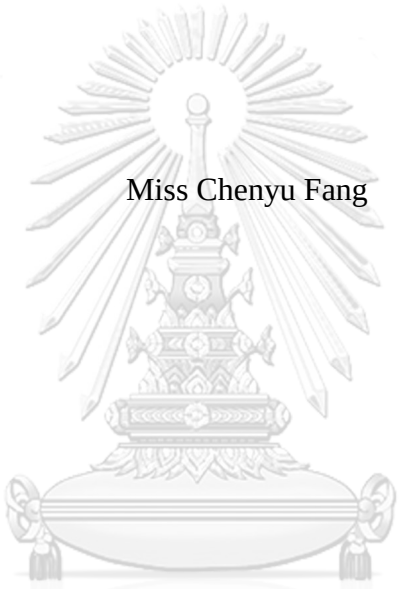
Political connection and firm performance: evidence from Chinese state-owned companies

Miss Chenyu Fang



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สายสัมพันธ์ทางการเมืองและผลการดำเนินงานของบริษัท: หลักฐานจากการศึกษาบริษัทภาควิสาหกิจจีน

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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต
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วิทยานิพนธ์ฉบับนี้ใช้แบบจำลองการถดถอยพหุคูณเพื่อศึกษาผลกระทบของสายสัมพันธ์ทางการเมืองต่อบริษัทรัฐวิสาหกิจ งานวิจัยฉบับนี้พบว่าสายสัมพันธ์ทางการเมืองสามารถเพิ่มผลการดำเนินงานของบริษัทรัฐวิสาหกิจได้อย่างมีนัยสำคัญ นอกจากนี้ หากประธานเจ้าหน้าที่บริหารหรือประธานบริษัทอยู่ในระดับบริหารเดียวกันกับผู้มีอำนาจควบคุมที่แท้จริงของบริษัท จะส่งผลให้อัตรากำไรสุทธิต่อสินทรัพย์รวมและอัตรากำไรสุทธิต่อส่วนของผู้ถือหุ้นเพิ่มขึ้น และเมื่อสัดส่วนของผู้บริหารระดับสูงที่มีสายสัมพันธ์ทางการเมืองเพิ่มสูงขึ้น อัตรากำไรสุทธิต่อสินทรัพย์รวมของบริษัทจะเพิ่มขึ้นด้วย งานวิจัยฉบับนี้พบว่าสายสัมพันธ์ทางการเมืองมีผลกระทบที่ไม่แตกต่างกันต่อบริษัทในอุตสาหกรรมที่ถูกควบคุมโดยรัฐบาลในระดับที่สูงและในระดับที่ต่ำกว่า สายสัมพันธ์ในระดับ “เมือง” แสดงผลกระทบในทางลบต่อผลการดำเนินงานในตลาดหุ้นของบริษัท งานวิจัยฉบับนี้ยังใช้โมเดล Probit เพื่อศึกษาถึงผลกระทบของวัฏจักรชีวิตของบริษัทต่อการสร้างสายสัมพันธ์ทางการเมือง และพบว่ามีการสร้างสายสัมพันธ์ทางการเมืองในบริษัทในเกือบทุกระยะของวัฏจักรชีวิตองค์กร

ภาควิชา การธนาคารและการเงิน ลายมือชื่อนิสิต .....

สาขาวิชา การเงิน ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

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This paper uses the multiple regression to research the political connection effect in the state-owned enterprise. It has been found that the political connection can significantly enhance state-owned enterprises' performance. Moreover, the same administration level between state-owned enterprises' actual controller and CEO/Chairman would enhance ROA and ROE. Additionally, as the proportion of political connection members increases, the ROA will be promoted. The political connection has same impact on the industries with more governmental control and the industries with less governmental control. The "city administration level" shows negative record in the stock market. Furthermore, this paper adopts the Probit Model to test the impact of life cycle stage on the political connection establishment. According to the finding, the political connection is set up in almost each stage.

Department:	Banking and Finance	Student's Signature	.....
Field of Study:	Finance	Advisor's Signature	.....
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INTRODUCTION

Background

In China, political connection prevails, and it has the significant relationship with company performance. Politics and economy, like twin babies, share weal and woe. The economy can be affected by politics in many aspects such as the change of international situation. The improvement of diplomatic relationship will lead to the rise of stock prices of multinational companies. The war will make politics and economy unstable and people feel insecure, resulting in the drop of stock prices and the surge in gold price. Local political turmoil will also influence the market. Beyond that, the country's major policies, such as industrial policy, tax policy, and monetary policy, all have a significant impact on the economy. There are lots of growing researches on the implications of political connections. As a matter of fact, politics not only influences the aggregate economy but also strongly affects the financial management and performance of a firm.

According to the current literature, many market abnormal behaviors related to the politics cannot be explained by conventional economics. For example, in Indonesia, when the message about the president's physical condition is spread, the performance of some companies appears obvious abnormal reaction. Besides, when Malaysia implements the capital control, some firms' market value obviously grows more rapidly than others. Thus, large numbers of scholars begin to consider the potential factor - political connection - which may be neglected in the previous study.

First, how do they define "political connection"? Political connection means that firms and government establish a special close relationship. Currently, the definition of the political connection is ambiguous and there is no unified definition standard. According to Faccio et al. (2002), the political relationship is a kind of political connection, and it exists between the person who has the political rights and the firm. Furthermore, they conclude the positions of officers who ever or currently

work in the governmental department. As stated by Claessens, Feijen, and Laeven (2008), the formation of this kind of relationship is through the election donations. Most of the scholars believe that if the senior executive in a listed company has the political background, it can be regarded as a kind of political connection. It is worth mentioning that political connection is not the political corruption and it is legal in each country. In the country with plural parties, if a firm gives the offertory to the candidate in the election, it may produce another kind of political connection. However, in China, a right concentrated country, the political connection may be different from other countries. As for China, if the senior executive ever or currently works in the governmental sector, this can be defined as a kind of political connection.

In China, a study by Wu, Wu, Zhou, and Wu (2012) find that private firms with politically connected managers outperform those without such managers, whereas local SOEs with politically connected managers underperform those without such managers. Their analysis covers the period of 1999-2007. In their paper, they mainly examine the following aspects:

1). The impact of political connection on local SOEs.

They found that local SOEs with such managers have poorer performance than those without such managers.

2) The impact of political connection on ETRs

ETR refers to effective income tax rate. They found that SOEs with politically connected managers pay the same taxes as those without such managers. Whether local SOEs and central SOEs have politically connected managers doesn't affect their ETRs.

3). The impact of political connection on the over-investment of free cash flow in SOEs

According to their finding, local SOEs with politically connected managers more severely over-invest their free cash flow than those without such managers, and

small local SOEs have more severe degrees of over-investment than big local SOEs. Apart from that, the central SOEs have no significant impact on the over-investment of free cash flow.

Even though the political connection is already being tested, there are still many interesting places that can be further researched:

1). The first section of this paper attempts to examine the impact of political connection on SOE's performance. If CEO/Chairman ever or currently serves in the governmental agencies, it means that the SOE has the political connection. This paper uses the panel data regression to explore the political effect and verify the existing findings. Within the political connection, the SOE can acquire more political resources and then they are able to make more profit. Or if they have a more powerful connection, the company may suffer from more political intervention, beyond that, the firm should undertake more social responsibility, and then the connection would damage corporate performance. For further research, this paper also tests the stronger effect of CEO/Chairman's political connection on firm performance as well as the universality of political connection.

2). The second section of this paper analyzes whether the political connection effect differs from industry to industry. It is expected that the political connection is different in industries. This paper will use the panel data to test the industry indices effect. Compared with other industries, the manufacturing and wholesale trade may have the weaker political connection because the technological update speed is fast and there is the scale economy. These industries depend strongly on the market but depend less on the government. Like the energy and construction industries, they may be affected more by the government. Indeed, Chinese government's monopoly power can influence their performance to a great extent.

3). The third section of this paper analyzes whether the political connection influences differently in chairman/CEO's administration level. Chinese government officer owns five kinds of administration control (from the highest to the lowest):

central, province, city, county, and village. Chairman/CEO all controls different administration level. “The higher the rank is, the higher the Chairman/CEO’s administration level will be.” For the administration superior officers, they can not only ask for more monopoly resources but also use their own right to make more profit to the SOE. However, for the lower-level officers, all the condition is contrary.

4). The fourth section of this paper explores whether life cycle stage will influence SOE’s political connection. This is based on the life-cycle theory. To be specific, the five stages are introduction, growth, maturity, shake-out, and decline. Different stages have different political connection characteristics. For example, in the introduction and growth stage, political connections will help the company quickly enter the market and promote the firm to become the listed company. However, in the maturity stage, the political connection may be counter-productive, specifically, the political connection may make the firm pay more attention to the social responsibility, rather than its own development, as a result, it will influence the firm performance.

