

STATE OWNERSHIP  
AND VALUATION DISCOUNT:  
Evidence from Chinese Listed Firms (2010–2024)

by

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## Abstract

This study investigates the relationship between government ownership and equity valuation in China's capital market. Using a comprehensive panel dataset of A-share listed firms from 2010 to 2024, this paper examines how state ownership affects valuation multiples, measured primarily by the price-to-earnings (P/E) ratio. Contrary to the initial hypothesis of a nonlinear relationship, the empirical results suggest a robust and statistically significant negative linear relationship between government ownership and equity valuation. Firms with higher levels of state ownership tend to trade at lower valuation multiples.

The findings remain consistent after addressing potential endogeneity concerns and after employing an alternative valuation multiple, EV/EBITDA. However, when firm fixed effects are introduced, the negative relationship becomes statistically insignificant. This suggests that the observed valuation discount is largely driven by cross-sectional differences across firms rather than within-firm variation over time. Overall, the results highlight the importance of firm heterogeneity in understanding the role of state ownership in equity valuation.

**Keywords:** State ownership; Equity valuation; Price-to-earnings ratio; Chinese listed firms; State-owned enterprises; Corporate governance

## Preface

This thesis was motivated by my interest in financial markets and the unique institutional structure of China's economy. While studying equity valuation and corporate finance, I became increasingly interested in how ownership structures influence investor perceptions of equity value. China's capital market provides a particularly compelling setting because state-owned and privately owned firms coexist within the same market environment.

Given the continued role of government ownership in Chinese listed firms and the ongoing mixed-ownership reforms, I wanted to better understand whether investors assign a valuation premium or discount to firms with greater state involvement. This research reflects my broader academic interests in corporate finance, valuation, and the intersection between markets and institutions.

## Chapter 1. Introduction

State ownership remains one of the most distinctive institutional features of China's capital markets (Qian, 1996; Sun et al., 2002). Despite significant progress in privatization and market liberalization since the 1990s, government entities continue to hold substantial ownership stakes in a large number of publicly listed firms (Li et al., 2011; Gan et al., 2018). As a result, China's equity market is characterized by a mixed-ownership structure in which state-owned enterprises coexist with privately controlled firms (Cao et al., 2024). This institutional setting raises an important question regarding how government ownership influences equity valuation.

Theoretically, the effect of state ownership on equity value is ambiguous. On one hand, government involvement may lead to inefficiencies due to political intervention, agency problems, and soft budget constraints, which can reduce profitability and investor confidence (Shleifer & Vishny, 1994; Qian, 1996). On the other hand, state ownership may provide benefits like preferential access to financing, regulatory protection, and implicit government guarantees, all of which could enhance equity value (Faccio, 2006; Liao & Young, 2012). Given these competing mechanisms, the net effect of government ownership on valuation is ultimately an empirical question.

Motivated by these considerations, this study examines the relationship between government ownership and equity valuation in Chinese listed firms. In particular, it tests whether government ownership is associated with a valuation discount or premium and whether this relationship exhibits nonlinearity (Sun et al., 2002; Hess et al., 2010; Yu, 2013). Using panel data covering the period from 2010 to 2024, this paper finds strong evidence of a negative relationship between government ownership and valuation multiples. However, further analysis reveals that this relationship disappears once firm fixed effects are included, suggesting that the

observed valuation discount reflects persistent differences across firms rather than causal effects of ownership changes within firms.

## **Chapter 2. Literature Review**

### *2.1 State Ownership, Agency Problems, and Firm Efficiency*

A large body of literature argues that state ownership may reduce firm value by creating agency problems and political interference. In China's state-owned enterprise (SOE) reforms, governments often retain ultimate control rights while delegating operational responsibilities to managers, creating both weak managerial accountability and political intervention in corporate decisions (Qian, 1996). These distortions may lead firms to prioritize social or political objectives over shareholder value maximization.

Empirical studies largely support this view. Wei et al. (2005) find that higher state ownership is associated with lower Tobin's Q among Chinese privatized firms, suggesting that investors discount firms with stronger government involvement. Similarly, Lin and Su (2008) document a diversification discount among government-controlled firms, arguing that political objectives often drive inefficient expansion into less profitable business segments. More recently, Cao et al. (2024) show that state-owned firms continue to trade at lower valuation multiples than private firms, largely due to lower profitability and operational inefficiencies.

