The Impact of CEO Political Connections: A Study on Management Performance in China

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ABSTRACT
This paper researching whether the management performance of the Chief Executive Officer (CEO) in Chinese listed companies is associated with political connections uses the data envelopment analysis (DEA) approach with data from 389 companies in China and demonstrates that chief executive officers' political connection is negatively associated with the management performance. There are three reasons. First, an Interest mismatch occurring between the shareholders and government would hurt the management's decision-making process and eliminate the benefits of political connection. Second, China is a country with a very strict legal system. Any action that uses public resources to seek private interest is strictly prohibited and will even be considered a crime in China. The CEO's political connection does not bring special resources to the company. At last, China has an open and efficient market system, and any enterprise can obtain the required resources in the open market.

Keywords: *Political connection, Management performance, Company efficiency, Chinese listed companies.*

1. INTRODUCTION

1.1. Background

After the study of political connection proposed by Krueger, it gradually became a worldwide research topic [1]. Many scholars have focused on paying attention to the impact of the association between companies and governments on company economic decision-making and efficiency.

The scarcity of resources is the root cause of economic problems. Resources are not only allocated by the market, but also by the government. The government holds many resources such as natural resources, tax incentives, government subsidies, and so on, which always are crucial resources for companies. According to the theory of resource dependence, companies with political connections will have more unique resources, which will make them more competitive in the market.

The typical characteristic of the modern company governance structure is that the ownership of the company is separated from the management right and the senior management who hold a few shares or even do not often hold the management decision-making power and resource distribution power in the daily operation of the company. The political identity of these senior managers is an important way for companies to have a political connection. Depending on rent-seeking activities, the government may require companies to help them achieve their political goals, seriously undermining the efficiency of the company [1]. Considering the agency problem, the political identity of senior managers exacerbates the misalignment between managers and owners, which may also hurt business operations.

It is meant to reveal the impact of political connections on companies, which can help companies improve operational efficiency.

1.2. Related Research

There are a lot of studies that confirm that political connections promote the survival and development of companies. Yang and Guo define two categories of political connections including existing and previous political connections and used the return on assets ratio (cross-sectional data) to represent company performance. Yang and Guo found that all kinds of political connections make a positive to company performance and existing political connections have a more positive impact than previous political connections [2]. The research of Chen et al. shows politically connected companies engage in a high-barrier business more easily and political connection plays a much more vital role in affecting company performance when a company is highly engaged in a business with high entry barriers [3]. Wu et al. find that the CEO who politically connected to the national government has a larger impact on IPO performance than those connected to the local government, especially when the company runs in a regulated market or is located in an area with fewer limitations [4]. Boubakri et al. and Hung et al. show companies with political connections promote their performance after the existence of political connections. Similarly, leverage and debt maturities increase after the existence of political connections. There is evidence that when they run into financial trouble, they are often bailed out by the government, offsetting the risk of higher leverage [5,6].

However, some studies verify the negative effect of political connections. Pang and Wang found that political connection will damage the company's future business performance and corporate value, which can be mitigated by a better legal environment or shareholder protection mechanism preventing rent-seeking activities [7]. Gao et al. show that politically connected non-family firms have lower M&A performance. The M&A performance of family firms with political ties is higher than that of family firms without political ties [8].

1.3. Objective

Many scholars have studied the various effects of political connections on companies. However, there are few studies on the association between political connections and management performance. Only Ahn and Shin find that politically connected chief executive officers (CEO) are beneficial to management performance in Korean companies [9]. Little research has been done on the relationship between political connection and management performance in Chinese companies. To fill this gap, this paper uses the data envelopment analysis (DEA) method with data from 389 companies listed on China's Shanghai stock market and try to explain how the politically connected CEOs effect the management performance.

2. METHOD

2.1. Hypothesis

These studies demonstrate that the political connection of chief executive officers (CEO) can undermine the inefficiency of companies, which is caused by interest misalignment between the shareholders and managers [10-12]. This leads to the following hypothesis:

Hypothesis 1: Political connection of the CEO in listed companies is positively associated with the management performance

2.2. Sample Selection

The sample consists of 389 companies listed on China's Shanghai stock market. In this paper, to reflect the efficiency of the whole company and the management performance of the CEO, this analysis uses all the data derived from the consolidated statements of the company.

