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Research on the Impact of the Independent Director System on the Independence of the Board of Directors

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Abstract: In the context of China's rapidly evolving capital market, the proliferation of listed companies has been a salient phenomenon. The quality of corporate governance has emerged as a pivotal factor in determining the success or failure of these entities. Research by Balsmeier *et al.* (2022) indicates that the greater the independence of a listed company's board of directors, the higher its innovation output (both in terms of quantity and quality of patents) [1]. This finding suggests a strong correlation between the performance of a company and the independence of its board. The present study has selected listed companies on the A-share market of the Shanghai Stock Exchange in 2013 as the subjects of its research. A sample of 960 companies was initially obtained from the CSMAR database. Following a rigorous financial data screening, a final sample of 944 valid companies was retained for further analysis.

Keywords: Independent director system; Independence of the board of directors; Governance mechanisms

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1. Introduction

The Ordinary Least Squares (OLS) method is employed in order to construct econometric models. Key explanatory variables are progressively introduced into the baseline model, and empirical analysis is conducted using RStudio. The research findings indicate that the enhancement of the independent director system exerts a significant positive impact on the improvement of board independence, thus providing crucial empirical evidence for the enhancement of the governance mechanisms of listed companies in China.

2. Replication of selected article

2.1. Original background and model overview

In their study, the researchers primarily examined the relationships between corporate governance mechanisms

(such as supervisory boards, equity concentration, state ownership, etc.) and board characteristics, while also testing the applicability of Western theories (such as the "Efficient Board Hypothesis") in the Chinese context. Their research revealed that eleven factors, including the size of the supervisory board, equity concentration, and state ownership, significantly influence a company's board characteristics.

2.2. Data sources and processing

The data for the study was entirely sourced from CSMAR. In the course of the data screening process, a temporal selection was first conducted in order to ensure the representativeness of the data. Subsequently, companies with stock codes commencing with '6' were filtered out in order to maintain sample uniformity. Finally, enterprise codes with missing data were removed to ensure the completeness of the sample.

However, during the subsequent data processing phase, it was discovered that there was a significant amount of missing data related to diversification in the database. Consequently, in the present replication process, the impact of diversification on board characteristics is not considered and it is excluded when constructing the model.

2.3. Reproduction results demonstration

In this replication operation, the results obtained based on the 2013 data exhibit partial discrepancies with those in the original paper. The following section presents a comparison and analysis of each table.

2.3.1. The results of Table 1

A comparison of the data in **Table 1** with the original data reveals that the proportion of independent directors has exceeded the original data by 4%.

Table 1. Descriptive statistics of independent directors

Variables	Obs.	Mean	Median	Std-dev	Min	Max	Skew	Kurtosis
Board size	944	2.21	2.2	0.21	1.61	2.94	0.17	1.39
Independence	944	0.37	0.33	0.06	0.25	0.67	1.98	4.86
Supervisory-board	944	4.06	3	1.51	1	13	1.76	4.5
Concentration	944	0.18	0.15	0.14	0	0.78	1.03	0.89
State share	944	0.05	0	0.14	0	0.92	3.08	9.24
Managerial ownership	944	0.02	0	0.08	0	0.67	5.02	26.56
CEO	944	0.14	0	0.34	0	1	2.1	2.41
Size	944	22.62	22.41	1.7	17.82	30.57	1.11	2.94
Leverage	944	0.54	0.55	0.21	0.05	1.15	-0.04	-0.65
Profitability	944	0.08	0.07	1.2	-20.74	23.74	4.66	275.02
Age	944	13.05	13	5.21	0	23	-0.59	-0.23
Firm value	944	1.42	0.94	1.88	0	25.7	5.72	50.21

The underlying cause of this discrepancy may be attributed to the strengthening of the institutional environment by the state. In 2001, China was the first nation to mandate that the proportion of independent directors in listed companies should account for one-third of the board of directors, thereby facilitating early development in this area. The gradual improvement of the "Corporate Governance Guidelines for Listed Companies" has resulted in the clarification of immunity clauses for independent directors who express dissenting opinions. Furthermore, the state has mandated that independent directors hold a majority (≥ 50%) in compensation committees (CSRC, 2018), thereby significantly propelling the establishment of the independent director system [2].