### *2.2 Privatization and Mixed-Ownership Reform*

Other studies emphasize that the effect of state ownership depends on the broader institutional environment and privatization design. Sun et al. (2002) identify an inverted U-shaped relationship between state ownership and firm performance, suggesting that moderate government ownership may provide benefits to firms. Similarly, Hess et al. (2010) and Yu

(2013) document nonlinear relationships in which firm performance initially declines but improves at higher ownership levels.

China's institutional reforms have also reshaped ownership incentives. Li et al. (2011) examine China's split-share structure reform and find that privatization improves market efficiency by enhancing risk sharing and reducing market frictions. More recently, Gu et al. (2025) show that mixed-ownership reform improves capital market efficiency by reducing stock price synchronicity and strengthening corporate governance mechanisms. These studies suggest that ownership reforms may influence valuation through improved market efficiency rather than ownership changes alone.

### *2.3 Government Ownership and Equity Valuation*

Existing evidence remains mixed regarding whether state ownership creates valuation discounts, nonlinear effects, or institutional advantages. Furthermore, much of the prior literature focuses on earlier stages of China's privatization reforms. This leaves limited evidence on how state ownership affects valuation in China's more mature post-2010 capital market environment. This study addresses this gap by examining whether government ownership continues to influence valuation multiples in Chinese listed firms between 2010 and 2024, while accounting for industry heterogeneity and firm-level differences.

## **Chapter 3. Data and Variables**

### *3.1 Data Sources and Panel Data Generation*

This study constructs a panel dataset of Chinese A-share listed firms using the China Stock Market and Accounting Research (CSMAR) database. The sample covers the period from 2010 to 2024 and includes firms listed on both the Shanghai and Shenzhen Stock Exchanges.

The dataset integrates multiple sources, including balance sheet data, income statement data, market and return data, dividend information, and ownership structure data. In particular, ownership information is derived from the top ten shareholders of each firm, with government-related shareholders identified based on classifications: state shares and state-owned legal person shares. After merging the data, the sample consists of 24,784 firm-year observations, representing 5,595 unique firms.

The data cleaning was implemented to improve the reliability of the final dataset. First, observations with state ownership below 5% were excluded. Very small government shareholdings are less likely to represent meaningful control rights. Since the focus of this study is on government influence, only firms with at least 5% state ownership were kept. Second, extreme values of the dependent variable, the natural logarithm of the P/E ratio at the 1st and 99th percentiles, were removed, considering that valuation multiples are highly skewed and can be heavily influenced by firms with extremely high or low earnings. After cleaning the dataset, the sample contains 2657 unique firms, with 18478 firm-year observations.

### *3.2 Descriptive Analysis of State Ownership Structure*

Before estimating the regression models, this study first examines the descriptive analysis of state ownership structure. Table 3.2.1 shows that state ownership in Chinese listed firms is highly concentrated at medium and high ownership levels. Approximately 39.5% of firm-year observations fall within the 20%–50% ownership range, while 35.0% involve majority state ownership above 50%. Only 25.5% of observations fall within the 5%–20% range. This pattern suggests that government ownership in listed firms is often associated with meaningful control rights.

Ownership Bin	Observations	Unique Firms	Observation pct.
5-20%	4706	1382	25.47%
20-50%	7296	1081	39.49%
50-100%	6475	872	35.04%

Table 3.2.1 State Ownership Distribution in Chinese Listed Firms

Table 3.2.2 compares firm characteristics across different levels of state ownership. Firms with majority government ownership are larger than firms with lower state ownership. Their average market capitalization is the highest across all groups, and average total assets are nearly three times larger than firms in the 5%–20% ownership group. This reflects the concentration of state capital in large strategic enterprises.

At the same time, highly state-owned firms exhibit lower valuation multiples. Firms with more than 50% government ownership have the lowest average P/E ratio and log P/E ratio in the sample, providing preliminary descriptive evidence of a valuation discount. Profitability differences are less pronounced, though firms with lower state ownership display slightly higher ROE. These patterns suggest that valuation differences may be partially driven by firm scale and structural characteristics.