Objective

In recent decades, China is experiencing the transition period from “planned economy” to “market economy”. As the governmental intervention reduces, the market forces become stronger. Unlike the developed country with high marketization degree and more transparent economy system, the Chinese government still plays an important role in the market. For instance, the government not only controls the major significant resources but also greatly influences the resource allocation. Generally speaking, the political connection can be divided into two kinds: initiative connection and passive connection. Initiative connection means that the company voluntarily seeks for connection with government, while the passive connection means that the government appoints the officer as an enterprise’s senior executive and meanwhile the enterprise must accept it. This phenomenon almost occurs in every state-owned enterprise (SOE). Because China is in the transition stage, it just supports the opportunity for the rent-seeking and political corruption, especially in the SOE. To

study this problem, this paper regards the SOE's profit source as a discussed theme. Based on the political connection and firm performance, the paper carries out in-depth research.

Although the research of political connection has gained some results, it is still in the early stage. To be specific, the research of this paper should reasonably disclose relative information of political connection and it is conducive to enriching the theory of political connection. Apart from that, this research can help managers promote the internal value of the enterprise. At the same time, investors are able to make more scientific and rational decision and judgment.

Research Gap and Contribution

At present, the intensive study of political connection with state-owned firms is less. In fact, scholars are more likely to consider that state-owned enterprise's political connection is inevitable and does not deserve in-depth research. This may explain why the number of the literature study on political connection with private firm far exceeds that with state-owned firms.

This paper aims to further study the political connection with state-owned firms. Beyond that, the motivation behind this research is to analyze the impact of political connection on SOE firms' performance and make it more comprehensive. Moreover, SOE firms are divided into different industries, furthermore, different influence between industries is compared. For region and administration level of the SOE firms, the paper also makes a test to examine different firms' performance. Additionally, this paper combines the life-cycle theory with the topic and makes a further exploration.

For the investors, the findings of this paper will help investors make an accurate and scientific decision for the future tendency of the firm and lead them to focus on how political connection plays a role in firm's performance. After

comprehensively weighing the firm value, investors will be able to make a more scientific decision.

For the state-owned enterprise, the finding of this paper can not only help them make a reasonable management decision but also promote the firm's value. Apart from that, it can help reveal the differences of politically connected firms, analyze the characteristics and nature of the firm (e.g. the industry indices and the administration level of a firm), combine with the firm's life stage, and show the impact, advantages, and disadvantages of political connection. In this way, the managers can choose and adjust strategies timely to enhance the firm value.

HYPOTHESIS DEVELOPMENT

The paper analyzes the political connection effect on state-owned firms in China and considered the main factors which are industry indices, administration level indices, as well as the life stage indices, selecting the period of 2013 - 2016 to test the following hypotheses.

Hypothesis 1: According to the empirical research for 790 newly public traded firms in China, "firms with politically connected CEOs under-perform those without politically connected CEOs by almost 18% based on three-year post-IPO stock returns and have poorer three-year post-IPO earnings growth, sales growth, and change in returns on sales". Fan, Wong, and Zhang (2007) find that the political connection plays a negative role in enterprise's business performance. However, Ding, Jia, Wu, and Zhang (2014) obtain entirely different results. As pointed out by them, firms with the political connection would have better performance because of the privilege derived from finance and tax as well as the positive impact of the board chair's political connections in SOEs. Based on these findings, the paper will explore how the political connection (Chairman/CEO ever or currently serves in the governmental agencies) influences the firm performance. Then, it will put forward the first hypothesis to verify the existing findings:

Hypothesis 1a: There is no relation between the political connection and SOE's performance.

Hypothesis 1b: The political connection would affect on SOE's performance because the political connection may help the enterprise gain the political resources which are monopolistic and scarce then enhance the performance or let them do more social responsibility then harm their performance.

Hypothesis 2: The impact of political connection on firm performance can attribute to the same administration level. If the Chairman/CEO ever or currently

serves in the governmental agencies that are same as the actual controller's, this condition may make the political connection become stronger. Meanwhile, the Chairman/CEO can not only play their full role but also obtain more resources for the firm using their special relationship.

Hypothesis 2a: There is no relation between the strong political connection and SOE's performance.

Hypothesis 2b: The state-owned firms with the strong political connection would enhance the SOE's performance.

Hypothesis 3: The universality of political connection affects the firm performance, meaning that the percentage of the executives & directors with the political connection can affect the firm's performance.

Hypothesis 3a: There is no relation between the universality of political connection and SOE's performance.

Hypothesis 3b: The universality of political connection effect the SOE's performance.

Hypothesis 4: The political connection effect would be influenced by industry indexes. In this paper, the industries are divided into two categories. To be specific, the first industry is less controlled by the Chinese government, such as the manufacturing and wholesale trade. These industries may have a weaker political connection because technology upgrading speed is so fast and there is scale economy. They would strongly depend on the market rather than the government. By contrast, the second one is more controlled by the Chinese market. For example, the energy and the construction industry may be affected more by the government. In addition, Chinese government monopolizes vast amounts of resources. Hence, the political connection exerts more impacts on their performance.

Hypothesis 4a: The political connection influence on SOE's performance is no difference between the more and less controlled by government industries.

Hypothesis 4b: The political connection has the impact on the SOE's performance in industries indices.

Hypothesis 5: Since the political connection would bring many advantages to SOE, the firm also needs to pay the price. Once the major incidents occur, the voice of taking social responsibility towards enterprise will upsurge. Under this condition, the firm with political connection must react stronger than others, especially the firms with Chairman/CEO of superior administration level. Thus, different administration level of a Chairman/CEO makes the firm perform in a different way. On the one hand, the higher the administration level, the worse the firm performance. In recent years, Chinese two sessions (NPC and CPPCC) have been paid more and more attention by the public. Meanwhile, the Chairman/CEO's action is exposed to everyone. Through the participation in political affairs, their consciousness towards social responsibility and mission will get improved. Hence, they need to pay more attention to their own reputation and enhance the social responsibility at all cost. Thus, the higher the administration level of the Chairman/CEO, the worse SOE's performance. On the other hand, if the administration level is higher, the Chairman/CEO can utilize their own relation network to strive for more profit for SOE. In this way, the firm performance will be better.

Hypothesis 5a: The administration level of CEO/Chairman would not influence the firm's performance.

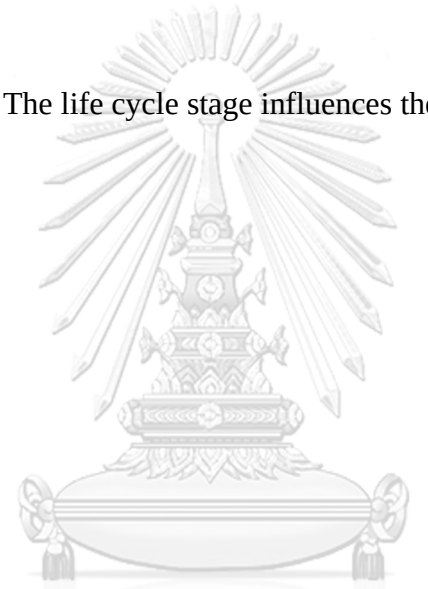
Hypothesis 5b: The administration level of CEO/Chairman would influence the firm's performance.

Hypothesis 6: Based on the life-cycle theory, there are five kinds of stages: introduction, growth, maturity, shake-out, and decline. Discussing the differences among various stages will help managers raise different strategy over stages and

enhance the value of the firm. Moreover, the different stage has its own political connection characteristics. In the introduction and growth stage, political connections will help the company quickly access to the market. However, in the maturity stage, the political connection may be counter-productive for itself. Apart from that, the political connection may make the firm pay more attention to the social responsibility rather than the development for itself, thus, it will harm the firm performance.

Hypothesis 6a: The life cycle stage has no impact on SOE's political connection.

Hypothesis 6b: The life cycle stage influences the SOE's political connection.



LITERATURE REVIEW

At present, there are many findings that explain the relationship between politics and economics. As a matter of fact, the research on political connection effect is thorough in foreign countries. Over the past few years, Chinese scholar has paid more attention to the political connection effect, hence, there are lots of literature researches on this kind of effect in China.

Evidence of the Relationship between Politics and Economy:

Politics and economy cannot be separated, and they influence each other. In fact, lots of phenomena cannot be explained by traditional economics. Thus, scholars must realize that politics has many influences.

According to Fisman (2001), when President Suharto's health condition is deteriorated, the Indonesian firms which have the political connection with him would appear the negative abnormal return in the stock market. Furthermore, Leuz and Oberholzer-Gee (2006) found that the political connected firms do not like to finance abroad because they can receive cheaper domestic cost fund by using the political connections.

