

Exploring the Impact of Ownership Structure on the Financial Performance of Listed Manufacturing Companies in China

Yi Chen

*School of Economics and Management, Xiamen University Malaysia, Selangor, Malaysia
2226880404@qq.com*

Abstract: This study investigates the impact of ownership structure on the financial performance of listed manufacturing companies in China, analyzing data from 2019 to 2023 using regression analysis. Results indicate that higher ownership concentration among the top ten shareholders significantly enhances Return on Assets (ROA), suggesting that concentrated ownership reduces agency problems through strengthened managerial oversight. However, excessively concentrated ownership may limit flexibility and innovation in dynamic industries. Institutional investors' shareholding positively influences financial performance by providing professional governance and strategic support, though this effect is moderated by governance structures and market conditions. Managerial ownership also shows a significant positive correlation with financial performance, aligning management and shareholder interests and reducing agency costs, yet overly concentrated managerial ownership can negatively affect long-term firm performance through power entrenchment. Conversely, state-owned shares significantly negatively impact ROA, implying lower profitability among state-owned enterprises due to restricted innovation capacity and market adaptability. The findings offer empirical insights into how ownership structures influence corporate financial outcomes, emphasizing the benefits of balanced ownership concentration and managerial incentives, as well as highlighting limitations inherent in state ownership. This study thus provides valuable guidance for optimizing corporate governance practices in China's manufacturing sector.

Keywords: Ownership structure, Financial performance, China's manufacturing sector, Corporate performance, Ownership concentration

1. Introduction

Corporate governance, initially framed through agency theory highlighting conflicts between shareholders and management [1], has broadened its scope due to globalization and rising attention toward ESG considerations [2]. Cross-country studies emphasize the influence of legal origin and regulatory conditions on corporate governance and economic growth [3]. Recently, China upgraded ESG standards, pressuring listed firms to improve governance structures and disclosure, thereby enhancing sustainable development and investment attractiveness [4]. Despite extensive research, existing studies predominantly address Western contexts or general governance mechanisms, leaving

a significant gap concerning the impact of ownership structure on financial performance in Chinese manufacturing companies.

Ownership structure impacts corporate performance. Fama and Jensen (1983) highlight that the separation of ownership and control leads to potential conflicts between managers and shareholders, a core concern of agency theory [5]. Research on ownership concentration reveals its dual effects. Managerial shareholding has an inverted U - shaped relation with firm value [6]. Institutional ownership proportion also matters [7]. State - owned ownership has unique impacts [8]. However, there are gaps. Few studies focus on dynamic equity structure shifts and industry - specific contexts with different shareholder types, limiting a full understanding of how shareholder structures affect corporate strategies and financial results.

Thus, this study aims to empirically investigate how ownership concentration among the ten largest shareholders, institutional investors, state-owned entities, and managerial holdings affect firm financial performance. Through addressing these questions, the research seeks to provide evidence-based insights for enhancing corporate governance effectiveness and improving financial outcomes within China's listed manufacturing sector.

2. Methodology

Empirical analysis has dominated corporate governance research recently, particularly during China's "13th Five-Year Plan," utilizing quantitative data and regression models to investigate the relationship between ownership structure and firm performance under varying market conditions and ownership systems. This methodological rigor provides credible insights into governance mechanisms and their economic implications. Consequently, this study also adopts empirical quantitative methods, specifically multiple regression analysis, to examine the effects of equity structure—including ownership concentration, institutional, managerial, and state-owned shareholding—on the financial performance (ROA) of listed manufacturing firms in China. As emphasized by Cao [9], empirical regression models can efficiently capture multi-variable relationships while controlling extraneous variables, offering robust insights for equity-performance relationships.

Data for this study are sourced from the China Stock Market and Accounting Research (CSMAR) database, chosen for its accuracy and comprehensive coverage of financial statements, shareholder structures, and governance data of Chinese listed firms. The analysis focuses on Chinese listed manufacturing companies due to their significance in China's economy, covering large, medium, and small-sized firms across diverse sub-sectors (electronics, machinery, chemicals) to enhance generalizability. Data from the latest three years are selected to reflect recent market trends and policy shifts, ensuring relevance and robustness.