Variable	5-20%	20-50%	50-100%
Avg. Market Cap (log)	15.83	15.73	16.29
Avg. Total Asset	21.87	29.17	84.73
Avg. Leverage	-	0.48	0.49
Avg. ROE	11.4%	9.2%	9.7%
Avg. Dividend Payout	37.6%	36.2%	36.5%
Avg. Beta	1.06	1.12	1.07
Avg. P/E Ratio	0.075	0.073	0.052
Avg. log PE	-3.16	-3.24	-3.58

Table 3.2.2 Firm Characteristics Across Different State Ownership Level

State ownership is also unevenly distributed across industries. As shown in Table 3.2.3, government ownership is concentrated in strategic and infrastructure-related sectors. Energy and utilities exhibit the highest average state ownership (42.4%), followed by transportation and logistics (40.7%) and finance (37.0%). Nearly half of firms in the energy sector are majority state-controlled.

In contrast, manufacturing and technology sectors exhibit lower average state ownership, at only 13.6% and 12.7%, respectively. These industries are generally more market-oriented and competitive. This sectoral concentration highlights the importance of controlling for industry effects in later regressions.

Industry	Avg. State Ownership (%)	Majority State Share Pct (%)
Energy and Utilities	42.43	49.84
Transportation and Logistics	40.74	46.52
Finance	36.96	39.01
Real Estate and Construction	26.42	25.36
Consumption Services	24.65	22.47
Others	16.76	12.40
Manufacturing	13.62	9.85
Technology Services	12.72	9.59

Table 3.2.3 Average State Ownership by Industry

Figure 3.2.4 presents the time trend of government ownership between 2010 and 2024. Average state ownership declined from 24.8% in 2010 to approximately 15.2% in 2024. Similarly, the proportion of majority state-controlled firms declined from 21.6% to 13.5% over the same period.

This downward trend is consistent with China's broader mixed-ownership reform agenda, which encouraged the introduction of private capital into state-owned enterprises and gradual reductions in direct government ownership. The declining trend also supports the selection of the

2010–2024 sample period, as it captures an important phase of ownership restructuring in China’s capital markets.

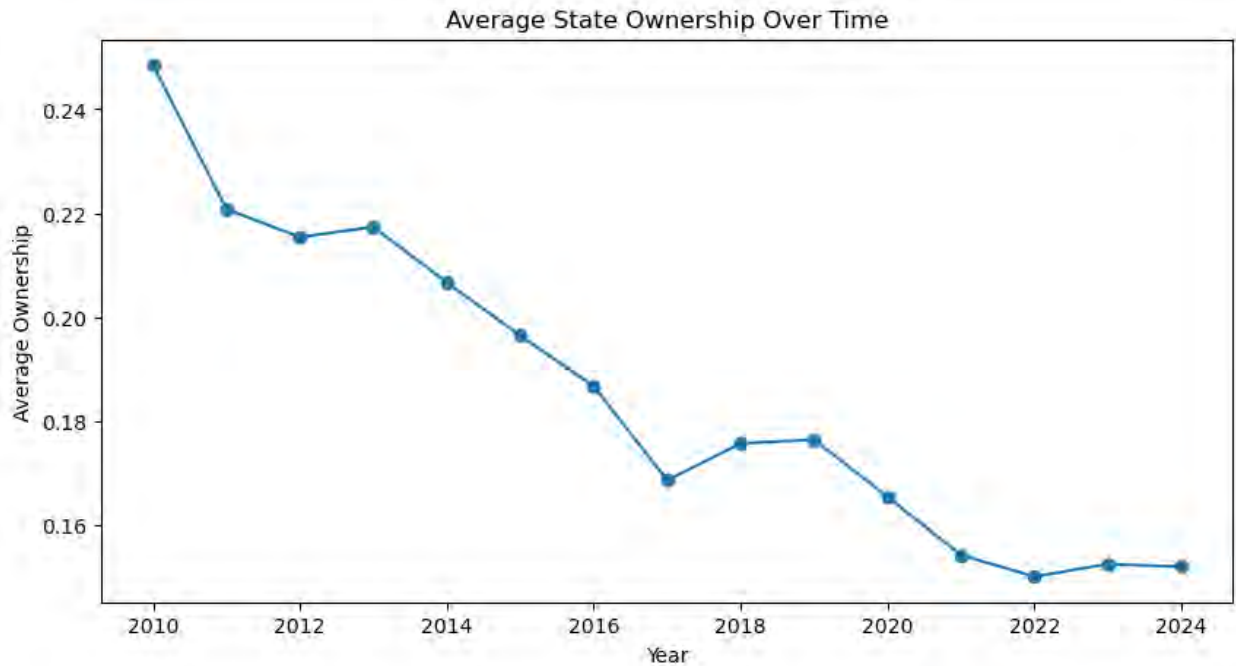


Figure 3.2.4 Trend of Government Ownership (2010-2024)

### 3.3 Variable Construction

The main dependent variable in this study is the natural logarithm of the price-to-earnings ratio. The logarithmic transformation is applied to reduce skewness and mitigate the influence of extreme values. The key independent variable is the fraction of shares held by government entities, which captures the degree of state ownership in each firm. To test for potential nonlinear effects, a squared term of government ownership is also included in some specifications.

