

The Impact of Independent Directorship on Business Performance in China: Empirical Study on SSE Listed Firms

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Abstract. In an effort to enhance the influence of independent directors within the framework of corporate governance, the China Securities Regulatory Commission (CSRC) has recently introduced revised regulations pertaining to independent directorship in August 2023. This regulatory adjustment signifies a pivotal step towards bolstering Chinese-specific corporate governance. This research endeavors to delve into the potential impact of independent directorship on business performance within mainland China's corporate landscape. This study harnesses data from publicly traded companies on the Shanghai Stock Exchange (SSE) in conjunction with panel data analysis and Ordinary Least Squares (OLS) regression to build empirical models. It is noteworthy that the initial results indicate a favorable connection between independent directorship and business performance. It has been demonstrated that having more independent directors is connected with better corporate profitability. Against the backdrop of the newly implemented regulatory reforms concerning independent directors, this study is poised to make a substantive contribution to the ongoing discourse on corporate governance and its ramifications for business performance in China. As these revised regulations usher in a renewed emphasis on independent directorship, this research's insights hold significant relevance for both practitioners and policymakers navigating the evolving corporate governance landscape.

Keywords: Independent directorship, firm performance, board of directors.

1. Introduction

Asian financial crisis in 1997 and 1998 had a significant impact on Asian countries' approach to corporate governance. Policymakers and business leaders realized it being essential to strengthen corporate governance so as to strengthen resilience of the economy and restore investor confidence. In Asian nations, independence of the board of directors was regarded as crucial, and matching legislation were enacted.

Although less affected by the crisis than other Asian countries, mainland China also started to advance board independence in corporate governance. Guidelines on the Establishment of an Independent Director System in Listed Companies were implemented by the CSRC in 2001. By June 30, 2002, publicly traded companies were demanded to have a minimum of two independent board members, and by June 30, 2003, one-third of the directors had to be independent. Thereafter, Provisions on Strengthening the Protection of the Rights and Interests of Public Shareholders, which was issued in 2004, Rules for Independent Directors of Listed Companies in 2022 and Administrative Measures for Independent Directors of Listed Companies (Exposure Draft) in 2023 further revised the regulations, defining independent directors' responsibilities and competencies, with the goals of improving corporate governance, defending the firm's general interests, and defending the legitimate rights and benefits of small and medium-sized shareholders.

Despite the policies put in place and the benefits of the independent board system acknowledged, it is still unclear what kind of tangible effect board independence has on company performance. Mainland Chinese firm's performance and the fraction of independent directors on boards are investigated in this study using data from listed businesses on the SSE and statistical analysis.

The rest of this paper is arranged as follows. Review of the literature and discussion on the differences and characteristics of the earlier researches are in the second section. The methodology applied in the research is introduced in the third section, which comprises variables, sampled data, and empirical research models. The fourth section presents the statistical analysis' findings and

interpretations. The study's design flaws and the likelihood of more research are discussed in the fifth part. The conclusion of this article's results and opinions is provided in the fifth part, along with ideas for independent directorship policies.

2. Literature Review

It is commonly believed that a board with more independent directors is of higher quality and is more likely to form sound strategies and thus increase firm performance [1]. Study on director independence and firm performance has shown various results. Some academics argue that independent directorship and company performance are positively correlated [2]. These studies believe that firm performance would be improved with more independent directors on board. There is no correlation between company performance and a director's independence, according to some other research [3]. Some researches even show a negative connection between the increase of board independence and business performance [4].

The correlation between director independence and firm performance may also be affected by other complex factors. Ararat and Yurtoglu report that female independent directors can result in better profitability [5]. According to Reguera-Alvarado and Bravo, certain values for director tenure and outside directorships are necessary for the existence of the positive connection between director independence and business performance [6]. Liu and Liu report that independent directors who reckon their directorships as prominent lead to better firm performance [7].

