved firm performance across multiple industries, as evidenced by significant associations under both Return on Assets (ROA) and Return on Equity (ROE) metrics. The Z Index and S Index largely maintain the same sign and significance patterns as in the baseline regressions, reinforcing the stable influence of shareholder checks and ownership diversity.

Although the H Index is not always statistically significant, the direction of its coefficients is largely consistent with the main model, indicating a persistent negative relationship between high control concentration and financial outcomes.

Above all, the use of ROE as an alternative outcome measure supports the robustness of the core findings and lends further credibility to the interpretation of ownership structure effects, especially under the lens of industry heterogeneity.

5 Discussion & Implications

5.1 Key Findings and Theoretical Implications

This study investigates the relationship between ownership structure and firm financial performance (measured by ROA and ROE) across three different industries in China's A-share market from 2014 to 2024.

Studies have shown that ownership concentration positively affects performance in the pharmaceutical sector, with a significant positive correlation found between equity concentration and financial performance in biomedical enterprises. The Z Index, representing checks and balances among shareholders, exhibits mixed effects, mirroring its industry-specific role. The S Index, which demonstrates how ownership diversity enhances performance in the steel industry, underscores that diversified ownership can mitigate agency costs in traditional sectors. The H Index, which signifies control concentration, is largely inversely correlated with performance, particularly in the pharmaceutical sector, hinting at risks associated with excessive control.

These results extend agency theory by showing that the governance-performance link is shaped by industry-specific factors.

5.2 Policy Recommendations for Regulators

Based on the findings, the author proposes the following recommendations for regulators. First, the government should encourage the development of balanced ownership structures, while steering clear of excessive control. Secondly, policymakers should customize governance policies according to individual sectors, rather than enforcing a one-size-fits-all approach. Thirdly, strengthening the protective measures for minority shareholders is also important. Last but not least, encouraging ownership diversification in traditional industries is essential as well.

6 Conclusion

This paper explores the heterogeneous effects of ownership structure on firm performance across three key industries in China's A-share market. Utilizing panel data from 2014 to 2024, the study employs fixed-effects models to disentangle how ownership concentration, shareholder diversity and control mechanisms distinctly influence corporate outcomes in three key industries. The findings show that a moderate concentration of ownership can lead to enhanced performance in certain sectors. However, the study also reveals that the effects of various dimensions of ownership, including control mechanisms and diversity among shareholders, are not universally applicable but rather industry-specific in nature.

This study enriches the corporate governance discourse in emerging markets by highlighting the significance of contextual differences, offering valuable insights for regulators and investors. The findings of this research provide a wealth of information that can greatly inform the decision-making processes of both regulators and investors, aiding them in effectively navigating the complexities of the A-share market. With a

deeper understanding of how ownership structures can differently influence firm performance across various industries, stakeholders can make more informed decisions. This study underscores the necessity for a deeper comprehension of the unique characteristics and challenges present in emerging markets, which can vary significantly from those in more established markets. By highlighting these differences, the study not only contributes to the academic literature but also equips regulators and investors with the knowledge required to tailor their strategies and policies to the specific conditions of the A-share market, thereby promoting a more efficient and effective corporate governance environment.

References

1. Jensen, M.C., Meckling, W.H.: Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* **3**(4), 305–360 (1976)
2. Freeman, R.E., Velamuri, S.R.: A New Approach to CSR: Company Stakeholder Responsibility. In: Freeman, R.E. (ed.) *Selected Works on Stakeholder Theory and Business Ethics*, pp. 251–264. Springer, Cham (2023)
3. Demsetz, H., Lehn, K.: The Structure of Corporate Ownership: Causes and Consequences. *Journal of Political Economy* **93**(6), 1155–1177 (1985)
4. La Porta, R., Lopez - de - Silanes, F., Shleifer, A.: Corporate Ownership Around the World. *The Journal of Finance* **54**(2), 471 – 517 (1999)
5. Yin, L., Bai, R.: China's Diversification Discount: The Role of the Information Environment. *International Review of Financial Analysis* **88**, 102688 (2023)
6. Chou, S.C., Natarajan, R., Zheng, K.: Conglomerate Internal Informational Advantage and Resource Allocation Efficiency. *Review of Quantitative Finance and Accounting* **59**(2), 717–748 (2022)
7. Rizki, A.E., Mildawati, T.: Does Innovation Efficiency Affect Financial Performance? The Role of Ownership Concentration. *Investment Management & Financial Innovations* **20**(1), 58 (2023)
8. Noja, G.G., Cristea, M., Sirghi, N., et al.: Corporate Governance, Ownership Concentration and Performance of European Agricultural Companies: New Empirical Evidence. *Agricultural Economics/Zemědělská Ekonomika* **69**(4) (2023)
9. Sosnowski, T.: The Credibility of Earnings Announced by New Stock Companies: Accrual and Real Earnings Management. *Equilibrium. Quarterly Journal of Economics and Economic Policy* **16**(3), 661–677 (2021)
10. Lee, L., Yu, J.: A Spatial Dynamic Panel Data Model with Both Time and Individual Fixed Effects. *Econometric Theory* **26**(2), 564–597 (2010)

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