To verify the association between political connections of the listed company and the management performance of the CEO, this research collects data from listed companies for 2018. There are two reasons why using data from this period. First, on 1st January 2018, the Chinese government began to implement the new accounting standards. Thus, the research period starts after that. Second, the COVID-19 outbreak began in China in 2019 and continues to this day, which has had varying degrees of impact on China's economy and all walks of life. To avoid the influence of this external factor on the result, this research decides to use data for 2018.

The data were gathered from a financial data and analysis tool service provider called Wind, and companies' financial statements. Especially, this analysis uses a variety of sources to gather information about the political connection, including the Institute of Public and Environmental Affairs (IPE), and financial news from NetEase. IPE is a public welfare environmental research institution, whose database collects information from the official website of 31 provincial people's governments and the official website of 338 prefecture -level people's government. NetEase is China's leading Internet technology company, which provides various services. One of these services is providing information about stocks, commerce, wealth management and other financial and economic fields [13].

2.3. Measures and Empirical Model

To explore the relationship between CEO's management performance and political connection, this analysis uses the following Equation (1):

$$MP_i = \beta_0 + \beta_0 \mathrm{PC} + \beta_2 SIZE_i + \beta_3 SAE_{1,i} + \beta_4 TAN_i + \beta_5 ROA_i + \beta_6 AGE_i + \beta_7 LOSS_i + \beta_8 NE_i + \epsilon_i \quad (1)$$

Table 1. Variable and explanation of Equation (1)

Variable	Explanation
PC	dummy variable equals 1 if management (CEO) has a political connection, and 0 otherwise;
Variable	Explanation
SIZE	natural log of total assets;

SAE_1	selling and administrative expenses scaled by sales;
TAN	tangible assets scaled by total assets;
ROA	return on assets;
AGE	natural log of company age;
LOSS	dummy variable equals 1 if net income is less than zero, and 0 otherwise;
NE	The number of employees.

The political connection (PC) is the independent variable of this research. According to Faccio, this paper measures the value of PC as 1 if the top administration positions (CEO, chairman, vice-president, or secretary of the board of chiefs) are government priests, parliament individuals, central servers, lawmakers, or political party individuals and 0 otherwise [14]. For instance, Yang Zeyuan who was the chairman of the board of Baosheng Science and Technology Innovation Company is the representative of the 13th People's Congress of Jiangsu Province in 2018. This analysis collects information about the CEO based on various sources including China Stock Market & Accounting Research Database (CSMAR) and Wind. CSMAR is a research-oriented and accurate database in the field of economics and finance in China.

The dependent variable which is management performance (MP) can be measured in two steps [15]. First, this analysis can conduct the data envelopment analysis (DEA) to calculate the efficiency of the entire company. In the DEA method, company efficiency is defined as input divided by output. A company invests money, machines, and workforce to generate revenue. Therefore, this analysis uses fixed assets (FA), selling and administrative expenses (SAE), the number of employees (NE), and operating costs (OC) as input variables and operating income (OI) as the output variable [16-18]. In this way, each input variable and output variable are assigned a unique weight. All companies' efficiency scores lie between 0 and 1, in which 1 is best. Second, this analysis divides company efficiency into company factors and management factors. Company efficiency is likely to be affected by company-specific factors, which may give managers a better chance to invest in more profitable projects. Porter's Five Forces tell us that managers have greater negotiating power for suppliers and customers when the company is larger and has more market share. Shin and Ahn suggest that profitable companies' CEOs can invest more aggressively in projects, and the options set of management's potential investments can be influenced by the company's life cycle [9]. To eliminate the impact of company-specific factors on the efficiency of the company, this analysis use company size (SIZE), company age (AGE), and company profitability (ROA) as company-specific factors in model 3, in which the residuals represent the dependent variable, management performance (MP).