The study uses independent variables capturing different ownership structures: Top Ten Shareholder Ownership (Top10) (ownership concentration), Institutional Ownership (INST) (institutional influence), State-Owned Ownership (State) (state governance characteristics), and Managerial Ownership (Mshare) (managerial alignment and potential agency conflicts). The dependent variable, Return on Assets (ROA), measures corporate financial performance. Control variables—company size (Size), leverage (Lev), years listed (Listage), revenue growth (Growth), and asset turnover (ATO)—control external influences. Companies with substantial missing data are excluded, and preprocessing ensures data integrity and consistency.

This study formulates hypotheses to assess the influence of different equity structures on financial performance (ROA):

H_0 : Shareholding proportions of the top ten shareholders, institutional investors, management, and state-owned entities have no significant impact on ROA.

H_1 : There is a significant correlation between the shareholding proportions (top ten shareholders, institutional investors, management, state-owned) and ROA.

Drawing from prior literature, the expectation is that concentrated ownership among top shareholders, institutional investors, and managerial ownership positively influences financial outcomes. However, given controversial findings regarding state-owned ownership impacts, further empirical examination is conducted.

The data analysis of this study will use the multiple regression model, which has been widely validated as an effective method in recent years in the study of the relationship between corporate governance and financial performance. Through multiple regression analysis, the study will quantify the impact of different shareholder structures on financial performance and explore its independence and significance under the condition of controlling variables. The specific data analysis methods and regression model construction are described below.

The model form is as follows:

$$ROA_{it} = \alpha_0 + \alpha_1 Top10_{it} + \alpha_2 INST_{it} + \alpha_3 Mshare_{it} + \alpha_4 State_{it} + CV + \sum year + \sum ind$$

Where.

- ROA_{it} : Return on Assets for the i-th company in the t-th year, representing the financial performance.

- α : Y-intercept or Y-intercept criterion of the regression line, which reflects the given firm's ROA if all the regression predictors equate zero.

- $\beta_1, \beta_2, \beta_3, \beta_4^{**}$: Coefficients for the independent variables, which show when and to what extent any variable impacted ROA.

- $Top10_{it}$ (Top Ten Shareholder Ownership) **: Shareholders' concentration in the form of the percentage of the total shares owned by the first ten shareholders.

- $INST_{it}$ (Institutional Ownership) **: Ownership in percentage of institutional investors showing the level of investment made by investors that are institutionalized.

- $Mshare_{it}$ (Market Share) **: Difference between the company sales or revenue and its market or industrial niche to show its competitiveness.

- $State_{it}$ (State-Owned Ownership) **: A dummy Variable equal to 1 for state owned, 0 otherwise.

- CV : Regressors, variables that can affect ROA but are not of our interest, like the size, capital structure or the industry of the companies.

- $\sum year$: Year dummy variables, to control for factors at macroeconomic or time level that impact all the firms operating in a particular year.

- $\sum ind$: Source specific dummies, to take account of industry level variations.

Data processing and analysis will be done using statistical software that includes SPSS, Stata or R in this study. These tools are capable of efficiently processing large amounts of data and generating reliable statistical results. Included:

The analysis employs robust statistical software (SPSS, Stata, or R), enabling efficient handling and interpretation of extensive datasets through the following comprehensive steps:

Data preprocessing: Data cleaning, addressing missing values, and standardization procedures ensure high data quality and comparability.

Regression model estimation and interpretation: A multiple regression model quantifies the relationships between equity structure variables and ROA, interpreting the direction and significance of these effects.

Robustness testing: Conducted by substituting ROA with return on equity (ROE) as an alternate performance measure. Consistency across these analyses validates robustness.

Significance testing: Utilization of t-tests and F-tests confirms the statistical significance and reliability of regression outcomes, ensuring findings are credible.

Nevertheless, the study acknowledges certain methodological limitations. Although the CSMAR database provides extensive and authoritative data, issues like delayed reporting, incomplete disclosure, or missing data may impact sample representativeness, limiting external validity. Further, inherent challenges of multiple regression, particularly multicollinearity, might destabilize regression coefficients or obscure variable importance. Therefore, Variance Inflation Factor (VIF) analysis will be conducted to detect multicollinearity, adjusting models accordingly to mitigate adverse effects. Additionally, regression models typically capture linear relationships effectively but struggle with nonlinear complexities. Future analyses might integrate complementary methodologies if nonlinear interactions between variables emerge.