Effect of independent directors can also be influenced by regulations and institutions varying between different countries and regions. According to Mishra, a negative correlation is found between independent directorship and company profitability in India [8]. Director independence has a negative impact on family firms and no significant effect on non-family firms in Japan [9]. More independent directors on board improves a company's profitability in Taiwan [10].

This study will apply data from recent years to examine the connection between independent directorship and business performance in listed companies in mainland China.

3. Methodology

3.1. Sample

Sampled data includes publicly traded enterprises on SSE that are not under special treatment for the period of 2004 to 2019 (excluding financial industry companies). The China Stock Market & Accounting Research Database (CSMAR) is where the data in use is gathered. In accordance with China's policy requirement that in-company reforms regarding the ratio of independent directors should be completed by 2003 at the latest, and financial performance of the companies was severely impacted by COVID-19 in the 2020 and beyond, sampled data covers the period (shown in Table 1).

Table 1. Sample profile

Index	Symbol	Year	TOBINQ	IndDR	Growth
397	600048	2019	0.965	33.33	0.101
562	600061	2004	1.275	33.33	-0.036
734	600074	2005	0.963	33.33	0.137
1212	600111	2005	1.095	30.77	-0.031
1367	600125	2010	3.257	33.33	2.052
1390	600126	2017	1.016	33.33	0.049
2151	600189	2013	1.266	36.36	-0.149
2306	600201	2004	1.279	22.22	-0.088
2847	600241	2009	1.287	33.33	0.506
3540	600301	2013	1.633	33.33	-0.093

3.2. Variables

3.2.1 Firm performance

In empirical research in economics, three metrics that are frequently used to gauge a company's performance are Tobin's Q. (TOBINQ), Return on Assets (ROA), and Return on Equity (ROE). Compared to ROA and ROE, TOBINQ takes into account market capitalization, net asset value, and future earnings expectations, making it more reflective to measure ability to generate long-term value for a business, instead of short-term earnings and asset utilization. TOBINQ is utilized as a proxy for firm profitability in this study. TOBINQ is determined as market value divided by total assets based on the parameters of the CSMAR database. A TOBINQ greater than 1 often denotes the market's perception that the market capitalization of a firm exceeds its net asset value, possibly due to the market's optimistic expectations about the company's future profitability. A TOBINQ less than 1 may mean that the market is skeptical of the company's future profitability.

3.2.2 Director independence

Based on earlier studies, the fraction of independent directors on board serves as a proxy for a director's independence (IndDR) [6]. The definition of independent director follows the guidelines provided by CSRC.

Commonly used control variables for researches on corporate governance are also included in the model.

3.2.3 Year

Measurement of time should be included in the research. Data corresponding to the year of identification were collected at the end of that year (data labeled as 2019 was collected on 2019-12-31).

3.2.4 Board size

Board size (Bsize) is commonly believed to have an influence on firm performance [11]. Larger boards are less likely to communicate effectively and reach agreement, lowering the quality of decision-making.

3.2.5 Asset size

The natural log of the total assets is taken to determine the size of a firm (ASize). Larger companies usually receive more supervisory and therefore pay more attention to complying with corporate governance rules, and bigger businesses have greater chances to bring on qualified independent directors to raise the standard of decision-making [8].

3.2.6 Financial leverage

Financial leverage ratio is believed to have an effect on firm performance [12]. Total liabilities divided by total assets equals financial leverage (Leverage).

3.2.7 Firm age

As a company ages, its management structure becomes more complex, necessitating a larger board of directors [8]. The year of observation (current statistical cut-off date) minus the year of IPO is used to compute the firm age (Age).

3.2.8 Meetings of BOD

The number of BOD meetings conducted is to a certain extent indicative of the quality of governance of the BOD and has an influence on firm performance [13]. The number of Board Meetings (Meetings) is calculated annually.

3.2.9 Operating revenue growth

Monitoring costs should also be taken into account when measuring firm performance. The operating revenue growth is used to proxy for monitoring costs as the two usually change simultaneously. Table 2 displays numeric summaries of the variables.