In addition to the main variables of interest, the regression models incorporate a set of control variables that capture firm characteristics known to affect valuation. These include return on equity (ROE), dividend payout ratio, firm size, and market beta. Year fixed effects are included to control for macroeconomic and market shocks. Industry fixed effects are introduced in extended specifications to account for sectoral differences.

## Chapter 4. Hypothesis Development

Given the competing effects of government ownership, prior literature has proposed a nonlinear relationship between government ownership and equity valuation. At low to moderate levels, increasing government ownership may introduce inefficiencies and reduce equity value, while at higher levels, strong state backing may enhance credibility and access to resources, leading to improved valuation. This suggests the possibility of a nonlinear relationship.

Based on this reasoning, this study proposes the following hypothesis:

**H1:** *There exists a nonlinear, U-shaped or inverted U-shaped, relationship between government ownership and equity valuation, as measured by the P/E ratio.*

In addition, given the strong theoretical arguments for inefficiency associated with state ownership, this study also considers a competing hypothesis:

**H2:** *Higher levels of government ownership are associated with lower equity valuation.*

By testing both hypotheses, this study aims to distinguish between nonlinear and monotonic effects of government ownership and to provide updated empirical evidence using recent data from China's capital market.

## Chapter 5. Methodology

To examine the relationship between government ownership and equity valuation, this study employs panel regression models. The baseline specification regresses the logarithm of the P/E ratio on government ownership and a set of firm-level control variables, while controlling for year fixed effects. This model captures the average relationship between state ownership and valuation across firms and over time.

To test for potential nonlinearities, the analysis extends the baseline model by including a squared term of government ownership. This allows for the possibility that the effect of state ownership on valuation may vary across different ownership levels.

A key concern in this analysis is the potential for endogeneity, particularly reverse causality. It is possible that firms with higher valuations are more likely to attract government ownership, rather than government ownership affecting valuation. To mitigate concerns about simultaneity and omitted variable bias, the study employs lagged variables and robustness checks.

## Chapter 6. Empirical Results

### 6.1 *Baseline Model*

To examine the relationship between government ownership and equity valuation, this study first estimates a baseline regression model in which the logarithm of the P/E ratio is regressed on the fraction of state ownership, controlling for firm characteristics and year fixed effects. The specification is as follows:

$$\ln (PE)_{it} = \beta_1 \text{stateOwnership}_{it} + X_{it}\gamma + \text{Year FE} + \epsilon_{it}$$

The baseline regression results indicate a statistically significant negative relationship between government ownership and equity valuation. The coefficient on state ownership is negative and highly significant, suggesting that firms with higher levels of government ownership tend to have lower P/E ratios. This finding is economically meaningful and consistent with the notion that investors apply a valuation discount to firms with greater government involvement, possibly due to concerns about inefficiency, political intervention, and weaker profit incentives.

## 6.2 *Nonlinear Test*

To further test for potential nonlinearity, the model is extended by including a squared term of government ownership:

$$\ln (PE)_{it} = \beta_1 stateOwnership_{it} + \beta_2 stateOwnership_{it}^2 + X_{it}\gamma + Year FE + \epsilon_{it}$$

The results show that while the linear term remains negative and statistically significant, the coefficient on the squared term is not statistically significant. This indicates that there is no empirical support for either a U-shaped or inverted U-shaped relationship between government ownership and equity valuation. The relationship appears to be monotonically negative across the entire range of ownership. Therefore, the data do not suggest that the effect of state ownership changes direction at different ownership levels.

These findings contradict the nonlinear hypothesis proposed in earlier literature and suggest that, in the more recent sample period, the marginal effect of government ownership on valuation does not depend on its level. One possible interpretation is that the institutional environment in China has evolved in such a way that the benefits associated with partial state ownership have diminished over time, resulting in a more consistently negative valuation effect.

