Government Subsidy, Corporate Pay-Gap and Firm's Financial Performance: Evidence from China

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Abstract

We analyze the relation between government subsidization and the corporate pay-gap between executives and employees for a relatively large number of Chinese corporations. Our results show that government subsidy, under managerial control, can be used to increase executives' compensation, and consequently, the corporate pay-gap in China. Our results also show that the effect of government subsidy on the corporate pay-gap is more significant among state-owned enterprises (SOEs) rather than private companies (non-SOEs). Finally, our results suggest that while the total pay-gap between the executives and employees has a positive impact on a firm's financial success, the pay-gap caused by government subsidy negatively affects the firm's economic performance.

Keywords: corporate governance, government subsidy, corporate pay-gap, firm's financial performance

1. Introduction

During the past two decades, two common practices have been observed among Chinese corporations. First, government subsidization has become a widespread instrument of industrial policy and a common source of financing for companies in China (Bu and Yu, 2012). Second, substantial increases of the executives' compensations have led to disproportionate pay-gaps between the executives and the employees, and the issue seems to be rather severe not only in private companies but also in state-owned enterprises (Chen and Li, 2001; Chen et al., 2003).

According to Bu and Yu (2012), the Chinese government grants subsidies to approximately 70% of Chinese corporations in order to promote economic growth. The relation between government subsidization and a firm's economic performance has been investigated in finance literature and most academic studies conclude there is a neutral or a negative relationship (Johnson and Mitton, 2003; Faccio et al., 2003; 2006). Similarly, De Long and Summers (1991) and Bergstrom (2000) argue that subsidization may positively affect the growth, but there is no evidence to support whether it improves the firm's productivity. Thus, government subsidy seems to provide a short-term success for the firm, but ultimately, may result in an inefficient allocation of resources and, consequently, in the long-term economic decline of the company. In China, subsidization can be described as an inefficient policy for two reasons. First, government subsidies are often granted through political connections (Faccio et al. 2006) and politicians may be more interested in maximizing political objectives than economic efficiency (Bergstrom, 2000). Second, it has been argued that Chinese executives may tend to pursue their own interests more than the interests of the employees and, consequently, use the subsidy to increase their own compensation (Lu, 2007). This could result in an abnormal growth of the executives' pay (lower growth of employees' wages) relative to the company's profit and consequently, to a larger pay-gap between executives and employees in Chinese corporations (Wang and Liu, 2008; Fang, 2011).

Finance theory, with regard to the corporate pay-gap, presents a dilemma. On the one hand, when the pay-gap between the executives and employees is based on competition, it results in a tournament effect within the firm and enhances the competitive spirit among the employees.   This could lead to more efficiency and, consequently, to the firm's financial success (Lin et al., 2003; Carpenter and Sanders, 2004; Chen, 2006). On the other hand, when the executive's compensation and the consequent pay-gap are based on managerial power, they could constitute an agency cost for the firm (Bebchuk and Fried, 2004; Grinstein and Hribar, 2004). It has been argued that, in China, the government subsidies being largely under the control of top management, have contributed to substantial increases in the executive compensation and, consequently, to the disproportional pay-gap between executives and employees (Lu, 2008; Bu et al., 2015).

In this paper, we pursue a double objective. First, we examine the effect of government subsidization of Chinese corporations on the pay-gap between the executives and employees. Our first purpose is thus to verify whether Chinese executives use their managerial power and the government subsidies to increase their own compensation. Using a relatively large sample of Chinese corporations, we verify the impact of subsidization on executive compensation and the pay-gap among state-owned and private companies. Second, we examine the effect of the pay-gap caused by subsidization on the firm's financial success. Given the fact that most previous studies have considered the total pay-gap in their analysis, our second purpose is therefore to dissociate the pay-gap caused by government subsidies from the total pay-gap so as to examine the relation of each portion of the pay-gap, separately, with the firm's economic performance.

This paper is organized as follows. Section 2 presents the theoretical framework and research hypotheses. Section 3 and 4 describe, respectively, the data and methodology used in order to test our hypotheses. Section 5 presents our empirical results. Section 6 presents our conclusions.