Particularly, the political connection has benefit in the election. This is called "winner election theory". Specifically, during the period of the American election, firms connected to elected governors increase value by 1.36% on average (Do, Lee, & Nguyen, 2015) state that. Claessens et al. (2008) indicated that during the election period of Brazil's federal representative, the firm which has offertory to the candidate will receive a high stock return.

Evidence of the Political Connections in the US:

The US is a multiparty governance country. Thus, the political connection refers to the relationship between the firm and the party, and the result of the relationship is more obvious in the election. As mentioned by Smith (2016), firms in more corrupt areas hold less cash and have greater leverage than firms in less corrupt areas. To examine the link between political uncertainty and firm investment, Jens (2017) used U.S. gubernatorial election as a source of plausibly exogenous variation in uncertainty. Then he finds that investment declines 5% before all elections and this number up to 15% for sub-samples of firms particularly susceptible to political uncertainty. Tahoun (2014) found that firms with a stronger ownership associated with politicians would receive more government contracts and the financial gains from these contracts are economically large. However, when the politicians divest stocks, firms discontinue contributions to the politicians, lose future contracts, and perform poorly. In November 2008, the announcement of Timothy Geithner as nominee for Treasury Secretary produced a cumulative abnormal return for financial firms which have the connection with him. By studying this event, Acemoglu, Johnson, Kermani, Kwak, and Mitton (2016) found that personal connections to top executive officials can matter greatly even in a country with a strong overall institution.

Evidence of the Political Connections in Non-US Market:

Similarly, the political connection gives the identical result as the US. For example, Dinç (2005) provided cross-country, bank-level empirical evidence about political influences on the banks in the emerging market. Moreover, the paper shows that in election years, government-owned banks increase their lending compared with private banks. Furthermore, Leuz and Oberholzer-Gee (2006) used data from Indonesia. According to their finding, firms with strong political connections are less likely to have publicly traded foreign securities. Additionally, the estimates of the performance consequences of foreign financing are severely biased if value-creating

domestic arrangements (e.g. political relationships) are ignored. As stated by Ang, Ding, and Thong (2013), the political connection generally adds little value to a company in Singapore. In industries which are supervised strictly by the government, the political connection appears to be important. As claimed by Bliss and Gul (2012) politically connected firms have a significantly higher extent of leverage, higher likelihood of reporting a loss, higher likelihood of having negative equity, and higher likelihood of being audited by a big audit firm.

Evidence of the Political Connections in Chinese Market:

In China, if the local governments' intervention is more severe, the local government connection will exert a more positive impact on the firm value in Chinese listed firms, Wu et al. (2012) states. In the research for firm performance, the firm is divided into two categories: the SOE and the private firm. For the influence on the private firm, most of the prior studies show that it has the positive impact on firm performance. As pointed out by Li, Meng, Wang, and Zhou (2008), the party membership of private entrepreneurs has a positive effect on their firms' performance when human capital and other relevant variables are controlled. As indicated by some scholars, the senior executives of SOE can utilize their own political connection to seek benefits for themselves or their firm. Meanwhile, the resource allocation would be influenced and the development of SOE will be hindered to a certain extent, hence, the political connection may make the firm underperform. To verify this hypothesis, Wu et al. (2012) found that private firms with the politically connected managers outperform those without such managers, whereas local SOEs with politically connected managers underperform those without such managers. Ding et al. (2014), the firms with the political connection would have better performance because of the privilege derived from finance and tax. Apart from that, a positive effect of a board chair's political connections on firm performance is only documented in SOEs. Qu and Ren (2012) found that the executives of state-owned enterprises who have the political connection can obviously promote the profits of state-owned enterprises. The reason for the totally contrary results may be attributed to the time period selection.

To be specific, Wu et al. (2012) chose the period of 1999- 2007, however Ding et al. (2014) selected the period of 2004-2006, and Qu and Ren (2012) selected the year of 2010, In fact, Chinese government relationship may change from period to period, and the connection may play a different role in the early stage and recent stage. By analyzing the reverse causality between political connection and firm performance, Wong (2010) made some findings. Namely, there is the positive and significant coefficient indicating that political connections do improve the connected firms' efficiency over time in Hong Kong market. However, the hypothesis that the competent firm has a higher likelihood of forming political connections is weak. Gao and Wang (2015), there is a positive correlation between the managers' political connection in the current year and the firm's performance in the next year, meaning that the current political connection can promote enterprises' performance in the next year. Meanwhile, there is a significant positive correlation between the current firm's performance and the next-year managers' political connection, implying that the good performance of firm can help managers get political connections in the later period.

This paper will not only test whether the political connections can influence the performance of the SOE but also verify the actual condition in the Chinese market.

DATA

Overview

This paper analyzes the period of 2013-2016. The reason for selecting this period is that the president Xi Jinping takes office from the beginning of 2013, and the period starting from 2013 can not only eliminate the replacement of president factor but also guarantee that the indexes being considered are not disturbed. According to Gao and Wang (2015) and Wu et al. (2012)'s prior study, the dependent variable used in this paper is from 2014 to 2016. For the political connection variables, this paper uses one-year lag - the period of 2013-2015. In order to concentrate on Chinese domestic stocks, the paper eliminates the B-share and H-share because these shares are supervised by home and abroad jointly. The state-owned company, which is A-share from Shanghai & Shenzhen stock market, is used. Beyond that, the actual controller is governmental agencies or State-owned Assets Supervision Commission. Furthermore, this paper removes the following samples: (1) Firms with the senior executive of unknown political background; (2) Firms with unclear data, (3) Firms that occur major accident such as ST, PT in the period selected; (4) Financial Companies. All in all, this paper collects 1,914 samples of Chinese state-owned enterprises and researches nearly 52,426 members' political background from the senior executives in state-owned firms.

Table 1: *Variables*

No.	Variable	Description	Unit	Source
1.	Perform	Firm's performance measured by ROA, ROE and Tobin's Q	–	CSMAR
2.	ROA	Return on the asset in present year $\text{ROA}=\frac{\text{EBIT}}{\text{Average total assets}}$	%	CSMAR
3.	ROE	Return on common stockholders' equity $\text{ROE}=\frac{\text{Net profit}}{\text{Balance of equity end this year}}$	%	CSMAR

Table 1 - Continued

No.	Variable	Description	Unit	Source
4.	Tobin's Q	Firm value at the end of the fiscal year $\text{Tobin's Q} = \frac{\text{Market value}}{\text{Replacement cost}} = \frac{\text{Toatal shares} * \text{Share price} + \text{Debt book value}}{\text{Total assets}}$	–	CSMAR
5.	CPC	Dummy variable that takes the value one for the Chairman/CEO ever or now works at government agencies	–	CSMAR
6.	SCPC	Dummy variable that takes the value one for the Chairman/CEO ever or currently serves at government organization administration level same with the actual controller's, zero otherwise	_	CSMAR
7.	PC rate	$\frac{\text{Numbers of executives and directors have ever or currently serve at government}}{\text{The size of the executive and directors}}$	%	CSMAR
8.	ln size	The natural logarithm of the total assets	–	CSMAR
9.	Leverage	$\frac{\text{Total liabilities}}{\text{Total assets}}$	%	CSMAR
10.	Top	Ownership percentage held by the controlling shareholder.	%	CSMAR
11.	Growth	Main Business growth rate: $\frac{\text{Revenue this year} - \text{Revenue last year}}{\text{Revenue last year}}$	–	CSMAR
12.	adlevel	The administration level of Chairman/CEO Center.	–	CSMAR
13.	Control	Take the value one if the industry is more controlled by the Chinese government, zero otherwise.	–	CSMAR
14.	Life	Life cycle stage of the state-owned company	–	CSMAR
15.	Year	Dummy variable that takes the value one in its year and zero otherwise	–	–
16.	Ind	Dummy variable that takes the value one in its industry and zero otherwise	–	–

* CSMAR is served by the Chinese corporate financial database.

Dependent Variables

Perform represents the companies' performance, which can be measured by ROA, ROE and Tobin's Q. ROA is the ratio of firm's amount of income and the total assets in a given period of time. It is not only a key index to reflect the effect of the comprehensive assets' utilization but also an important indicator to measure the corporate profitability. This paper uses the EBIT divided by average total assets to calculate. According to Q. Wang (2004), in Chinese accountancy rules, EBIT is equal to total profit plus interests expense. This index reflects the percentage of interest expense and total profit on the average assets, so that it is a good indicator to measure the ROA of state-owned firms. ROE is an indicator that reflects the level of earnings of shareholders' equity. ROE and ROA are all used to measure the financial index of enterprise's operating capability. The biggest and essential distinction is that these two calculate in different financial leverage: ROA reflects the profit rate generated by the fund from both creditors and shareholders, while ROE reflects only the shareholders' investment funds. Compared with ROA & ROE, Tobin's Q means whether the market value of the enterprise is greater than the cost of capital which brings cash flow to the enterprise. If Tobin's Q is greater than 1, it indicates that the wealth created by the enterprise is greater than the input cost, enterprises also create value to the society; otherwise, it is a waste of social resources. As argued by H. C. Wang, Qiu, and Huang (2006) , there is a negative correlation between the ROA and Tobin's Q in Chinese listed company because of the strong speculative, investments easier to overvalue Tobin's Q for the underperformance company. By using these three indexes, the performance would be tested comprehensively, and all the indicators can be directly adopted from the CSMAR.