## 6.3 *Industry Endogeneity*

To further explore whether the impact of government ownership varies across sectors, this study estimates an interaction model in which the effect of state ownership is allowed to differ by industry. By interacting the state ownership variable with industry indicators, the model allows for industry-specific marginal effects of government ownership on equity valuation.

$$\ln\left(\frac{P}{E}\right)_{it} = \sum_j \beta_j stateOwnership_{it} \times Industry_j + X_{it}\gamma + Year FE + \epsilon_{it}$$

	coef	P value
Consumption	-0.5809	0.00
Energy and Utility	-0.1539	0.27
Finance	-0.3577	0.11
Manufacturing	0.3311	0.00
Real Estate and Construction	-0.0332	0.82
Technology Services	-0.2091	0.17
Transportation and Logistics	-0.3711	0.16
others	-0.0651	0.82

Table 6.3.1 Marginal Effect of ownership in Each Industry

	coef	Std err	t	P> t
State ownership fraction	-0.5809	0.153	-3.794	0.000
Energy and Utility	0.4270	0.206	2.074	0.038
Finance	0.2232	0.274	0.816	0.415
Manufacturing	0.9120	0.180	5.078	0.000
Real Estate and Construction	0.5476	0.209	2.623	0.009
Technology Services	0.3718	0.217	1.714	0.087
Transportation and Logistics	0.2098	0.304	0.690	0.490
others	0.5158	0.319	1.615	0.106

Table 6.3.2 Regression Result Summary with Industry Interactions

The results reveal substantial heterogeneity across industries. In the baseline industry (consumption), government ownership is associated with a significantly negative effect on valuation, with a coefficient of  $-0.5809$ . This indicates a strong valuation discount applied by investors in more market-oriented and competitive sectors. Similarly, negative effects are also observed in transportation and logistics ( $-0.3711$ ) and finance ( $-0.3577$ ) industries, while the statistically significant coefficients suggest some variation in the strength of the relationship.

In contrast, the effect of government ownership is opposite in manufacturing, where the coefficient becomes positive ( $0.3311$ ) and statistically significant. This suggests that, in manufacturing sector, state ownership is likely to be associated with a valuation premium. A similar pattern, though statistically insignificant and small, is observed in real estate and construction. In industries such as energy and utilities, the effect of government ownership is also weak and statistically insignificant, indicating that state involvement neither significantly harms nor enhances equity valuation in these sectors.

These findings suggest that the valuation effect of government ownership is highly industry dependent. In competitive service industries, where market discipline and efficiency are critical, state ownership appears to be penalized by investors. In contrast, in manufacturing or real estate sectors that in which government support, coordination, or resource allocation may play a more important role, the negative effects of state ownership are mitigated or even reversed.

These heterogeneous effects are economically intuitive in Chinese context. State ownership may impose policy burdens and inefficiencies in some industries, but simultaneously providing financial backing or coordination advantages in others. As a result, the overall negative relationship observed in the baseline model masks important variation across sectors, highlighting the importance of accounting for industry effects when evaluating the impact of government ownership on equity valuation.

#### *6.4 Addressing Reverse Causality*

A key concern in estimating the relationship between government ownership and equity valuation is the potential for endogeneity, particularly reverse causality. Specifically, it is possible that firms with higher valuations are more attractive to government investors, leading to higher levels of state ownership. In this case, the observed relationship between government ownership and valuation would not reflect a causal effect, but rather endogenous selection.

To address this concern, this study implements alternative regression specifications designed to mitigate simultaneity bias. In particular, lagged ownership structures and adjusted model specifications are employed to reduce the likelihood that current equity valuation directly influences contemporaneous government ownership. By using predetermined or less

contemporaneously correlated measures of ownership, the estimation aims to better capture the direction of causality from ownership to valuation.

$$\ln\left(\frac{P}{E}\right)_{it} = \sum_j \beta_j \text{stateOwnership}_{it-1} \times \text{Industry}_j + X_{it-1}\gamma + \text{Year FE} + \varepsilon_{it-1}$$

R Squared	0.567
Coefficient	-0.537
P-value	0.001

Table 6.4.1 Regression Result After Applying Lagged State Ownership

The results from these specifications provide strong evidence that the baseline findings are robust. The coefficient on government ownership remains negative and statistically significant, and its magnitude increases substantially compared to the baseline model. Specifically, the estimated coefficient becomes  $-0.5374$ , with statistical significance at conventional levels, while the model's explanatory power also improves ( $R^2 = 0.567$ ). The increase in magnitude suggests that, if anything, the baseline estimates may understate the negative effect of government ownership on equity valuation.