In conclusion, by combining empirical quantitative rigor, robust data collection and preprocessing, comprehensive statistical modeling, and thorough robustness testing, this research approach systematically addresses the impact of equity structure on Chinese manufacturing firms' financial performance. Acknowledging identified limitations further strengthens analytical reliability and directs future research towards more nuanced methodological explorations.

3. Data analysis

3.1. Descriptive statistics

Table 1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	10170	0.0450	0.0712	-0.3530	0.2539
ROE	10170	0.0660	0.1357	-0.8192	0.4140
Top10	10170	0.5788	0.1525	0.2083	0.9097
INST	10170	0.4075	0.2455	0.0012	0.9203
Mshare	10170	0.1663	0.1994	0.0000	0.7050
State	10170	0.0208	0.0923	0.0000	0.9100
Size	10170	22.3029	1.2007	19.7968	26.4403
Lev	10170	0.3929	0.1842	0.0489	0.9244
ListAge	10170	2.0329	0.9290	0.0000	3.4340
Growth	10170	0.1322	0.3199	-0.6535	2.0324
ATO	10170	0.6574	0.3543	0.0619	2.8913

The descriptive statistics (Table 2) highlight that listed manufacturing companies in China exhibit moderate profitability, with ROA averaging 0.0450 and ROE averaging 0.0660. Equity structure variables show relatively high concentration, as indicated by the mean Top 10 shareholders' ownership (0.5788) and institutional investors' shareholding (0.4075), suggesting these entities significantly influence firm governance. Firm size, leverage, listing age, growth, and operational efficiency also exhibit notable variance, providing a suitable foundation for empirical analysis.

3.2. Correlation analysis

Table 2: Correlation analysis

Variables	ROA	Top10	INST	Mshare	State	Size	Lev	ListAge	Growth	ATO
ROA	1									
Top10	0.2826***	1								
INST	0.1491***	0.4397**	1							
Mshare	0.1507***	0.2672**	-0.5917***	1						
State	-0.0329***	0.0976**	0.2083***	-0.1583***	1					
Size	0.0448***	-0.0439**	0.3632***	-0.3367***	0.1727**	1				
Lev	-0.3701***	-0.1910**	0.0617***	-0.2321***	0.0846**	0.4342***	1			
ListAge	-0.2062***	-0.4826**	0.0613***	-0.4768***	0.0782**	0.4663***	0.3415***	1		
Growth	0.3259***	0.0737**	0.0703***	0.0500**	0.0312**	0.0608***	0.0533***	-0.1297**	1	
ATO	0.2429***	0.1031**	0.1427***	-0.0571***	0.0303**	0.1816***	0.2409***	0.0431**	0.2090**	1

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

Correlation analysis results (Table 3) indicate significant relationships among core variables. ROA positively correlates with ownership concentration (Top10: 0.2826) and managerial shareholding (Mshare: 0.1507), implying these ownership structures can enhance corporate profitability. Conversely, ROA negatively correlates with leverage (Lev: -0.3701) and listing age (ListAge: -0.2062), suggesting higher leverage and longer listing periods negatively affect profitability. Additionally, growth (0.3259) and asset turnover (0.2429) positively correlate with profitability. Notably, a significant positive correlation exists between Top10 and institutional investors' shareholding (INST: 0.4397), while INST negatively correlates with managerial shareholding (Mshare: -0.5917), indicating potential substitution effects among shareholder types. None of the correlation coefficients exceed 0.6, suggesting limited multicollinearity.

3.3. VIF test

Table 3: VIF test

Variable	VIF	1/VIF
INST	4.2300	0.2366
Mshare	3.6100	0.2768
Top10	2.9600	0.3379
ListAge	2.0100	0.4977
Size	1.7600	0.5666
Lev	1.3700	0.7314
ATO	1.1400	0.8776
Growth	1.0900	0.9175
State	1.0700	0.9370
Mean VIF	2.1400	

Variance Inflation Factor (VIF) testing (Table 4) confirms minimal multicollinearity, with all individual VIF values below 10 and an average VIF of 2.14, ensuring reliability in subsequent regression analyses.