2. Theoretical Framework and Hypotheses

A body of theory has investigated the relation between government subsidies and a firm's financial performance and several academic studies suggest a negative impact of government aid on a firm's long-term economic success (Roberts, 1991; Fisman, 2001; Faccio *et al*., 2006). Financial theory has also analyzed the relation between the corporate pay-gap and a firm's financial performance.   Most studies also consider the total gap between executives and employees' compensation in their analysis. While several studies suggest a positive relation between the pay-gap and a firm's financial performance (Lin *et al*., 2003; Chen, 2006; Zhou and Zhu, 2010), others argue that the pay-gap between executives and employees could constitute an agency cost for the firm (Fang, 2011; Bu et al.; 2015).

2.1 Government Subsidy, Pay-Gap and Firm's Financial Performance

Faccio *et al*. (2006) analyze the financial success of 450 subsidized firms in 35 countries. Their results suggest that politically connected firms are more likely to receive government subsidies. Hwever, they exhibit significantly lower financial performance. Also, Tzelepis and Skuras (2004) analyze the impact of capital subsidization on several performance indicators such as growth, profitability and efficiency. Their study concludes that subsidization seems to have an impact on a firm's growth but no significant effect on its profitability and efficiency. Further, it has been argued that subsidized corporations seem to experience several financial privileges such as weaker loan requirements and more favourable interest rates (Faccio *et al*., 2003; Johnson and Mitton, 2003). However, capital market participants seem to be reluctant to provide capital to subsidized firms and consequently, they show a significantly lower level of financial success in terms of equity value and ROA (Faccio *et al*., 2006). Furthermore, financial literature suggests that while the establishment of a political connection may lead to more frequent government subsidies and, consequently, a higher financial performance, termination of the connection may result in a decline in the firm's financial success (Roberts, 1990; Fisman, 2001). Therefore, while government subsidies seem to provide short-term financial success to the firm, ultimately, they seem to result in a long-term decline of a firm's financial performance.

Financial theory also provides several explanations for the relation between the corporate pay-gap and a firm's financial success. Theoretically, the pay-gap between executives and employees will create a tournament effect and have a positive impact on a firm's financial performance. Lin *et al*., (2003) and Chen (2006) argue that the pay-gap creates an incentive for employees to work efficiently and, consequently, could result in an improvement in a firm's financial performance. Similarly, Carpenter and Sanders (2004) examine the relation between top management team compensation and its subsequent financial performance. Their results suggest that top management's total compensation is positively correlated with a firm's financial success; however, their results show that the pay-gap between CEOs and top management seems to have a negative effect on a firm's economic performance.

Further, finance theory suggests a possible negative relation between the corporate pay-gap and a firm's financial success. Several agency-based studies suggest that a corporate pay-gap due to managerial power may generate additional agency costs for the firm. For instance, Song and Thakhor (2006) and Adams and Ferreira (2007) argue that executives' control over the information is, to some extent, responsible for the managerial power over several decisions. The asymmetrical information between executives and other stakeholders grants the executives a degree of discretion over several decisions, including their own compensations. This could result in a disproportional pay-gap between executives and employees and consequently an agency cost for the firm (Bu *et al.*, 2015). Consequently, several studies suggest different means of reducing managerial power over the executives' compensation in order to reduce the agency cost and the consequent financial losses for companies. For instance, Garvey (1997) suggests that executive compensation should be tied to shareholder wealth. Similarly, Conyon (1997) suggest the development of "compensation committees" within corporations in order to control the growth of the executive's pay while Hirshleifer and Suh (1992) suggest an "optimal profit-based" compensation system for the firms' executives.

2.2 Government Subsidy and Pay-Gap in China

In China, the compensations of the executives of State-owned enterprises (SOEs) are, to some extent, regulated by SASAC, which stipulates a performance-based compensation for the executives of SOEs. (Note 1) However, SASAC regulations have created some bias in SOEs' evaluation system and consequently in the compensation mechanism. First, the performance measures in SASAC regulations include Net Assets, ROA, ROE, etc. Therefore, executives have certain discretion over their reports to SASAC and consequently a certain control over the information that they make available to the public concerning these variables (Bu *et al.*, 2015). Further, the government subsidies, by regulation, are included in "non-operating income" of SOEs. Consequently, government subsidies result in an artificial increase of the SOEs' Net Assets and thus, an opportunity for the executives to increase their own salaries. Moreover, government subsidies are also included in the performance indicator (Return/Net Assets) in the annual assessment of SOEs, which would create a second opportunity for the executives to justify their performance-based compensation. In other words, the Chinese compensation mechanism of pay-for-performance when combined with government subsidies does not necessarily reduce the agency cost for the SOEs. However, it has created a "disguised" strategy for the executives to increase their remuneration (Healy, 1985).