These findings indicate that the negative relationship between state ownership and valuation is unlikely to be driven only by reverse causality. If highly valued firms were systematically attracting government ownership, one would expect the coefficient to become weaker or even positive after addressing endogeneity concerns. However, the observed strengthening of the negative coefficient suggests that the direction of causality is more consistent with government ownership contributing to lower valuation, rather than the reverse.

Nevertheless, it is important to note that while these approaches help mitigate endogeneity concerns, they do not fully eliminate them. Without a strong exogenous source of variation, such as an instrumental variable or policy shock, the results should still be interpreted as suggestive rather than strictly causal.

### 6.5 Robustness Check: Alternative Valuation Measure

To ensure that the results are not driven by the choice of valuation multiple, the analysis is repeated using EV/EBITDA. EV/EBITDA reflects the value of the entire firm relative to its operating cash flow and is less affected by capital structure and accounting choices.

$$\ln\left(\frac{EV}{EBITDA}\right)_{it} = \beta_1 stateOwnership_{it} + X_{it}\gamma + Year FE + Industry FE + \varepsilon_{it}$$

$$\ln\left(\frac{EV}{EBITDA}\right)_{it} = \sum_j \beta_j stateOwnership_{it} \times Industry_j + X_{it}\gamma + Year FE + \varepsilon_{it}$$

	ln(P/E)		ln(EV/EBITDA)	
	coef	P> t	coef	P> t
State ownership fraction	0.0191	0.506	-0.0518	0.089
Energy and Utility	0.0055	0.826	-0.4474	0.000
Finance	0.3870	0.000	0.7618	0.000
Manufacturing	0.2245	0.000	-0.2363	0.000
Real Estate and Construction	-0.0281	0.297	0.6757	0.000
Technology Services	0.4441	0.000	-0.2414	0.000
Transportation and Logistics	-0.2360	0.000	-0.6470	0.000
others	0.2630	0.000	-0.1281	0.001

Table 6.5.1 Regression Result Summary Comparison, with Industry Fixed Effects

	ln(P/E)		ln(EV/EBITDA)	
	coef	P value	coef	P value
Consumption (baseline)	-0.5809	0.00	-0.2704	0.14
Energy and Utility	-0.1539	0.27	-0.41953	0.02
Finance	-0.3577	0.11	-0.2640	0.51
Manufacturing	0.3311	0.00	0.1515	0.19
Real Estate and Construction	-0.0332	0.82	0.0687	0.72
Technology Services	-0.2091	0.17	0.1701	0.42
Transportation and Logistics	-0.3711	0.16	-1.3151	0.00
others	-0.0651	0.82	-0.1502	0.65

Table 6.5.2 Marginal Effect Comparison, with Industry Interaction

The results using EV/EBITDA are consistent with the baseline findings. Government ownership remains negatively associated with equity valuation, confirming that the observed relationship is robust across different valuation measures. This strengthens the credibility of the main findings. Industry, like transportation and logistics, continue to show lower enterprise

valuation associated with higher state ownership; and manufacturing sector still show positive relationship.

Interestingly, the ownership effect in the Tech and Real Estate sector differs across valuation multiples. This suggest that state ownership affects industries through distinct channels. While it weakens earnings-based growth expectations in innovation-driven sectors such as Technology Services, it enhances balance-sheet credibility and enterprise-level valuation in asset- and policy-dependent sectors like Real Estate, leading to opposite marginal effects across P/E and EV/EBITDA measures.

### 6.6 Additional Analysis: Firm Fixed Effects

To further investigate the nature of the relationship between government ownership and valuation, the analysis introduces firm fixed effects. This specification controls for all time-invariant characteristics of individual firms, allowing the estimation to focus on within-firm variation over time.

$$\ln\left(\frac{P}{E}\right)_{it} = \beta_1 stateOwnership_{it} + X_{it}\gamma + Year_{Industry}FE + FirmFE + \varepsilon_{it}$$

R Squared	0.812
Coefficient	-0.0157
P-value	0.895

Table 6.6.1 Regression Result, with Firm Fixed Effects

After including firm fixed effects, the coefficient on government ownership becomes small (-0.0157) and statistically insignificant. This result has important implications for the interpretation of the baseline findings. Specifically, it suggests that the negative relationship observed in earlier models is primarily driven by cross-sectional differences across firms rather than changes within firms over time.