Moreover, in comparison with the original data, China's publicly listed companies experienced an increase in financial leverage of 5.47% in 2013, while the mean ROE demonstrated a substantial improvement of 18%. The data indicates that Chinese enterprises continue to operate with high debt ratios, with a concomitant improvement in profitability, albeit not yet at an outstanding level. This finding indicates that, while Chinese companies are demonstrating a consistent upward trajectory, their growth potential is constrained. This phenomenon may be ascribed to China's response to the 2008 economic crisis, which encompassed the initiation of the "Four Trillion Plan" policy, resulting in economic expansion and a relaxation of credit conditions [3]. Furthermore, the decline in corporate income tax rates from 33% to 25% consequent to the 2008 economic crisis is also a potential contributing factor to this phenomenon [4].

2.3.2. The results of Table 2

The data presented in **Table 2** largely corroborate the conclusions drawn in the article, suggesting that the diminishing marginal effect of reforms could be the possible cause of this phenomenon. The fundamental structure of this section was established during the pivotal reforms between 2001 and 2005, with subsequent policy adjustments primarily constituting marginal corrections rather than comprehensive revisions.

Table 2. Correlation matrix of independent matrix

	1	2	3	4	5	6	7	8	9	10	11	12
Board size	1											
Independence	-0.340***	1										
Supervisory-board	0.459***	-0.033	1									
Concentration	0.097**	0.076*	0.095**	1								
State share	0.100**	-0.024	0.091**	0.263***	1							
Managerial ownership	-0.066*	0.021	-0.099**	-0.078*	-0.081*	1						
CEO	-0.136***	0.055	-0.093**	-0.113***	-0.047	0.114***	1					
Size	0.408***	0.096**	0.412***	0.391***	0.114***	-0.048	-0.121***	1				
Leverage	0.154***	0.044	0.168***	0.008	-0.017	-0.084**	-0.043	0.364***	1			
Profitability	-0.087**	0.053	0.003	-0.021	-0.01	0.001	0.102**	-0.078*	0.021	1		
Age	-0.125***	-0.059	-0.083*	-0.257***	-0.097**	-0.338***	-0.058	-0.196***	0.099**	0.006	1	
Firm value	-0.173***	0.064	-0.175***	-0.197***	-0.019	0.028	0.127***	-0.520***	-0.208***	0.375***	0.083*	1

Note: * $P < 0.10$, ** $P < 0.05$, *** $P < 0.01$.

2.3.3. The results of Table 3

As demonstrated in **Table 3**, the findings reveal an inconsistency with the original conclusion, attributable to the negligible differences observed in the grouping by managerial shareholding. This phenomenon may be attributed, at least in part, to the tendency of managerial power to impede the expansion of boards. However, it is important to note that further research is necessary to confirm this hypothesis and to refine the conclusions that can be drawn.

Table 3. Subsample test of board characteristics

Variable	Subsample 1	Subsample 2	t-Statistics
State ownership			
Board-size	2.194	2.263	-4.189*** (0.000)
Independence	0.37	0.373	-0.557 (0.578)
Managerial ownership			
Board-size	2.206	2.212	-0.442 (0.658)
Independence	0.372	0.37	0.561 (0.575)
Supervisory board			
Board-size	2.143	2.298	-11.662*** (0.000)
Independence	0.373	0.367	1.688 (0.092)
CEO			
Board-size	2.221	2.137	4.372*** (0.000)
Independence	0.37	0.379	-1.573 (0.118)
Concentration			
Board-size	2.192	2.226	-2.467’* (0.014)
Independence	0.368	0.374	-1.600 (0.110)

Note: * $P < 0.10$, *** $P < 0.01$.

2.3.4. The results of Table 4

Based on **Table 4**, the present study finds that the impact of managerial ownership on board size is insignificant, which contradicts the conclusions drawn in the article. It has been determined by research that two potential reasons for this phenomenon exist. The initial effect is the offsetting outcome resulting from the early (1999–2001) negative influence counterbalancing the subsequent positive influence. Secondly, there was a considerable shift in the policy environment between 2001 and 2013. Specifically, 2003 marked the advent of the split share structure reform, a period when the governance structure was in a transitional vacuum, during which managerial ownership had a notable impact. In 2013, the implementation of the “Corporate Governance Guidelines for Listed Companies” was comprehensive, and the regulatory framework for enterprises had matured to the extent that it would no longer significantly influence the size of the board of directors.