Independent Variables

CPC is a dummy variable that takes the value one for the Chairman/CEO who ever or now works at governmental agencies. In China, there are two top executives: general managers and chairman of the board. Chairman, as the highest authority in

Chinese firms, is responsible for overall operation, and the general manager is elected by and responsible for the board. According to Chan, Dang, and Yan (2012) as well as Fan et al. (2007), if chairman/CEO is or was a governmental official, it can be regarded as a kind of political connection.

SCPC is a dummy variable, and it denotes whether the enterprise has a strong political connection. If it has, the value one can be taken. According to (Fan et al., 2007), the administration level of a government agency where the chairman/CEO ever or now holds the position is the same as the actual controller's administration level. For example, for the central SOEs, if its general manager or chairman ever or currently works at the central government, then it means that there is the strong political connection. For the Shenzhen City owned SOEs, if its chief executives ever or currently work at the Shenzhen City government, then enterprise has the strong political connection, and SCPC value is 1.

PC rate is the ratio of the numbers of executives who have political connections.

Control Variables

In line with previous studies, two kinds of control variable are considered, financial information and ownership structure.

Financial information includes the leverage of firm, which is measured by debt to asset ratio for the current year (Leverage). For the firm size, it is measured by the natural logarithm of the firm's total assets (ln size). With regard to the firm's growth, it is measured by the main business growth (Growth)

According to Sun and Huang (1999), there is a kind of nonlinear relation between the value of the listed company and the percentage of holding by the

controlling shareholder. Thus, the paper constructs the ownership structure measured by the ownership percentage held by the controlling shareholder (Top)

The admin is also a dummy variable, it classifies 5 class of Chairman/ CEO administration level, from the highest to lowest are: center, province, city, county, and village. According to the 19 CSRC industry categories, this paper employed the 16 dummy variables to measure the industry effect.

Industry Indexes

According to the classification standard of Chinese industry, it has 19 kinds of industries. However, this paper analyzes the impact of the political connection on the firm's performance of 16 industries over the period of 2013-2016. As a matter of fact, state-owned company seldom has the "Health Care & Social Service" and "Resident Service" industry as well as the "Financial" industry which is eliminated. This paper believes that the anomaly to affect each industry differently depends on their degree of being influenced by the political connection. In other words, the performance of industries that are more reliant on the political connections such as "construction" and "energy" is different from the performance of industries which are less affected by the political connection such as "wholesale" and "manufacturing".

Table 2: *Industry Group and Classification*

	No.	Variable	Industry	Include
More controlled by the Chinese government	R	CUL	Cultural	Cultural &Physical cultural &Entertainment
	M	TEC	Technology	Electronic Components Information & Scientific research
	S	IG	Integrated	__
	G	TRAN	Transportation	__
	A	FARM	Farming	Agriculture & Forestry & Animal Husbandry & Fishery
	D	ENE	Energy Product & Supply	Electric power & Gas & Water
	E	CONS	Construction	__

Table 2- Continued

	No.	Variable	Industry	Include
Less controlled by the Chinese government	F	WHO	Wholesale	Wholesale & Retail
	K	REI	Real Estate	—
	N	WE	Water conservancy &Environmental control	—
	I	INF	Information	Information dissemination &Information technology service industry
	L	RENT	Rental Service	Leasehold &Business service
	C	MANI	Manufacturing	—
	H	DA	Dining &Accommodation	—
	B	EXTR	Extractive	Mining
	P	ED	Education	—

Life-cycle Stage

According to Dickinson (2011)'s elaborate explanation for the relationship between cash flow and life-cycle stage, which also combines with Gort and Klepper (1982)'s "five-stage division", it divide the life-cycle into five stages: introduction, growth, maturity, shake-out and decline, and also detailed define the different cash flow to different life-cycle stage.

Table 3: *Life-cycle Stage Classification*

	introduction	growth	maturity	shake-out			decline	
operating cash flow	-	+	+	-	+	+	-	-
investing cash flow	-	-	-	-	+	+	+	+
financing cash flow	+	+	-	-	+	-	+	-

METHODOLOGY

1. Impact of Political Connection Effect on Firm Performance.

At first, this paper analyzes the impact of political connection on SOE's performance. As mentioned in the above paper, there is a reverse causality between political connection and firm performance. Based on the prior study, the paper uses the time lag between the two variables, which is the current political connection result in the SOE's next-year performance. Hence, the preciseness of paper can be ensured. The first regression has no control variables and the model is followed:

Regression 1.1:

$$\mathbf{Perform_{it} = \beta_0 + \beta_1 CPC_{it-1} + \varepsilon_{it}}$$

Then the paper adds the control variables in, the natural logarithm of the total assets, the leverage, the main business growth rate and the biggest shareholders' holding percentage.

Regression 1.2:

$$\mathbf{Perform_{it} = \beta_0 + \beta_1 CPC_{it-1} + \beta_2 \ln size_{it} + \beta_3 Leverage_{it} + \beta_4 Growth_{it} + \beta_5 Top_{it} + \beta_6 Ind_{it} + \beta_7 Year_{it} + \varepsilon_{it}}$$

To test whether the political connection effect has positive relevance with the SOE performance in the Chinese market, this paper constructs the hypothesis like this:

$$\mathbf{H_0: \beta_1 = 0 \text{ vs. } H_1: \beta_1 \neq 0} \qquad \textbf{(H 1.1 \& H 1.2)}$$

The null hypothesis proves that there is no relevance between political connection and firm performance, and the alternative hypothesis verifies that political

connection affects SOEs' performance in the Chinese market. This can be tested as a two-tail t-test. If the null hypothesis is rejected, it can be inferred that the political connection can influence SOE's performance in the Chinese market.

To see whether the same administration level between Chairman/CEO and the actual controller will influence SOE's performance, this paper constructs the model like this.

Firstly, the regression is run out without control variables:

Regression 1.3:

$$Perform_{it} = \beta_0 + \beta_1 SCPC_{it-1} + \varepsilon_{it}$$

Then all the control variables are included:

Regression 1.4:

$$Perform_{it} = \beta_0 + \beta_1 SCPC_{it-1} + \beta_2 \ln size_{it} + \beta_3 Leverage_{it} + \beta_4 Growth_{it} + \beta_5 Top_{it} + \beta_6 Ind_{it} + \beta_7 Year_{it} + \varepsilon_{it}$$

For testing the impact, the paper construct hypothesis like this:

$$H_0: \beta_1 = 0 \text{ vs. } H_1: \beta_1 > 0 \qquad \textbf{(H 1.3 \& H 1.4)}$$

The null hypothesis says that the same location and administration level between Chairman/CEO and the actual controller would not influence the firm's performance, and the alternative hypothesis states that same location and administration level between Chairman/CEO and actual controller make the firm's performance better. This can be tested as a one-tail t-test. If the null hypothesis is rejected, it can be inferred that the political connection intensity has a positive effect on SOE's performance in the Chinese market.

The third independent variable is the political connection rate, and it is measured by the rate of the numbers of executives and directors who have the political connection. To test how the universality of political connection influences

the SOEs' performance, the paper builds a regression. Firstly, the control variables are not taken into account:

Regression 1.5:

$$\mathbf{Perform_{it} = \beta_0 + \beta_1\, PC\ rate_{it-1} + \varepsilon_{it}}$$

Secondly, all the control variables are included in:

Regression 1.6:

$$\mathbf{Perform_{it} = \beta_0 + \beta_1\, PC\ rate_{it-1} + \beta_2\, ln\ size_{it} + \beta_3\, Leverage_{it} + \beta_4\, Growth_{it} + \beta_5\, Top_{it} + \beta_6\, Ind_{it} + \beta_7\, Year_{it} + \varepsilon_{it}}$$

For testing the impact, the paper construct hypothesis like this:

$$\mathbf{H_0: \beta_1 = 0\ vs.\ H_1: \beta_1 \neq 0} \qquad \textbf{(H 1.5 \& H 1.6)}$$

The null hypothesis says that the PC rate of SOE would not influence the firm's performance, while the alternative hypothesis states that PC rate of SOE would influence the firm's performance. This can be tested as a two-tail t-test. If the null hypothesis is rejected, the universality effect of political connection on SOE's performance in the Chinese market can be inferred.