Table 2. Numeric summary

Variables	Obs	Mean	Std Error	25 th Pctl	Median	75 th Pctl
TOBINQ	4065	1.883	2.789	1.087	1.364	1.963
IndDR	4065	36.267	5.357	33.33	33.33	37.5
Bsize	4065	9.251	1.999	9	9	10
ASize	4065	22.412	1.486	21.42	22.13	23.27
Leverage	4065	0.556	1.049	0.396	0.531	0.665
Age	4065	12.193	4.901	8	12	16
Meetings	4065	9.483	4.609	7	8	11
Growth	4065	2.154	42.139	-0.053	0.107	0.416

3.3. Theoretical Framework

The effect on TOBINQ of the IndDR and other control factors is examined using OLS regression. Fixed effects regression was employed to support the findings of the OLS regression since there are inherent differences between individual firms, such as culture, strategy, and branding effects, which can have an influence on firm performance. In time series data, there is some correlation between observations, and observations of the same individual at different points in time can be affected by common factors, therefore, random effects regression was used to address endogeneity.

Due to the potential heteroscedasticity problem, OLS regression and panel data methods all use robust standard errors, which can reduce the impact of heteroscedasticity on parameter estimates by accounting for the error term's variation.

3.4. Empirical Model

Effect of IndDR on TOBINQ is studied in this research through OLS regression, fixed effects model and random effects model, while controlling effect of other control variables. The equation below presents the empirical model.

$TOBINQ = \beta_0 + \beta_1 IndDR + \beta_2 Year + \beta_3 Bsize + \beta_4 ASize + \beta_5 Leverage + \beta_6 Age + \beta_7 Meetings + \beta_8 Growth + \varepsilon$. TOBINQ is Tobin's Q. IndDR stands for independent directorship. Year, Bsize, ASize, Leverage, Age and Meetings are control variables. ε is the error term.

4. Results

The association between IndDR and TOBINQ is first investigated using OLS regression. The results are shown in Table 3. The impact of IndDR on TOBINQ is found to be positive.

In the second model, the impact of other control variables on TOBINQ is investigated. Unlike what was previously believed, a positive relationship between BSize and TOBINQ is discovered, with a slope of 0.0499 and a p-value of 0.002. This probably owes to the fact that sampled companies have relatively small board sizes. The mean value of Bsize is 9.251 and the 75th Pctl is 10. Within this range, firm performance increases with the number of directors instead of decreases. Performance of firms is found to be adversely correlated with firm size. This phenomenon may be the result of market saturation, diseconomies of scale, or declination of management efficiencies. Coefficients of other control variables are found to be insignificant, suggesting that effects of these variables on firm performance are not significant.

Table 3. OLS regression results

	TOBINQ		
	(1)	(2)	(3)
IndDR	0.0302*** (0.008)		0.0288*** (0.000)
Year		0.1320*** (0.000)	0.1307*** (0.000)
Bsize		0.0499*** (0.002)	0.0714*** (0.000)
ASize		-0.6514*** (0.000)	-0.6657*** (0.000)
Leverage		1.6158 (0.286)	1.6146 (0.286)
Age		-0.0033 (0.773)	-0.0063 (0.584)
Meetings		0.0150 (0.247)	0.0141 (0.275)
Growth		-0.0001 (0.828)	-0.0001 (0.788)
Constant	0.7885*** (0.002)	14.0384*** (0.000)	13.1704*** (0.000)
R2	0.003	0.482	0.485
Adjusted R2	0.003	0.482	0.484
Residual std.	2.785	2.009	2.004
F-statistic	14.64	18.64	19.58

In the third model, effects of IndDR and control variables are studied together. After adjusting for control variables, positive effect of IndDR on TOBINQ remains significant, and effects of control variables remain largely similar.