Concurrently, within the model that examines the board's independence, the impact of CEO duality and managerial ownership on board independence is found to be non-significant. However, the original data reveals a negative correlation between CEO duality and board independence, while managerial ownership is positively correlated with the same outcome. The observed discrepancy regarding CEO duality may be attributed to the fact that, following the 2006 revision of the Company Law, which served to strengthen the powers of independent directors, the authority of CEOs has been subject to a gradual constraint and restriction. Additionally, it is noteworthy that during the period of reform, there has been a gradual decline in the proportion of low-performing companies in China, accompanied by an improvement in the operational status of enterprises [6]. With regard to the disparities arising from managerial shareholdings, it is hypothesised that the root cause of this phenomenon may lie in the change in equity incentive methods for management. In 2003, the utilisation of stock options as a means of motivation was a prevalent practice among Chinese enterprises. In an effort to optimise the benefits derived from these options, management exhibited a propensity to augment the size of the board of directors, thereby facilitating the ratification of decisions that were conducive to their own interests. However, by 2013, the incentive method underwent a shift towards restricted shares [7]. Consequently, management became more focused on long-term stock price stability and no longer needed to deliberately control the board's size, thus maintaining the existing structure.

Table 4. Regression results of governance variables

	Model 1		**Model 2**	
	Coeff	**SE**	**Coeff**	**SE**
Constant	1.226***	0.107	0.233***	0.033
Supervisory-board	0.047***	0.004	-0.003*	0.001
Concentration	-0.128**	0.05	0.021	0.015
State-share	0.064	0.043	-0.019	0.013
CEO	-0.047**	0.017	0.008	0.005
Managerial-ownership	-0.11	0.081	0.003	0.025
Size	0.038***	0.005	0.006***	0.002
Age	-0.003*	0.001	0	0
Leverage	0.009	0.03	0.007	0.009
Profitability	-0.015**	0.005	0	0.002
Firm-value	0.009*	0.004	0.005***	0.001
R-squared	0.291		0.0422	
Observations	944		944	

2.4. Robustness test

In the robustness check section, this study employs the same variable substitution approach as the original paper, replacing "State-owned shares" with "State-holding + Legal person holding" and using "Sales revenue" instead of "Total assets" to measure firm size. Furthermore, the term "Revenue growth rate" has been substituted for "Profitability". The outcomes resulting from these substitutions are analogous to those of the original model. Robust regression is furthermore employed to address the presence of outliers, thus ensuring that the outcomes are not significantly different from the original model, as shown in **Table 5**.

Table 5. Robustness checks result

	Model 1	
	Coefficient	**Std-Error**
Constant	0.247***	0.029
Supervisory-board	-0.002*	0.001
Concentration	0.003	0.013
State-share	-0.004	0.012
CEO	0.007	0.005
Managerial-ownership	-0.006	0.022
Size	0.003*	0.001
Age	0	0
Leverage	0.008	0.008
Profitability	0	0.001
Firm-value	0.004***	0.001
Weighted-Independence	0.231***	0.014
R-squared	0.2614	
Observations	944	

3. New hypothesis

3.1. Background introduction

In 2001, the China Securities Regulatory Commission promulgated the "Guidelines on Establishing an Independent Director System in Listed Companies," which stipulated that at least one-third of the board members in Chinese listed companies must be independent directors. This development signified the inception of the independent director system in China.

Nevertheless, it is important to note that early independent directors were frequently regarded as "ceremonial positions," often nominated by major shareholders or management, and thus lacking true independence. Notable instances of this phenomenon include the "New Great Land Fraud Case," which involved the presence of "token directors." In this particular instance, the fraudulent activities perpetrated by

New Great Land Biotech Company were exposed, thus highlighting the need for rigorous financial oversight and regulatory enforcement. The investigation revealed that the independent directors had been recommended by the actual controlling shareholders and had never questioned the abnormal financial data [8].

It is evident that the underlying cause of this phenomenon is predominantly attributable to two factors. Firstly, there is an evident absence of adequate supervision over related-party transactions. Secondly, there is a lack of financial independence.