2. Impact of Political Connection Effect on Industry Performance

This paper analyzes the impact of political connection effect on industry based on 16 kinds of industries of SOE in the Chinese market and the regression model is as follows:

Regression 2:

$$\mathbf{Perform_{it} = \beta_0 + \beta_1\, CPC_{it-1} + \beta_2\, Control_{it-1} + \beta_3\, CPC_{it-1} * Control_{it-1} + \beta_4\, ln\ size_{it} + \beta_5\, Leverage_{it} + \beta_6\, Growth_{it} + \beta_7\, Top_{it} + \beta_8\, Ind_{it} + \beta_9\, Year_{it} + \varepsilon_{it}}$$

To test whether the political connection effect is different between the government-regulated industries and free-competition industries, this paper divides the industries into two kinds of group, in which one is more controlled by the government and the other is less controlled by the government. Furthermore, the variable Control is used to describe the industry that is more controlled by the Chinese government.

For the industry which is controlled more by the government, the impact of political connection on the firm performance is β1+ β3. For the industry which is less controlled by the government, the impact is β1. The difference between the two industries is β3. Then, the paper constructs the hypothesis like this:

H_0: $\beta_3 = 0$ vs. H_1: $\beta_3 > 0$ **(H 2)**

The null hypothesis states that the political connection has the no different influence on these two industries' performance, and the alternative hypothesis states that political connection would enhance the performance of industry that is more controlled by government compared with the industry that is less controlled by the Chinese government. This can be tested as a one-sided t-test. If the null hypothesis is rejected, it can be inferred that the political connection can influence the performance of industries that are more controlled by the government.

3. Impact of the administration level of CEO/Chairman on SOE's performance.

There are five different administration levels in China. The higher the administration level, the heavier the firm's social duty and responsibility, thus, it may have more connection with the policy and government. However, for the lower-level firm, it just pays attention to its own development. Hence, based on the analysis, this paper constructs the following regression model:

Regression 3:

$$\mathbf{Perform_{it}} = \beta_0 + \sum_{j=1}^{4} \beta_j \mathbf{adlevel_{jit-1}} + \beta_5 \ln \mathbf{size}_{it} + \beta_6 \mathbf{Leverage_{it}} + \beta_7 \mathbf{Growth_{it}} + \beta_8 \mathbf{Top_{it}} + \beta_9 \mathbf{Ind_{it}} + \beta_{10} \mathbf{Year_{it}} + \varepsilon_{it}$$

To test the impact of political connection on firm performance in administration level, the paper assumes that the village level is the based group. Furthermore, four dummy variables (center, province, city and county) are used to describe the administration level nature. Besides, adlevel represents the Chairman/CEO's administration level of SOE. If the administration level attribute is i, the adleveli =1, otherwise adleveli =0. Thus, the paper constructs the hypothesis like this:

$$\mathbf{H_0: \beta_j = 0 \text{ vs. } H_1: \beta_j \neq 0} \qquad \mathbf{(H\ 3)}$$

The null hypothesis states that the administration level of CEO/Chairman would not influence the firm's performance, and the alternative hypothesis states that the administration level of CEO/Chairman would influence the firm's performance. This can be tested as a two-tail t-test. If the null hypothesis is rejected, then it can be inferred that the administration level can influence SOE's performance. From the regression results, it will be easy to see the political connection and its different intensity in each administration level. Additionally, the result may be the same as the expectation that with the higher administration level, the firm may be more affected by the political connection. The reason is that it needs to take more responsibility. However, for the firm with lower administration level, because the GDP is assessed from the superior government, it has to alleviate their duty and develop more in the economy.

4. Impact of life-cycle stage Effect on Political Connection

The life-cycle stage will influence the firm's political connection. If the age of SOEs is younger, they need a more political connection to enter the market. As a matter of fact, by utilizing the political connection, they can get not only more

monopoly resource but also more good chances. For the maturity firms, the political connection may not that have advantages like young SOEs. Moreover, the political connection may lead them to take more social responsibility, which will thereby harm the SOE's performance.

Regression 4:

$$\textbf{Probit}\ (CPC_{it}) = \beta_0 + \sum_{k=1}^{4} \beta_k\, Life_{kit} + \beta_5\, \ln size_{it} + \beta_6\, Leverage_{it} + \beta_7\, Growth_{it} + \beta_8\, Top_{it} + \beta_9\, ROA_{it} + \beta_{10}\, Ind_{it} + \beta_{11}\, Year_{it} + \varepsilon_{it}$$

To test whether the SOE's life stage will affect firm's political connection, this paper uses the Probit model to test. The CPC is dummy variable. It takes one if the Chairman/CEO ever or now works at governmental agencies; otherwise, it is zero. According to Deng and Cao (2009), the achievement of firms will influence the political connection. This is because when the officers get into a business, they often choose a firm with better performance and Chairman/CEO of firms with good performance is also easier to be selected as the governmental officers. Size is the total assets of firms, and it reveals the firm's scale. Through ROA, people can directly see firm's performance. Additionally, the main business growth can be used to measure the firm's performance. Boubakri, Cosset, and Saffar (2008) if the firm's leverage is higher, it may build the more political connection to get rid of the financial distress. The government can directly influence the firm's activities in the ownership concentration SOE. This paper assumes that the "introduction" stage is the based group. Furthermore, four dummy variables are used to describe the different life stage. If the life cycle is in stage i, the Lifei=1, otherwise the Lifei =0. Hence, this paper constructs the hypothesis like this:

$$\textbf{H}_0: \beta_i = 0 \text{ vs. } \textbf{H}_1: \beta_i \neq 0 \qquad \textbf{(H 4)}$$

The null hypothesis states that the life stage will not affect firm's political connection, and the alternative hypothesis states that life stage will affect firm's political connection. This can be tested as a two-tail t-test. If the null hypothesis is rejected, then it can be inferred that the life stage will affect firm's political connection.

RESULTS

Impact of Political Connection Effect on Firm Performance.

Table 4: *Descriptive Statistics of Variables*

variable	N	mean	sd	min	max
ROA	1911	0.030	0.050	-0.180	0.180
ROE	1911	0.030	0.190	-1.230	0.380
tobinsq	1827	2.060	2.040	0.190	12.740
CPC	1914	0.360	0.480	0	1
Lnsize	1911	22.670	1.360	19.780	27.030
leverage	1911	0.520	0.210	0.100	1
Growth	1911	0.110	0.560	-0.560	3.950
Top	1914	0.390	0.150	0.120	0.760

From the table 4, the leverage mean value equals to 52%, but the average ROE equals to 3%. It shows that the condition of the state-owned company in China generally appears the high liability and low return. Meanwhile, it can reflect that the SOEs bear more policy burden. Nevertheless, the Tobin's Q standard deviation reaches about 204%, and this number is much larger compared with the ROA and ROE. This is also the possible reason why the below test result is extremely different from other two variables. The CPC's mean value equals to 0.36, meaning that the state-owned company generally exists the political connection.

Table 5: *Result of Regression 1.1&1.2*

VARIABLES	(1) ROA	(2) ROA	(3) ROE	(4) ROE	(5) Tobin's Q	(6) Tobin's Q
CPC	0.0062**	0.0038*	0.0245***	0.0169**	-0.179*	0.0475
	(0.011)	(0.0716)	(0.0043)	(0.0294)	(0.0663)	(0.529)
Lnsize		0.011***		0.0351***		-0.825***
		(0)		(0)		(0)
leverage		-0.111***		-0.341***		-1.764***
		(0)		(0)		(0)
Growth		0.0177***		0.0527***		0.232**
		(0)		(0)		(0.0286)
Top		-0.0106		-0.0264		0.0045
		(0.138)		(0.284)		(0.984)
Constant	0.031***	-0.15***	0.0214***	-0.572***	2.124***	21.24***
	(0)	(0)	(0.0003)	(0)	(0)	(0)
Observations	1,911	1,911	1,911	1,911	1,827	1,827
R-squared	0.003	0.233	0.004	0.165	0.002	0.424

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1
For column (1), (3), (5), results are the regression without control variables.
For column (2), (4), (6), results are the regression with control variables.

According to the analysis of the first hypothesis, the paper divides the sample into the one with control variables and the one without control variables, and the dependent variables present in ROA, ROE and Tobin's Q. According to the result in Table 5, in the absence of the control variables, the ROA and ROE coefficient is positive and the firms with the political connection are statistically significantly higher than the firms without political connection by 0.38% and 1.69% at 10% and 5% significant level respectively. That is to say, the political connection can help SOE get more privilege from the government. Nevertheless, for Tobin's Q, the result shows that without the control variables, there is a negative correlation between the political connection and Tobin's Q. However, when the control variables are added on, it has no correlation. Hence, when using Tobin's Q to measure the impact of political connection on performance, this paper finds that there is no significant correlation between the two.