Table 4. Fixed effects regression results

	TOBINQ		
	(1)	(2)	(3)
IndDR	0.0265*** (0.002)		0.0178** (0.012)
Bsize		0.0459** (0.032)	0.0668*** (0.002)
ASize		-0.9730*** (0.000)	-0.9743*** (0.000)
Leverage		1.6238*** (0.000)	1.6255*** (0.000)
Age		0.1543*** (0.000)	0.1511*** (0.000)
Meetings		0.0507*** (0.000)	0.0506*** (0.000)
Growth		-0.0013** (0.033)	-0.0013 (0.176)
Log likelihood	-9057.9	-7356.4	-7351.9
R2	0.003	0.568	0.569
F-statistic (robust)	9.70	828.66	712.88

Next, fixed effects regression is applied to control for individual fixed effects on how the dependent and independent variables are correlated, as well as the effect of individual changes in time

on the dependent variable. Table 4 presents the findings. According to the results, signs of coefficients remain largely the same. Effect of firm age changed from negative to positive, this may be due to the fact that fixed effects models isolate individual changes in time from the effects of age, thus better estimating the relationship between the two. The significance level of several control variables changed within fixed effect models. This may be owing to that fixed effects regressions focus more on inter-individual variation over time, controlling for unobservable differences between individuals.

Lastly, random effects regression is performed. In panel data, multiple observations of the same set of individuals are made. As a result, there may be correlation between observations in the time dimension. Some characteristics of firms may remain relatively stable over the years, such as board size and meetings per year. This can lead to increased correlation between observations over the years. Random effects regression can adjust for this correlation by introducing individual random effects. It would enable a more precise estimation of the correlation between the two types of variables. Table 5 displays the regression results. Similar findings to those of fixed effects regression were given by random effects regression. The effect of independent directorship on business performance is shown positive in all regression models.

Table 5. Random effects regression results

	TOBINQ		
	(1)	(2)	(3)
IndDR	0.0499*** (0.000)		0.0511*** (0.000)
Bsize		0.0920*** (0.000)	0.1430*** (0.000)
ASize		-0.0522*** (0.000)	-0.1549*** (0.000)
Leverage		1.6712*** (0.000)	1.6702*** (0.000)
Age		0.0697*** (0.000)	0.0695*** (0.000)
Meetings		0.0232** (0.018)	0.0249** (0.012)
Growth		-0.0015 (0.216)	-0.0014 (0.206)
Log likelihood	-9203.5	-7697.4	-7670.9
R2	0.069	0.532	0.540
F-statistic (robust)	196.89	92.16	85.05

5. Limitation and Outlook

In order to obtain data for all the control variables, the companies selected for this study are listed companies that are not under special treatment in 2004-2019 and have complete data disclosure for each year. This filtering condition will filter out some companies that have been delisted due to poor operations and some companies that have not disclosed complete data due to their small size. It is plausible that the positive influence of independent directors only exists in larger and companies that are well-run over time. These companies have the opportunity to hire more talented independent directors, while firms that are filtered out may only be able to employ ineffective independent directors to meet regulatory requirements, which in turn may not have a positive impact on a corporation's success.

Also, most of the companies included in the dataset employ a number of independent directors that merely meets regulatory requirements. The 25th Pctl of the IndDR value is 33.3%, while the 75th Pctl is only 37.5%. Due to the restricted interval over which the variable takes its value, it is possible that positive impact of independent directors may exist only within a small interval.

Future studies could employ larger datasets and introduce more control variables to further address issues of heterogeneity, endogeneity, and simultaneity bias to demonstrate a stronger proof of the connection between firm profitability and independent directorship. The detailed conditions and modalities of the impact of independent directors in Chinese companies can also be further studied.

6. Conclusion

Board independence's impact on corporate performance in mainland China is examined in the study using information from companies that are listed on the SSE. In addition to OLS regression, fixed effects and random effects regression are also employed to account for both individual and time-invariant components. It has been discovered that independent directorship generally improves firm performance. This result validates the CSRC's recently updated rules for independent directors of listed firms in 2023.

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