3.4. Regression analysis

Table 4: Regression analysis

VARIABLES	(1) ROA	(2) ROA
Top10	0.0293*** (4.1239)	0.0163*** (2.6428)
INST	0.0926*** (17.6421)	0.0365*** (8.0601)
Mshare	0.1113*** (18.4843)	0.0529*** (10.2732)
State	-0.0440*** (-6.0082)	-0.0384*** (-6.3621)
Size		0.0147*** (24.1851)
Lev		-0.1955*** (-55.3313)
ListAge		-0.0022*** (-2.6663)
Growth		0.0550*** (30.3151)
ATO		0.0603*** (34.0296)
Constant	-0.0274*** (-10.4190)	-0.2809*** (-22.5224)
Ind Effect	YES	YES
Year Effect	YES	YES
Observations	10,169	10,169
R-squared	0.1469	0.4287
F	329.4539***	773.1112***

Note:***, **, and * indicate significant at the 0.01, 0.05, and 0.1 significance levels, respectively. The t-values are in parentheses.

The main regression analysis (Table 5) examines the impact of ownership structure on ROA using fixed-effect models controlling for year and industry. Column (1) shows significant positive effects from the ownership proportions of Top10 (0.0293), institutional investors (INST: 0.0926), and management (Mshare: 0.1113), all significant at $p < 0.01$, confirming that concentrated equity and institutional governance positively enhance firm profitability. Conversely, state ownership (State: -0.0440) significantly negatively impacts ROA, indicating weaker profitability among state-owned enterprises (SOEs). After including control variables (size, leverage, list age, growth, and asset turnover) in Column (2), these effects remain robust, though coefficients are moderately reduced—Top10 (0.0163), INST (0.0365), Mshare (0.0529), and State (-0.0384)—confirming their stable influence on profitability.

3.5. Robustness check

Table 5: Robustness test

VARIABLES	(1) ROE	(2) ROE
Top10	0.0309** (2.2384)	0.0329*** (2.6588)
INST	0.1752*** (17.2138)	0.0560*** (6.1923)
Mshare	0.1927*** (16.5001)	0.0903*** (8.7771)
State	-0.0569*** (-4.0085)	-0.0595*** (-4.9308)
Size		0.0324*** (26.6916)
Lev		-0.3148*** (-44.5929)
ListAge		-0.0024 (-1.4485)
Growth		0.1058*** (29.1729)
ATO		0.1187*** (33.5163)
Constant	-0.0541*** (-10.6333)	-0.6763*** (-27.1369)
Ind Effect	YES	YES
Year Effect	YES	YES
Observations	10,169	10,169
R-squared	0.1177	0.3725
F	252.0489***	613.9427***

Note: ***, **, and * indicate significant at the 0.01, 0.05, and 0.1 significance levels, respectively. The t-values are in parentheses.

Robustness tests (Table 6), replacing ROA with ROE, validate these primary findings, demonstrating consistent positive impacts from Top10, INST, and Mshare on financial performance, along with consistently negative effects from state ownership. Control variables also maintain significance, reinforcing their importance. Thus, the robustness tests strengthen the credibility and generalizability of the regression findings.

3.6. Significance test

Significance testing through F-tests ($F(522,374) = 3.04$, $\text{Prob} > F = 0.0000$) further validates the regression model's explanatory power, confirming that explanatory variables significantly predict the dependent variable. This result supports the overall model's reliability and robustness.

4. Results and discussion

Firstly, regression analysis confirms a significant positive correlation with ROA (coefficient: 0.0163, $p < 0.01$), consistent with Shleifer and Vishny's assertion that ownership concentration effectively mitigates agency problems by enhancing managerial oversight. This aligns with Zhang [10],

affirming concentrated ownership as beneficial for profitability but also acknowledges potential innovation limitations, particularly in dynamic industries.

Secondly, institutional investors significantly positively influence ROA (0.0365, $p < 0.01$). This finding aligns with Chi et al., indicating institutional investors foster strategic investment and professional governance, boosting long-term corporate financial outcomes. However, the reduced coefficient after control variables suggests institutional investors' impact might vary depending on governance context and market conditions [11].