The result is closely in line with the existing literature. Ding et al. (2014) found that the firms with the political connection would have outperformance because of the privilege derived from finance and tax as well as the positive impact of the board chair's political connections in SOEs.

For the control variables, the data also shows that the performance tends to be higher as the assets size becomes larger and the business grows at high speed. However, the higher leverage would result in poorer performance. The largest shareholders' holding has no significant impact on SOE's performance.

Table 6: *Descriptive Statistics of Variables*

variable	N	mean	sd	min	max
ROA	1911	0.03	0.05	-0.18	0.18
ROE	1911	0.03	0.19	-1.23	0.38
tobinsq	1827	2.06	2.04	0.19	12.74
SCPC	1910	0.29	0.45	0	1
Lnsize	1911	22.67	1.36	19.78	27.03
leverage	1911	0.52	0.21	0.10	1
Growth	1911	0.11	0.56	-0.56	3.95
Top	1914	0.39	0.15	0.12	0.76

From the descriptive statistics of variables in Table 6, it can be seen that the SCPC average value equals to 0.29, interpreting that 29% of the state-owned companies have the strong political connection in China. 29% SOEs' CEO/Chairman who ever or now works in the government organization has the same administrative level as the firm's actual controller.

Table 7: *Result of Regression 1.3&1.4*

VARIABLES	(1) ROA	(2) ROA	(3) ROE	(4) ROE	(5) Tobin's Q	(6) Tobin's Q
SCPC	0.0074***	0.0036	0.0305***	0.0184**	-0.138	0.103
p-value	(0.0033)	(0.101)	(0.0003)	(0.0141)	(0.183)	(0.214)
p-value/2	(0.0016)	(0.0505)	(0.0001)	(0.0071)	(0.0915)	(0.107)
Lnsize		0.011***		0.0351***		-0.827***
		(0)		(0)		(0)
leverage		-0.111***		-0.340***		-1.735***
		(0)		(0)		(0)
Growth		0.0177***		0.0527***		0.228**
		(0)		(0)		(0.0312)
Top		-0.0109		-0.0289		0.0416
		(0.131)		(0.245)		(0.846)
Constant	0.0310***	-0.151***	0.0212***	-0.571***	2.092***	21.23***
	(0)	(0)	(0.0002)	(0)	(0)	(0)
Observations	1,907	1,907	1,907	1,907	1,823	1,823
R-squared	0.004	0.233	0.005	0.165	0.001	0.425

Robust pval in parentheses
*** p<0.01, ** p<0.05, * p<0.1
For column (1), (3), (5), results are the regression without control variables.
For column (2), (4), (6), results are the regression with control variables.

As displayed in Table 7, Tobin's Q shows no significant result in the strong political connection. Obviously, the performance for SOEs' ROA test with the strong political connection is statistically significantly higher than that without strong political connection by 0.74% and 0.36% at 1% and 10% significant level (one-sided t-test) in without and with control variables. More obviously, the performance measured by ROE with strong political connection is statistically significantly higher than that without the strong political connection by 3.05% and 1.84% in without and with control variables at 1% significant level (one-sided t-test). From the above analysis, it can be summarized that the same administrative level between CEO/Chairman and the actual controller can make the SOEs' ROE perform better.

Table 8: *Descriptive Statistics of Variables*

variable	N	mean	sd	min	max
ROA	1911	0.0300	0.0500	-0.1800	0.1800
ROE	1911	0.0300	0.1900	-1.2300	0.3800
tobinsq	1827	2.0600	2.0400	0.1900	12.7400
PCrate	1914	0.1700	0.1300	0	0.8300
Lnsize	1911	22.6700	1.3600	19.7800	27.0300
leverage	1911	0.5200	0.2100	0.1000	1
Growth	1911	0.1100	0.5600	-0.5600	3.9500
Top	1914	0.3900	0.1500	0.1200	0.7600

The mean value of the PCrate is around 17% in Table 8, proving that there is not much political connection in Chinese state-owned company.

Table 9: *Result of Regression 1.5&1.6*

VARIABLES	(1) ROA	(2) ROA	(3) ROE	(4) ROE	(5) Tobin's Q	(6) Tobin's Q
PCrate	0.0346***	0.014*	0.0983***	0.0321	-1.216***	0.0225
	(0)	(0.0801)	(0.0015)	(0.267)	(0)	(0.934)
Lnsize		0.0108***		0.0352***		-0.824***
		(0)		(0)		(0)
leverage		-0.110***		-0.340***		-1.766***
		(0)		(0)		(0)
Growth		0.0178***		0.0528***		0.233**
		(0)		(0)		(0.0289)
Top		-0.0106		-0.0276		-0.0012
		(0.135)		(0.264)		(0.995)
Constant	0.0274***	-0.149***	0.0135*	-0.573***	2.266***	21.23***
	(0)	(0)	(0.0831)	(0)	(0)	(0)
Observations	1,911	1,911	1,911	1,911	1,827	1,827
R-squared	0.008	0.233	0.005	0.164	0.006	0.424

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1
For column (1), (3), (5), results are the regression without control variables.
For column (2), (4), (6), results are the regression with control variables.

For the political connection rate on board, the regression results in Table 9 all show that without control variables, there is a significant effect between political connection rate and firm performance. For ROA, the coefficient is 3.46% at 1% significant level, and ROE is also positive coefficient, which is 9.83% at 1% significant level. However, Tobin's Q is totally different, showing that the political connection rate increases 1%, and Tobin's Q decreases 121.6%. Only the ROA shows the significant result at 10% significant level in "with control variables", meaning that the political connection members' proportion increases by 1%, and then the ROA increases by 1.4%. However, for the ROE and Tobin's Q, when the regression adds the control variables, all results are changed. That is to say, before adding control variables, the regression has the problem of missing variables.

Impact of Political Connection Effect on Industry performance

Table 10: *Description of Regression 2.*

IND	ROA	ROE	tobinsq	CPC	Lnsize	leverage	Growth	Top
CUL	0.0450	0.0705	3.403	0.758	22.42	0.377	0.150	0.505
TEC	0.0475	0.2080	1.854	0.750	22.02	0.732	0.927	0.583
IG	0.0275	0.0340	3.302	0.600	22.04	0.471	0.013	0.326
TRAN	0.0563	0.0631	1.621	0.561	23.17	0.428	0.088	0.452
FARM	0.0049	-0.0227	3.002	0.500	21.69	0.432	0.017	0.362
ENE	0.0562	0.0818	1.391	0.486	22.86	0.548	0.141	0.384
CONS	0.0272	0.0709	0.892	0.459	23.92	0.740	0.035	0.440
WHO	0.0414	0.0579	1.713	0.438	22.52	0.566	0.066	0.359
REI	0.0298	0.0531	1.018	0.437	23.42	0.672	0.233	0.403
WE	0.0449	0.0543	2.946	0.421	21.67	0.373	0.059	0.317
INF	0.0351	0.0534	3.685	0.381	22.29	0.436	0.185	0.392
RENT	0.0691	0.1170	2.762	0.364	22.69	0.417	0.045	0.387
MANI	0.0291	0.0112	2.307	0.277	22.44	0.512	0.113	0.375
DA	0.0370	0.0319	2.946	0.167	21.74	0.399	0.177	0.404
EXTR	0.0070	-0.0283	1.210	0.165	23.81	0.518	-0.057	0.530
ED	0.0325	0.0464	4.421	0	21.31	0.486	0.531	0.321

From the Table 10, the paper classifies the industries into two kinds of the group (the group that is more controlled by the Chinese government and the one that is less controlled by the Chinese government) according to the average political connection ranking and the Chinese government monopolistic industries. Obviously, the industry that is more controlled by the government includes the “culture”, “transport”, “farm” and so on, while the industry that is less controlled by the government includes “wholesale”, “manufacture” and so on. They almost accord with the highly regulated industries by the Chinese government. This regression test result is shown in the Table 11-1. However, Xu (2016)’s industry administration monopoly division and Yu and Zhang (2013)’s calculation for the degree of monopoly and government control show that the “Extractive” and “Water Conservancy & Environmental Control” also attribute to the industries which are more controlled by the government. Then, the paper tests it, which can be shown in Table 11-2.