First step: evaluation of a company's efficiency: $max\theta = (OI) * \left(v_1 FA_i + v_2 OC_i + v_3 SAE_{2,i} + v_4 NE_i\right)$ (2)

Second step: management performance evaluation: $Company\ Efficiency_i = \alpha + \gamma_1 SIZE_i + \gamma_2 AGE_i + \gamma_3 ROA_i + \varepsilon_i$ (3)

Table 2. Variable and explanation of Equation (2) and Equation (3)

OI	operating income;
FA	fixed assets;
OC	operating costs;
SAE_2	selling and administrative expenses;
NE	number of employees;
Company Efficiency	company efficiency measured by DEA estimation using research model (2);
SIZE	natural log of total assets;
AGE	natural log of company age;
ROA	company profitability is calculated by dividing net income by total assets;
ε	management performance (MP).

This analysis uses company size (SIZE) and ROA as alternative measures of management's ability to bridle company-specific factors related to management performance [14]. This analysis also sets up several variables representing company resources that can help managers promote company efficiency including selling and administrative expenses (SAE), tangible asset intensity (TAN), company age (AGE), net loss (LOSS), and the number of employees (NE) [19,20]. To avoid outliers' effects on the results, this analysis winsorize all variables except for dummy variables at 5% and 95%. Every equation that this paper use is conducted by Excel.

3. RESULT

3.1. Descriptive Statistics

Table 3 shows the mean value of MP and company efficiency are 0 and 0.653, respectively. The best company efficiency is 1. Therefore, the average company efficiency denotes that companies are 34.7% below the best efficiency. Because MP is the residuals from the model, it is natural that the mean value is 0. The average PC of 0.252 implies that only 25.2% of companies exist political connections.

Table 4 indicates political connection (PC) which our focus on is negatively correlated with management performance (MP), which means the political connection maybe reduce the management efficiency. It is correlated with selling and administrative expenses (SAE) and company size (SIZE) as well as.

Table 5 indicates that the variance inflation factors (VIF) of all variables are small, which all are less than 10. Therefore, multicollinearity problems are less likely to exist.

Table 3. Descriptive statistics

Variable	Mean	Std. dev.	p25	p50	p75
Company Efficiency	0.653	0.155	0.541	0.641	0.761
PM	0	0.135	-0.094	0.001	0.082
PC	0.252	0.435	0	0	1
SIZE	22.496	1.590	21.276	22.189	23.385
SAE_1	0.133	0.095	0.072	0.112	0.168
TAN	0.953	0.045	0.940	0.964	0.981
ROA	0.054	0.047	0.025	0.048	0.079
AGE	2.770	0.320	2.565	2.833	2.996
LOSS	0.954	0.210	1	1	1
NE	12152.76	36085.75	1148	2684	6557

Table 4. Correlations

	MP	PC	SIZE	SAE_1	TAN	ROA	AGE	LOSS
PC	-0.1664							
SIZE	0.0000	0.0826						
SAE_1	-0.6877	0.0829	-0.2964					
TAN	0.1079	-0.0409	-0.1035	-0.0617				
ROA	-0.0000	-0.0068	-0.2071	-0.0786	0.1367			
AGE	-0.0000	0.0201	-0.1765	-0.0051	0.0452	0.0341		
LOSS	0.0827	0.0433	-0.0363	-0.2194	0.1023	0.5237	-0.0223	
NE	-0.0044	-0.0061	0.6256	-0.1833	-0.0424	-0.0870	-0.1776	0.0186

Table 5. Variance inflation factors

variable	VIF	1/VIF
SIZE	1.90	0.52
NE	1.67	0.59
ROA	1.46	0.68
LOSS	1.46	0.68
SAE_1	1.20	0.84
AGE	1.05	0.95
PC	1.03	0.97
TAN	1.03	0.97

4. EMPIRICAL ANALYSIS RESULTS

4.1. Multivariate Test

Table 6 shows the multiple linear regression results which test the relationship between management performance and political connection for the 389 listed companies in China. Column (2) presents analysis results for hypothesis 1, the relationship between management performance and the political connection is significant (t-stat = -2.22) and the coefficient for PC is negative (coef. = -0.024). This indicates that political connection hurts management performance, which is contrary to hypothesis 1.