In other words, firms with higher state ownership tend to have lower valuations because such firms are inherently different from privately owned firms in ways that are not captured by observable control variables. These differences may include organizational structure, governance quality, industry positioning, or long-standing institutional characteristics.

## **Chapter 7. Discussion**

The findings of this study provide important insights into the role of government ownership in shaping equity valuation and contribute to an ongoing debate in the literature. The consistent negative relationship observed in the baseline models aligns with the prior research documenting a valuation discount associated with state ownership. Wei, Xie, and Zhang (2005) and Lin and Su (2008) both found out that government involvement is linked to lower equity value, often due to political interference, inefficient resource allocation, and weaker incentives for profit maximization. More recent evidence also highlights a persistent valuation gap between state-owned and private firms (Cao et al., 2024).

However, this study does not find evidence supporting a nonlinear relationship, contradicting with earlier works such as Sun, Tong, and Tong (2002), Yu (2013), and Hess et al. (2010), all of whom document U-shaped or inverted U-shaped patterns. One possible explanation for this difference is the time period of analysis. Much of the earlier literature focuses on China's transitional phase during or shortly after major privatization reforms. The marginal effects of ownership restructuring were more pronounced. In contrast, the present study examines a more recent period from 2010 to 2024. China's capital markets have become more mature and institutionalized. As a consequence, the benefits of partial state ownership may have diminished relative to earlier periods, leading to a more consistently negative relationship.

Another key finding of this study is that the negative relationship between government ownership and valuation disappears after controlling for firm fixed effects. This provides an important qualification to the existing literature. The findings suggest that the relationship is mostly driven by cross-sectional differences across firms. This interpretation is consistent with the argument in Cao et al. (2024) that the valuation gap is primarily explained by fundamental differences in profitability and firm characteristics rather than ownership status itself. This is equal to say that firms with higher state ownership tend to have lower valuations because these firms systematically differ from private firms in ways that are persistent and not easily altered.

This perspective also helps explain the seemingly contradictory findings in the literature. For example, Liao and Young (2012) highlighted the potential positive role of residual government ownership in reducing expropriation risk and signaling stability. These effects may still exist but are likely embedded in firm-specific characteristics that do not vary significantly over time. As a result, they are absorbed by firm fixed effects in panel regressions and do not appear as significant within-firm effects. Similarly, the nonlinear relationships identified in earlier studies may reflect structural differences between firms at different ownership levels rather than dynamic effects of ownership changes.

These findings have important implications for ongoing mixed-ownership reforms in China. While introducing private capital into state-owned enterprises may improve governance and operational efficiency, the results suggest that ownership changes alone may not be sufficient to alter market valuation in the short run. Instead, deeper structural reforms, including improving profitability, enhancing transparency, and strengthening corporate governance, may be necessary to close the valuation gap.

## **Chapter 8. Conclusion**

To conclude, this study examines the relationship between government ownership and equity valuation using a panel dataset of Chinese listed firms from 2010 to 2024. The result indicates a robust and significant negative relationship between state ownership and valuation multiples, P/E ratio. There is no evidence of nonlinearity. The findings are consistent across different model specifications and alternative valuation measures.

The inclusion of firm fixed effects reveals that the negative relationship is driven by cross-sectional difference, suggesting that the valuation discount associated with state ownership reflects persistent firm characteristics instead of causal effects of ownership changes.

Overall, the study contributes to the literature by highlighting the importance of firm heterogeneity in understanding the impact of government ownership on equity valuation. It also provides insights for policymakers and investors regarding the role of state ownership in the capital market.

## **Chapter 9. Limitation**

This study has several limitations that should be acknowledged. First, the analysis focused more on correlation. To mitigate endogeneity concerns, the study has applied robustness checks. However, establishing a causal relationship remains challenging. Reverse causality and omitted variable bias may persist if there exist unobserved factors simultaneously influence both ownership structure and equity valuation. Future research could strengthen the causal identification by employing instrumental variable approaches, natural experiments, or policy shocks.