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Table 11-1: *Result of Regression 2.*

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ROA	ROA	ROE	ROE	Tobin's Q	Tobin's Q
CPC	0.0057*	0.0045*	0.0235**	0.0197**	-0.1500	0.0737
	(0.0591)	(0.0836)	(0.0289)	(0.0438)	(0.1910)	(0.4020)
control	0.0161***	0.0132***	0.0453***	0.0358***	-0.2650	-0.0244
	(0)	(0.0002)	(0.0010)	(0.0072)	(0.1380)	(0.8590)
CPCcontrol	-0.0067	-0.0089*	-0.0207	-0.0276*	0.0562	-0.0679
P-value	(0.2090)	(0.0594)	(0.2380)	(0.0969)	(0.8130)	(0.7170)
P-value/2	(0.1045)	(0.0297)	(0.1190)	(0.0485)	(0.4065)	(0.3585)
Lnsize		0.0108***		0.0346***		-0.824***
		(0)		(0)		(0)
leverage		-0.110***		-0.338***		-1.771***
		(0)		(0)		(0)
Growth		0.0179***		0.0532***		0.232**
		(0)		(0)		(0.0289)
Top		-0.0117		-0.0290		0.0201
		(0.101)		(0.243)		(0.927)
Constant	0.0286***	-0.147***	0.0146**	-0.565***	2.164***	21.22***
	(0)	(0)	(0.0291)	(0)	(0)	(0)
Observations	1,911	1,911	1,911	1,911	1,827	1,827
R-squared	0.013	0.239	0.009	0.168	0.004	0.425

Robust pval in parentheses

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

For column (1), (3), (5), results are the regression without control variables.

For column (2), (4), (6), results are the regression with control variables

Table 11-1 shows the result of the political connection impact on the different industries, the column 1, 3, 5 are without control variables, the column 2, 4, and 6 are with control variables. For the ROA measure the performance, the political connection makes the return on assets decrease by 0.44%. However, for the industry that is less controlled by the government, the political connection makes their return on assets increase by 0.45%, so compares to the less controlled by government industries, the more controlled by government industries own the political connection would make the ROA performs worse by 0.89% at 5% significant level (one-sided t-test).

More interestingly, if ROE is used to measure the performance, the result is also the same with ROA. For the industry that is more controlled by the government, the political connection makes ROE decrease by 0.79%. For the industry that is less controlled by the government, the political connection makes the ROE increase by 1.97%. Comparing to the less controlled by government industries, the more controlled by government industries own the political connection would make the ROA performs worse by 2.76% at 5% significant level (one-sided t-test).

However, for Tobin's Q, the test result does not show any significant result.

According to the three measured results, the political connection makes the ROA and ROE of industries which are more controlled by government become worse, while it makes the ROA and ROE of industries which are less controlled by government industries become better. This is contrary to the prior expectation. Nevertheless, because the classification is not precise, the "Extractive" and "Water Conservancy & Environmental Control" industries should be classified into the more controlled group. Apart from that, this paper conducts the further test.

Table 11-2: *Result of Regression 2.*

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ROA	ROA	ROE	ROE	Tobin's Q	Tobin's Q
CPC	0.0045	0.0032	0.0217*	0.0176*	-0.1860	0.0790
	(0.1490)	(0.2300)	(0.0531)	(0.0846)	(0.1210)	(0.3900)
control	0.0046	-0.0005	0.0190	0.0020	-0.436***	-0.0021
	(0.2070)	(0.8850)	(0.1420)	(0.8760)	(0.0026)	(0.9860)
CPCcontrol	0.0032	0.0020	0.0006	-0.0029	0.1940	-0.0882
P-value	(0.5360)	(0.6750)	(0.9720)	(0.8580)	(0.3550)	(0.5940)
P-value/2	(0.2680)	(0.3375)	(0.4860)	(0.4290)	(0.1775)	(0.2970)
Lnsize		0.0110***		0.0351***		-0.824***
		(0)		(0)		(0)
leverage		-0.111***		-0.341***		-1.773***
		(0)		(0)		(0)
Growth		0.0177***		0.0528***		0.232**
		(0)		(0)		(0.0295)
Top		-0.0107		-0.0267		0.0186
		(0.136)		(0.288)		(0.933)
Constant	0.0300***	-0.150***	0.0174**	-0.571***	2.218***	21.22***
	(0)	(0)	(0.0131)	(0)	(0)	(0)
Observations	1,911	1,911	1,911	1,911	1,827	1,827
R-squared	0.006	0.233	0.006	0.165	0.008	0.425

Robust pval in parentheses
*** p<0.01, ** p<0.05, * p<0.1
For column (1), (3), (5), results are the regression without control variables.
For column (2), (4), (6), results are the regression with control variables.

This test removes the “Extractive” and “Water Conservancy & Environmental Control” industries to the “more controlled group” in Table 11-2. The most obvious change is that only the ROE statistically shows the significant result, and the political connection makes the performance better both for the two kinds of industries by 1.76% at 10% significant level. There is no additional significant impact between the two. Hence, the political connection is a significant factor that influences the ROE in government monopolized industries and competitive trade industries.

Impact of the administration level of CEO/Chairman on SOE’s performance.

Table 12: *Description of Regression 3.*

advel	ROA	ROE	tobins q	CPC	Lnsize	leverage	growth	Top
1	0.0458	0.0710	1.885	1	23.07	0.483	0.0885	0.400
2	0.0402	0.0530	1.931	1	23.13	0.493	0.1500	0.409
3	0.0412	0.0529	1.484	1	23.12	0.568	0.0767	0.417
4	0.0335	0.0370	2.214	1	22.37	0.512	0.0800	0.376
5	0.0188	-0.0487	2.154	1	22.37	0.575	0.1170	0.339
Total	0.0379	0.0442	1.889	1	22.83	0.526	0.0935	0.395

From the ROA and ROE, it can be seen that the tendency of the value is almost high to low from administration level 1 to level 5

Table 13-1: *Result of Regression 3.*

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ROA	ROA	ROE	ROE	Tobin's Q	Tobin's Q
center	0.0269**	0.0081	0.1200**	0.0778	-0.2690	-0.1850
	(0.0363)	(0.3980)	(0.0398)	(0.1210)	(0.3570)	(0.4020)
local	0.0190	0.0088	0.0951*	0.0718	-0.2860	-0.2060
	(0.1200)	(0.3170)	(0.0975)	(0.1540)	(0.2150)	(0.2520)
Lnsize		0.0097***		0.0261***		-0.574***
		(0)		(0.0001)		(0)
leverage		-0.126***		-0.273***		-2.882***
		(0)		(0)		(0)
Growth		0.0141***		0.0488***		0.0449
		(0.0007)		(0.0003)		(0.635)
Top		0.0129		0.0331		0.439
		(0.264)		(0.389)		(0.206)
Constant	0.0188	-0.128***	-0.0487	-0.480***	2.154***	16.18***
	(0.117)	(0.0003)	(0.392)	(0.0010)	(0)	(0)
Observations	579	579	579	579	559	559
R-squared	0.013	0.299	0.024	0.178	0.002	0.427

Robust pval in parentheses
*** p<0.01, ** p<0.05, * p<0.1
For column (1), (3), (5), results are the regression without control variables.
For column (2), (4), (6), results are the regression with control variables.

From the Table 13-1, to test the impact of political connection on indices of administration level, the paper adopts the stepwise regression analysis. First of all, it divides the administration level into two groups: center administration and local administration. The administration level below the center all belongs to the local administration. According to the Table 13-1, the significant result only shows in the ROA and ROE without control variables, which are 2.69% and 12% both at 5% significant level. For the local administration level measured by ROE, it shows the significant positive coefficient in without control variables by 9.51% at 10% significant level. However, this result cannot demonstrate anything for the impact on indices of micro administration level. The following paper constructs the test for each administration level.

Table 13-2: *Result of Regression 3.*

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	ROA	ROA	ROE	ROE	Tobin's Q	Tobin's Q
center	0.0269**	0.0079	0.1200**	0.0772	-0.2690	-0.1780
	(0.0367)	(0.4080)	(0.0402)	(0.1240)	(0.3580)	(0.4210)
province	0.0214	0.0021	0.1020*	0.0567	-0.2240	-0.0374
	(0.1060)	(0.8290)	(0.0875)	(0.2710)	(0.4240)	(0.8660)
city	0.0224*	0.0140	0.1020*	0.0802	-0.671***	-0.313*
	(0.0744)	(0.1220)	(0.0829)	(0.1230)	(0.0050)	(0.0816)
county	0.0146	0.0068	0.0856	0.0703	0.0594	-0.176
	(0.245)	(0.455)	(0.138)	(0.167)	(0.824)	(0.393)
Lnsize		0.0096***		0.0263***		-0.577***
		(0)		(0.0003)		(0)
leverage		-0.128***		-0.278***		-2.813***
		(0)		(0)		(0)
Growth		0.0145***		0.0494***		0.0378
		(0.0004)		(0.0002)		(0.690)
Top		0.0117		0.0310		0.469
		(0.314)		(0.419)		(0.177)
Constant	0.0188	-0.124***	-0.0487	-0.480***	2.154***	16.18***
	(0.1170)	(0.0004)	(0.3930)	(0.0020)	(0)	(0)
Observations	579	579	579	579	559	559
R-squared	0.017	0.305	0.025	0.180	0.029	0.429

Robust pval in parentheses
*** p<0.01, ** p<0.05, * p<0.1.
For column (1), (3), (5), results are the regression without control variables.
For column (2), (4), (6), results are the regression with control variables.