Then, managerial shareholding significantly positively impacts ROA (0.0529, $p < 0.01$). This aligns with Jensen and Meckling's agency theory and Morck, Shleifer, and Vishny's findings, supporting that moderate managerial ownership aligns interests between management and shareholders, reducing agency costs and improving profitability. The study cautions, however, against excessively high managerial ownership due to potential power entrenchment, adversely affecting long-term firm growth.

Last but not least, state-owned equity demonstrates a significant negative correlation with ROA (-0.0384, $p < 0.01$), supporting Xu and Wang's findings that while SOEs benefit from stronger control, they often experience decreased profitability due to lower flexibility, reduced innovation capacity, and policy-driven objectives overshadowing profitability. Qiu [12] further reinforces that integrating private capital through mixed ownership reforms can mitigate these inefficiencies, improving overall performance.

5. Conclusion

This study empirically validates that ownership structures significantly affect the financial performance of Chinese listed manufacturing firms. Ownership concentration among the top ten shareholders, institutional investors, and managerial shareholding consistently demonstrates positive profitability effects. Conversely, state ownership negatively impacts firm performance, suggesting privatization or mixed-ownership strategies could improve profitability.

The study offers clear policy implications: encouraging balanced managerial and institutional ownership, while carefully managing state-owned shares, could enhance governance structures and overall corporate financial outcomes in China's manufacturing sector.

Future research should thus focus more intensively on dynamic equity changes and cross-industry comparisons, addressing existing shortcomings. Systematically examining shareholder type distinctions will further elucidate precise mechanisms by which ownership structure impacts firm performance, enhancing theoretical understanding and practical governance strategies.

References

- [1] Jensen, M. C., & Meckling, W. H. (1976). *Theory of the firm: Managerial behavior, agency costs, and ownership structure*. *Journal of Financial Economics*, 3(4), 305-360
- [2] Shleifer, A., & Vishny, R. W. (1997). *A survey of corporate governance*. *The Journal of Finance*, 52(2), 737-783.
- [3] La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). *Corporate ownership around the world*. *the Journal of Finance*, 54(2), 471-517.
- [4] Tencent News. (2024). *1720 Listed Companies Exposed to ESG Risk Events, Management Failures in Molecular Companies Particularly Prominent - Q2 2024 Listed Company ESG Risk Report*. Retrieved from <https://new.qq.com>
- [5] Fama, E. F., & Jensen, M. C. (1983). *Separation of ownership and control*. *Journal of Law and Economics*, 26(2), 301-325.
- [6] Morck, R., Shleifer, A., & Vishny, R. W. (1988). *Management ownership and market valuation: An empirical analysis*. *Journal of Financial Economics*, 20(1-2), 293-315. [https://doi.org/10.1016/0304-405X\(88\)90048-7](https://doi.org/10.1016/0304-405X(88)90048-7)
- [7] Chi, J., Liao, J., & Yang, J. (2019). *Institutional stock ownership and firm innovation: Evidence from China*. *Journal of Multinational Financial Management*, 50, 44-57.
- [8] Xu, X., & Wang, Y. (1999). *Ownership structure and corporate governance in chinese stock companies*. *China Economic Review*, 10(1), 75-98.

- [9] Cao, T., Qian, X., & Zheng, J. (2010). *Corporate governance improvements of Chinese listed companies: 2002–2006*. *Caijing Yanjiu*, 36(2), 133–144.
- [10] Zhang, Y. (2024). *The impact of ownership structure on financial performance of listed media companies: an empirical study*. *Accounting Research*, 2024(16), 165-168.
- [11] Ju, L., Ma, Q., & Li, H. (2022). *The impact of Chinese insurance institutional investors' holdings on the operating performance of listed companies: An empirical study from the perspective of insurance company operational attributes*. *Wuhan Jinrong*, 8, 18-28.
- [12] Qiu, Z., & Su, Y. (2024). *An empirical study on mixed ownership, equity structure, and financial performance*. *Hebei Qiye*, 10, 100-103. <https://doi.org/10.19885/j.cnki.hbqy.2024.10.014>