Second, only using government ownership may not fully capture the true political influence and control. Although this study relies on shareholders data from top shareholders,

political connections may operate through many other indirect channels, including affiliated entities and board representation. Then, the constructed ownership variables may underestimate the actual influence of the state, resulting in potential error. More data on ultimate ownership, control rights, or political connections could improve the quality of the future analysis.

Third, this study does not clearly identify the underlying driving reason for this relationship. The empirical results suggest that firms with higher state ownership are valued with a discount. It still remains unclear whether the discount is caused by operational inefficiency, governance issues, political objectives. One potential channel that has not been explored in this study is the role of firms' social responsibilities, like employment stabilization, public service provision, or engagement in corporate social responsibility activities aligned with government objectives. These activities are not profit oriented and thus contributing to a lower market valuation. Future research could investigate these channels more explicitly by incorporating measures of social responsibility, policy burden, or government activities to better understand why state ownership is associated with valuation differences.

Finally, this study focuses on publicly listed firms in China, which may limit the generalizability of the findings. Listed firms are usually larger, more regulated, and subject to greater disclosure requirements than unlisted firms. The role of government ownership may differ in other institutional contexts or across countries. Future research could extend the analysis to other emerging markets or incorporate cross country comparisons to understand how institutional environments shape the relationship between state ownership and equity valuation better.

## REFERENCES

- Cao, Y., Subrahmanyam, A., Yang, X., & Zhu, P. (2024). *An Empirical Analysis of the Valuation Gap Between State-Owned and Non-State-Owned Enterprises*. Social Science Research Network. <https://doi.org/10.2139/ssrn.4948300>
- Faccio, M. (2006). Politically Connected Firms. *American Economic Review*, 96(1), 369–386. <https://doi.org/10.1257/000282806776157704>
- Gan, J., Guo, Y., & Xu, C. (2018). Decentralized Privatization and Change of Control Rights in China. *The Review of Financial Studies*, 31(10), 3854–3894. <https://doi.org/10.1093/rfs/hhx100>
- Gu, X., Qiao, S., Wang, Y., & Song, T. (2025). Effect of the mixed ownership reform on the stock market: Evidence from China. *PLOS ONE*, 20(3). <https://doi.org/10.1371/journal.pone.0317927>
- Hess, K., Gunasekarage, A., & Hovey, M. (2010). State-dominant and non-state-dominant ownership concentration and firm performance: Evidence from China. *International Journal of Managerial Finance*, 6(4), 264–289. <https://doi.org/10.1108/17439131011074440>
- Li, K., Wang, T., Cheung, Y. L., & Jiang, P. (2011). Privatization and Risk Sharing: Evidence from the Split Share Structure Reform in China. *The Review of Financial Studies*, 24(7), 2499–2525. <https://doi.org/10.1093/rfs/hhr025>
- Liao, J., & Young, M. (2012). The impact of residual government ownership in privatized firms: New evidence from China. *Emerging Markets Review*, 13(3), 338–351. <https://doi.org/10.1016/j.ememar.2012.02.004>
- Lin, C., & Su, D. (2008). Industrial diversification, partial privatization and firm valuation: Evidence from publicly listed firms in China. *Journal of Corporate Finance*, 14(4), 405–417. <https://doi.org/10.1016/j.jcorpfin.2008.05.001>
- Qian, Y. (1996). Enterprise reform in China: Agency problems and political control. *Economics of Transition*, 4(2), 427–447. <https://doi.org/10.1111/j.1468-0351.1996.tb00181.x>
- Shleifer, A., & Vishny, R. W. (1994). Politicians and Firms. *The Quarterly Journal of Economics*, 109(4), 995–1025. <https://doi.org/10.2307/2118354>
- Sun, Q., Tong, H. S., & Tong, J. (2002). How Does Government Ownership Affect Firm Performance? Evidence from China's Privatization Experience. *Journal of Business Finance & Accounting*, 29(1–2), 1–27. <https://doi.org/10.1111/1468-5957.00422>

Wei, Z., Xie, F., & Zhang, S. (2005). Ownership Structure and Firm Value in China's Privatized Firms: 1991–2001. *Journal of Financial and Quantitative Analysis*, *40*(1), 87–108.  
<https://doi.org/10.1017/S0022109000001757>

Yu, M. (2013). State ownership and firm performance: Empirical evidence from Chinese listed companies. *China Journal of Accounting Research*, *6*(2), 75–87.  
<https://doi.org/10.1016/j.cjar.2013.03.003>

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