On the other hand, the result also presents variables related to company (relative) size such as SIZE and SAE_1 are significantly associated with the management performance. Both of the coefficients are negative, which means the two variables have a detrimental effect on management performance. Surprisingly, the coefficient for ROA which represent the company's profitability is significantly negative. However, this paper does not explore the reasons for this phenomenon.

Draw a conclusion, the relationship between politically connected CEOs in listed companies in China and management performance is supported. However, it is negative relationship instead of positive relationship. The hypothesis 1 is not supported.

Table 6. Multivariable test results

Dep. variable = MP		
	(1) t	(2) P> |t|
PC	-2.22	0.027**
SIZE	-5.00	0.000***
SAE_1	-20.27	0.000***
TAN	1.47	0.143
ROA	-2.16	0.031**
AGE	-1.31	0.190
LOSS	-1.19	0.233
NE	-0.21	0.836
F-value	56.51	
Adjusted R2	0.5337	

4.2. Robustness Tests

This paper divides company efficiency into company factors and management factors. To eliminate the impact of company-specific factors on the efficiency of the company, this paper uses the residuals to represent the dependent variable, management performance (MP), in model 3. Although the return on assets is a company-specific factor that may help CEO pursue projects more aggressively, it is also a measurement of management performance. Excellent CEOs can improve ROA through superb management ability. For robustness, this paper deletes the variable which is ROA in model 3, considering ROA as a measurement of management performance rather than company-specific factors.

In addition, this paper winsorizes all variables except for dummy variables again at 1% and 99%. Similarly, unreported test results are not essentially different from the previous results in the earlier section. Therefore, robustness test results support hypothesis 1 regarding the negative association between politically connected CEOs in listed companies in China and management performance.

5. DISCUSSION

This study researches the management performance and political connection of 389 CEOs whose companies are listed on China's Shanghai stock market. Based on resource dependency theory, this paper makes a hypothesis that politically connected CEOs perform better than non-connected CEOs. Our analysis results verify the significant relationship between management performance and political connection. However, the association is negative, which is notable.

The question of why the CEO’s political connection has a detrimental effect on management performance for companies listed on China's Shanghai stock market needs to be solved. This paper tries to explore the potential answers from three aspects. First, several academics consider that the interest inconformity between principals and managers and an invalid monitoring system can lead to serious agency problems for politically connected CEOs in state-owned companies [10,11,21-24]. Managers delegated by the government are likely to pursue the goals conforming to the government policy, which may damage the profit of outside shareholders [12]. Therefore, for state-owned companies, an interest mismatch occurring between the shareholders and government would hurt the management’s decision-making process and eliminate the benefits of political connection. Second, China is a country with a very strict legal system. Any action that uses public resources to seek private interest is strictly prohibited and will even be considered a crime in China. For private companies, the CEO's political connection does not bring special resources to the company but makes the CEO handle some tedious political affairs, which greatly weakens the effect of resource dependence theory and removes the positive aspects of political connection. Finally, China has an open and efficient market system, and any enterprise can obtain the raw materials in the open market. For instance, companies can raise external capital through equity and debt financing and can even turn to the government for support, even for CEOs without political connections (Hong Kong's financial defense war in 1998). As expected, these multiple sources of access to resources undermine the impact of resource dependence theory.

6. CONCLUSION

The results of this study are subject to some limitations. Because our empirical analysis is limited to listed companies in China's Shanghai stock market, the findings may not be generalizable to all Chinese listed companies. Despite these limitations, this paper makes a momentous contribution. The finding provides a more accurate empirical effect of political connection and management performance in China’s Shanghai stock market listed companies by directly separating managerial performance using DEA approaches. On the basis of empirical strategies, it is confirmed that resource dependence theory is completely ineffective in China's Shanghai-listed companies, and CEO's political connection undermines management performance.

Overall, the results present that politically connected CEOs perform worse than non-connected CEOs in China. The results survive after several robustness tests. It is verified that the resource dependence theory is completely ineffective in China's Shanghai-listed companies, and politically connected CEOs undermine management performance.

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