It is encouraging that in 2012, as China comprehensively deepened its reforms, the state strengthened the system of independent directors. Since that time, the system has transitioned from a focus on "formal compliance" to a greater emphasis on "substantive performance," thereby becoming an important counterbalancing force in corporate governance through regulatory enhancements, intensified accountability mechanisms, and improved market environments [9]. Moreover, the data indicates a significant reduction in the number of cases where companies experienced negative impacts due to inadequate oversight, compared to before. This prompts the following hypothesis: "the strengthening of the independent director system is positively correlated with the independence of the board of directors."

3.2. Quantification and model establishment

The enhancement of the independent director system can be reflected through two metrics: the proportion of independent directors and the network centrality of independent directors. In the establishment of the model, the data is first subjected to normalisation, after which a comparison and division of the normalised data is conducted to derive a weighted independence score. This process culminates in the attainment of a quantitative result for the strengthening of the independent director system. A higher weighted independence score indicates a higher proportion of independent directors on the board and that these independent directors occupy central positions within their professional networks.

3.3. Outcome presentation

As demonstrated in **Table 5**, the coefficient of the weighted independence score is 0.231*, signifying that for each unit increase in this score, the proportion of independent directors rises substantially by 23.1%. This finding suggests that the professionalism or quality of service of independent directors (such as background qualifications, attendance rates, and proposal quality) are the core factors driving this increase. The market's assessment of independent directors has undergone a transition, shifting from a focus on "presence or absence" to "quality and effectiveness."

Furthermore, the coefficient for the supervisory board is -0.002*, yet its absolute value is negligible, suggesting that the supervisory function remains inadequately delineated. The relationship between independent directors and the supervisory board is characterised by its complexity and non-linear nature. It can be concluded that high-quality independent directors may collaborate with the supervisory board through specialised committees, rather than merely substituting for each other.

Recent studies have indicated that there is an increasing demand for the professionalism and performance quality of independent directors in today's corporate society. This has resulted in more capable independent directors becoming involved in key corporate decisions, thereby leading to a decline in the phenomenon of "token directors". Furthermore, as independent directors become more involved in corporate decision-making, the independence of the board is gradually increasing. Consequently, the validity of this study's assumption is

confirmed, signifying a positive correlation between the enhancement of the independent director system and the autonomy of the board of directors.

4. Conclusion

A comparison of the governance mechanisms in 2013 with those in the period from 1999 to 2003 reveals distinct stage-specific characteristics. Traditional governance variables such as CEO duality and managerial shareholding exhibited diminished impacts, while the roles of policy rigidity and market mechanisms became more pronounced. It is noteworthy that the relationship between independent directors and the supervisory board has evolved from a simple functional substitution to a more complex collaborative model. Concurrently, the positive correlation between the proportion of independent directors and the company's market value serves as evidence of the market's recognition of governance quality.

Nevertheless, it must be acknowledged that this study is subject to several inherent limitations. Firstly, the sample is confined to A-share companies listed on the Shanghai Stock Exchange, which may compromise the generalizability of the findings. Furthermore, an analysis based solely on data from a single year fails to capture the long-term dynamic effects of policy reforms, potentially leading to discrepancies with actual conditions.

References

[1] Balsmeier B, Fleming L, Manso G, 2017, Independent Boards and Innovation. Journal of Financial Economics, 123(3): 536–557.

[2] China Securities Regulatory Commission (CSRC), 2018, [No. 29 Announcement] Guidelines for Corporate Governance of Listed Companies, Beijing.

[3] McKissack A, Xu JY, 2011, Chinese Macroeconomic Management Through the Crisis and Beyond. Asian-Pacific Economic Literature, 25(1): 43–55.

[4] Cui J, Liu R, Miao J, 2010, Economic Crisis Impact on China and China's Response. Business Research and Innovation Journal, 5: 1–3.

[5] Yang Y, 2016, An Empirical Study on the Impact of the Split-Share Structure Reform on the Capital Structure of Listed Companies

[6] Elsayed K, 2007, Does CEO Duality Really Affect Corporate Performance? Corporate Governance: An International Review, 15(6): 1203–1214.

[7] Ma J, Wang H, 2024, Research on the Impact of Equity Incentive Model on Enterprise Performance: A Mediating Effect Analysis Based on Executive Entrepreneurship. PLoS ONE, 19: e0300873. https://doi.org/10.1371/journal.pone.0300873

[8] Song YQ, 2017, Research on Prevention of Financial Fraud in IPO: A Case Study of New Great Land, thesis, China Academy of Fiscal Sciences.

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