The result shows in the Table 13-2 is totally different among three kinds of performance. For ROA, the political connection of the “central administration level” and “city administration level” all show the positive coefficient with ROA in without control variables by 2.69% and 2.24% respectively at 5% and 10% significant level. For ROE, the “central administration level” “provincial administration level” and “city administration level” show the positive coefficient in without control variables by 12%, 10.2%, and 10.2% respectively at 5%, 10% and 10% significant level. However, for Tobin’s Q, the condition is totally different from the above performance. The “city administration level” has a negative coefficient in with and without control variables by 67.1% and 31.3% at 1% and 10% significant level. Thus, for the “city administration level”, the political connection would reduce the Tobin’s Q performance. As mentioned by H. C. Wang et al. (2006), there is a negative correlation between the ROA and Tobin’s Q in Chinese listed company because of strong speculation. This paper finds that the political connection would enhance the ROA. Compared with the “village” level, the “city”-level firm performs better but worse in the stock market, because the higher administrative level, the easier CEO/Chairman can gain benefit from the government.

Impact of life-cycle stage Effect on Political Connection

Table 14: *Description of Regression 4.*

life	ROA	ROE	tobins q	CPC	Lnsize	leverage	Growth	Top
Introduction	0.0094	-0.0142	2.016	0.283	22.71	0.612	0.1680	0.388
Growth	0.0389	0.0504	1.774	0.355	22.89	0.524	0.1600	0.385
Mature	0.0419	0.0451	1.980	0.389	22.81	0.492	0.0721	0.414
Shake-Out	0.0326	0.0296	2.339	0.353	22.30	0.513	0.1020	0.372
Decline	0.0133	-0.0325	2.890	0.343	21.98	0.556	0.0461	0.366
Total	0.0332	0.0302	2.060	0.357	22.67	0.524	0.1100	0.392

From Table 14, it can be observed visually that ROA almost shows the parabolic shape from the introduction period to the decline period, and the mature stage is the highest one. As for ROE, the tendency is also same as ROA. The political connection shows the more obvious relationship in the mature stage, but the lowest relationship in the introduction stage.

Table 15: *Result of Regression 4.*

VARIABLES	CPC(without)	CPC(with)	margins
Growth	0.2030*	0.1700	0.0620
	(0.0526)	(0.1140)	(1.5820)
Mature	0.2940***	0.2780***	0.1010
	(0.0034)	(0.0078)	(2.6780)***
Shake-out	0.1980*	0.2430**	0.0890
	(0.0842)	(0.0401)	(2.0600)**
Decline	0.1720	0.2480*	0.0910
	(0.1970)	(0.0672)	(1.8360)*
ROA		0.9280	0.3390
		(0.1560)	(1.4200)
Ln size		0.1070***	0.0390
		(0)	(4.1420)***
leverage		-0.0331	-0.0120
		(0.8440)	(-0.1960)
Growth		-0.0314	-0.0110
		(0.5760)	(-0.5590)
Top		-0.3510*	-0.1280
		(0.0930)	(-1.6830)*
Constant	-0.5750***	-2.7820***	
	(0)	(0)	
Observations	1,911	1,911	

Pvalue in parentheses CPC column, t-test in the parentheses margins column
*** p<0.01, ** p<0.05, * p<0.1

From the results of regression 4, it can be easy to see the political connection in each life stage. In the “mature” stage, the partial effect of coefficient 0.278 states that compared with the “introduction” stage, the probability of “mature” stage to own the political connection is higher by 10.1% in the significant level of 1%. In the “shake-out” stage and “decline” stage, the partial effect of coefficient 0.243 and 0.248 of them means that the probability for “shake-out” and “decline” stage to own political connection is higher than “introduction” stage by 8.9% and 9.1%,

respectively at the significant level of 5% and10%. Beyond that, the “growth” stage also shows somewhat significant results under larger significant level. Thus, the political connection seems to be vital in each stage, meaning that through political connections, the company would gain more advantages than disadvantages, such as financing convenience, policies support, tax preference, and the operating privilege. Thus, the company all consider having the political connection no matter in which stage.

CONCLUSION

At first, this paper summarizes domestic and overseas research. Then, it combines with Chinese national conditions and adopts the empirical study to explore the impact of political connection on SOEs’ performance in different kinds of dimension.

Wu et al. (2012) found the negative impact of political connection on performance. In this paper, by analyzing the political connection more meticulously, to be specific, it researches three different kinds of indices as the reference of SOE’s performance and selects the period of 2013-2016. Furthermore, the study finds that the ROA and ROE all have positive results and the firms with the political connection are statistically significantly higher than the firms without political connection by 0.38% and 1.69% at 10% and 5% significant level respectively. However, for Tobin’s Q, the results do not show the significant effect of the political connection on firm performance. That is to say, the SOEs which have the political connection can obviously promote its performance. The conjecture of the phenomenon can be explained by three aspects: (1) the SOEs with the political connection can more easily acquire the governmental subsidy, and the political connection can assist the enterprise to reduce operational risk. Beyond that, Pan, Dai, and L (2009) empirically study the impact of political connection on governmental subsidy when the company gets into trouble. Besides, they confirm that the politically connected company would

gain more subsidies from the government. (2) The SOEs with the political connection can gain more tax preference, and the tax policy preference is mainly in the shape of the public document. Notably, apart from some special economic zones, other zones can also enjoy the privilege in some cases, thus, it not only supports a lager rent-seeking space but also entitles the government officials to dominate and decide. (3) For the SOEs with political connection and higher credibility, the suppliers are more willing to establish a cooperative relationship with them. It seems that the consumers prefer to purchase products from companies with the strong political connection and firm performance. Apart from that, the paper finds that the ROA and ROE with strong political connection are higher than those without strong political connection by 0.36% and 1.84% at 10% and 1% significant level. For the universality of political connection test, the results prove that politically connected member's proportion increases 1%, and then the return on assets increases 1.4%, proving that if there are more political connections among the board, the SOEs have better performance.

On the industry dimension, the paper has some finding. According to the original ranking, the group that is more controlled by the government shows the statistically significantly lower return on assets and return on equity with political connections by 0.89% and 2.76%, respectively at 5% significant level. Nevertheless, in order to get the precise result, this paper removes the "Extractive" and "Water Conservancy & Environmental Control" industries to the more controlled group. Then, the difference disappears. Thus, the political connection has no different influence the SOEs' performance between the monopolistic industries and competitive trade industries.

On the dimension of administration level, through researching 5 levels of administration over the period of 2013-2016, this paper found that influence is not statistically significant through the changing of the administration level indices. However, for Tobin's Q, the "city administration level" shows negative coefficient both in "with and without control variables" by 67.1% and 31.3% at 1% and 10% significant level. Thus, for the "city administration level", the political connection would reduce the enterprise's stock market performance.

On the dimension of life-cycle stage, the paper investigates indices of 5 stages (i.e. the introduction, growth, maturity, shake-out and decline) from 2013 to 2016. In each stage, SOEs almost all show the different degree to own the political connection. In the "mature" stage, "shake-out" stage and "decline" stage, the SOEs increase the probability to have the political connection by 10.1%, 8.9% and 9.1% at the significant level of 1%, 5% and 10%. Since the political connection can promote the SOEs to gain the benefits from the government, companies in each stage would consider owning the political connection.

Since President Xi came into power, anti-corruption has always been the social mainstream action. In recent years, the problem of political corruption in China has been improved. Besides, "non-administration" policy will also lead to the violent controversy. This paper believes that it is necessary to put it into effect. The political connection of CEO/Chairman can make the SOEs' performance better. However, this kind of "rent-seeking" behavior, which makes use of the political connection to reap excessive profits, damages the non-SOEs' economic benefit. This special political connection cannot produce the reasonable value in the social resource allocation. The paper considers that this kind of political connection should be forbidden, so as to promote the healthy development of Chinese economy.

Last but not least, the effect of political connection on SOEs' performance is a meaningful topic that deserves in-depth research. Although this paper has done a lot of work, there is still inadequacy. In terms of sample size, due to the limitation of time & the number of SOE, the data is hard to keep pace with the times. If this paper continues to expand the period, the result may be more precise. With regard to the political connection effect, this paper has concluded the positive effect. However, in reality, the political connection has the dual character, which not only brings the privilege of the economy to SOEs but also lets them bear policy burden. As for the dimension, this paper discusses the dimension only from three aspects, but many other dimensions can still be researched.

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APPENDIX

VITA

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