Concerning private companies (non-SOEs) in China, a government subsidy implies that the company accepts, to some extent, government supervision and meets government requirements concerning social responsibility (Shleifer and Vishny, 1994; 1998; Lin and Li, 2004). It has been argued that such supervision may constitute an incentive for non-SOEs executives to behave in a more rational and responsible manner with regard to government subsidies (Tang and Luo, 2007; Du et al., 2009). However, in reality, managerial power often enables the executives to obtain government subsidies based on not only the nature of the corporation's activities (Bu and Yu, 2012; Kong *et al.,* 2013), but also based on their political connections (Chen, 2003; Faccio *et al.*, 2006; Pan *et al.*, 2009), thus, to some extent, they may use the government subsidy to increase their own compensation.

These arguments and observations lead to the following hypotheses:

H1a: Government subsidies can be used to increase Chinese executives' compensation and, consequently, lead to a relatively larger pay-gap between executives and employees.

H1b: Government subsidies result in a larger pay-gap between executives and employees in Chinese SOEs relative to the Chinese non-SOEs.

Further, we note that there are two types of government subsidy in China: Hard-constraint subsidy (HCS) and Soft-constraint subsidy (SCS). Hard-constraint subsidies are granted under relatively severe conditions and guidelines. They impose several objectives on the company and government requires strict application of a set of rules. It has been argued that hard-constrained subsidies are more productive in terms of employment (Wren and Waterson, 1991; Jenkins *et al.*, 2006) and company efficiency (Girma *et al.*, 2007; Lv and Yu, 2011). Therefore, HCSs being under the strict control of the government will impose certain accountability on the executives and lead them to use the subsidy more efficiently. On the other hand, SCSs, basically at the discretion of the government officials, are often granted through political connections (Faccio *et al.*, 2006; Hu, 2006; Pan *et al.*, 2009). Consequently, in the absence of government supervision, executives have the discretion to use the SCSs to increase their own compensations. These arguments and observations lead to the following hypothesis:

H2: Soft-constraint government subsidies lead to a larger pay-gap between executives and employees relative to hard-constraint subsidies in China.

Further, it has been also suggested that the pay-gap between executives and employees can constitute an incentive for the employees to work efficiently and ultimately improve the firm's financial performance (Lin *et al.,* 2003; Chen, 2006). However, the pay-gap caused by managerial power and the executives' control over government subsidies may not have the same effect (Zhou and Zhu, 2010). This argument is based on the fact that managerial power may discourage the "competitive spirit" of the employees and create an incentive for them to "please" the top management rather than to improve their performance. Moreover, it has been argued that SCSs, being under strict managerial control, may lead to an inefficient allocation of the resources and consequently, to a lower financial performance of the firms. These arguments and observations lead to following hypotheses:

H3a: The pay-gap caused by government subsidy has a negative impact on a firm's financial performance.

H3b: The pay-gap caused by government subsidy has a larger negative impact on SOEs' financial performance relative to non-SOEs.

H3c: The pay-gap caused by soft-constraint subsidies has a larger negative impact on firm's financial performance relative to the pay-gap caused by hard-constraint subsidies.

3. Data

We obtain data such as total and executives compensations from CSMAR database for sampled Chinese companies for the period from 2007 to 2012. (Note 2) Our data consists of 5118 firm-year observations on Chinese listed companies. We also obtain information for all amounts of government subsidies awarded to our sampled companies from CSMAR annual reports for the same period. In order to eliminate the bias caused by extreme values, we eliminate all observations within the top or bottom 1% of the distributions. Further, finance literature suggests several factors that could affect the executives' compensation and, ultimately, the pay-gap between the executives and employees. Therefore, we also consider variables such as firm size (Murphy, 1999; Tosi et al., 2000, Lu et al., 2012), return/ assets, firm's leverage and the number of the executives' shares (Lu et al., 2012). Further, Huang and Xi (2009) and Wu and Wu (2010) argue that the number of shares of the major shareholder could reduce managerial power and consequently, the pay-gap between executives and employees. Finally, we take dummy variables for industry and year as in Fama and French (1997). Table 1 summarizes the descriptions of our variables in this paper:

Table 1. Description of variables

Variables	Description
EXEPAY	Executives' average compensation: Executives' total compensation/ number of the executives.
EMPWAGE	The employees' wage = (the company's total wages-executives' total pay)/(the number of employees- the number of executives).
GAP	Pay gap = Executives' average pay/Employees' average wage.
GAP1	Pay gap excluding the part resulting from the government subsidies.
GAP2	The pay gap resulting from the government subsidies.
SUBSIDY	The government subsidy is the dependent variable taken from the CSMAR database's non-operating income category, and is manually screened according to the disclosed information of the subsidy, specifically, it includes the financial appropriation, fiscal interest subsidy, government incentives, tax discounts and tax relief categories disclosed in the annual reports of listed companies. We use the government subsidies' natural logarithm as the independent variable.
Soft constraint subsidies	We obtain soft-constrained subsidies through manually screening the details of government subsidies in the notes of annual reports from the listed companies. The soft constraint subsidies are government subsidies without specific objectives, mainly including the enterprise development fund, industry development fund and enterprise support funds.
Hard constraint subsidies	The hard constraint subsidies are government subsidies with specific objectives, mainly including import subsidies, natural gas subsidies, natural resources subsidies, industrial development subsidies, Science and technology subsidies, research subsidies, price regulation funds, agricultural subsidies, the special loan reliefs, foreign trade subsidies, foreign cooperation subsidies, the public construction subsidies, and other listed subsidies.
SIZE	The company's size: The natural logarithm of the total assets.
ROA	The return/assets excluding the government subsidies: ROA = (Net income-government subsidies)/total assets.
LEV	Firm's leverage: Total debts/Total assets.
ESHR	The natural logarithm of the number of executives' shares.
MSHR	The ratio of the first major shareholders' proportion of shares.
D_{SOE}	Dummy variable: D_{SOE} =1 for state-owned enterprises and D_{SOE} = 0, for non-state-owned enterprises.
IND	Industry dummy variable. In this paper, according to the China securities regulatory commission's classification criteria made in 2010, we divide the listed companies into 21sectors and set the corresponding dummy variables.
YEAR	Year dummy variable. We set dummy variables corresponding to 2007-2012.

4. Methodology

Once all financial information is gathered, we use a linear regression model (1) to analyze the impact of the government subsidy on three dependent variables, respectively, executives' compensation (*EXEPAY*), employees' compensation (*EMPWAGE*) and pay-gap between executives and employees (*GAP*): (Note 3)

$$EXEPAY = \alpha + \beta_1 SUBSIDY + \beta_2 CONTROL + e \qquad (1.a)$$

$$EMPWAGE = \alpha + \beta_1 SUBSIDY + \beta_2 CONTROL + e \qquad (1.b)$$

$$GAP = \alpha + \beta_1 SUBSIDY + \beta_2 CONTROL + e \qquad (1.c)$$

where *EXEPAY* and *EMPWAGE* represent, respectively, the natural logarithms of the average compensation of the executives and the employees, *GAP* is the difference between executives' and employees' average compensation (logarithm of *EXEPAY/EMPWAGE*). *SUBSIDY* denotes the logarithm of the total government subsidy paid to our sampled companies. Our control variables consist of $SIZE_t$ (the natural logarithm of the total assets), ROA_t (return/assets at the beginning of the period), LEV_t (company's financial leverage, represented by total debt/total

assets), *ESHR_t* (the natural logarithm of executives' shares) and *MSHR_t* (the natural logarithm of the major shareholder's shares). Finally, we use dummy variables for industry and year as in Fama and French (1997).

Further, we verify the impact of the pay-gap due to the effect of government subsidies on firms' financial success. Thus, we run the regression models (2):

$$ROA_{t+1} = \alpha + v_1.GAP1_t + v_2.GAP2_t + v_3.CONTROL + \delta \qquad (2)$$

where ROA_{t+1} denotes return/assets at the end of the period, *GAP1* is the pay-gap excluding the portion related to the government subsidies (the residual values in regression 1), *GAP2* denotes the pay-gap caused by government subsidies (the estimated value in regression 1). The control variables in this regression model are the same as in the previous model.

Finally, we subdivide our sample based on the level of government subsidy and we verify the robustness of our results and we perform the regression model (3):

$$ROA_{t+1} = \alpha + v_1.GAP_t + v_2.D_{HL,t} + v_3.GAP_t.D_{HL,t} + v_4.CONTROL + \delta \qquad (3)$$

where ROA_{t+1}, GAP_t, and control variables are the same as in previous regressions. $D_{HL,t}$ is a dummy variable that takes the value 1 for «high-subsidy» and 0 for «low-subsidy» companies and $GAP_t.D_{HL,t}$ is the product of *GAP* and D_{HL} that captures the combined effects of pay-gap and the level of government subsidy on a firm's financial success.

To summarize, we run our three regression models through the following steps:

1. We perform the regression model (1) on our full-sample companies in order to verify the impact of the government subsidy on three dependent variables, respectively, the executives' pay (*EXEPAY)*, the employees' wage (*EMPWAGE*) and the pay-gap between executives and employees (*GAP*).

2. Further, we divide our sample into state-owned (SOEs) and non-state-owned (non-SOEs) enterprises and we run the regression model (1) on our subsamples in order to verify the impact of the government subsidy on the three dependent variables in each category of firm and based on the nature of property.

3. We re-run the regression model (1) subdividing our sample into companies receiving either soft-constraint (SCSs) or hard-constraint (HCSs) subsidies. This enables us to verify the impact of each type of government subsidy on the pay-gap between the executives and employees.

4. We decompose the pay-gap into a pay-gap due to a government subsidy (*GAP2*) and then into a pay-gap excluding the portion due to a government subsidy (*GAP1*). We then perform the regression model (2) on our full sample and also on all our subsamples in order to verify the impact of the two types of pay-gap on a firm's subsequent financial success (ROA_{t+1}). Further, we verify the robustness of our results by also performing the regression model (2) with ROE_{t+1} as the dependent variable.

5. Based on the annual level of subsidy received by the companies, we subdivide, respectively, our full-sample firms and each of the sub-samples (SOEs, non-SOEs, HCSs and SCSs) into three groups (High-subsidy, Average-subsidy and Low-subsidy). Excluding the average-subsidy companies, we construct new subsamples by regrouping the high-subsidy and low-subsidy companies. Then, we perform the regression model (3) in order to verify the robustness of our results.

5. Results

5.1 The Impact of Government Subsidies on Pay-Gap

Table 2 summarizes the descriptive statistics for our sampled firms for the 2007-2012 period. The table shows that executives' pay was, on average, 9.40 times that of the employees' with a standard deviation of 9.34 and a maximum of 176.80. The average pay-gap caused by government subsidies is 2.92 and the average gap excluding government subsidies is 8.52. Moreover, the average executive's compensation and that of the average employee compensations were respectively 50.59 thousands and 68.5 thousands RMB. Overall, our results suggest that there is a relatively large pay-gap between executives and employees in Chinese listed companies.

Table 2. Descriptive statistics

EXEPAY and *EMPWAGE* represent, respectively, the average compensation of the executives and employees. *GAP* denotes the pay-gap between executives and employees estimated by the ratio *EXEPAY/EMPWAGE. SUBSIDY* represents the government subsidy.

For our control variables, *ROA* and *SIZE* denote, respectively, a firm's return/assets and size. *ESHR* and *MSHR* represent, respectively, the executives and the major shareholder's shares. *LEV* denotes firm's leverage, total debt/assets.

Main Variables	N	Min	Max	Median	Mean	SD
EXEPAY	5118	7.31	295.0	38.81	50.59	43.03
EMPWAGE	5118	1.49	33.47	5.12	6.85	5.51
GAP	5118	1.01	176.8	7.02	9.40	9.34
SUBSIDY	5118	6.91	19.58	15.60	15.54	1.73
Control Variables						
ROA	5118	-17.81	20.85	3.63	3.78	5.51
SIZE	5118	18.64	28.24	21.46	21.65	1.21
ESHR	5118	0.00	18.51	0.00	4.67	6.77
MSHR	5118	0.04	84.00	5.00	13.03	15.70
LEV	5118	4.80	92.22	48.15	46.87	20.33

Further, we subdivide our sample into SOEs and non-SOEs in order to compare the difference of pay-gaps based on the nature of property. Our sample includes 2941 SOEs and 2177 non-SOEs. Table 3 summarizes our results for state-owned and non-state-owned enterprises. Our results show that the executives earned, on average, 10.95 times higher compensation than the employees in non-SOEs while the gap was 8.26 times for SOEs. The *t*-statistics reveals that the difference is significant at 1%. The average compensation for the executives was 48.12 thousand RMBs in non-SOEs while it was 50.95 thousand RMBs in SOEs. The *t*-statistics show that the difference is significant at 5%. The results also show that average employee compensation was 5.67 thousand RMBs for non-SOEs, 7.73 thousand RMBs in SOEs and the *t*-statistics show that the difference is significant at 1%. Overall, our results show that, compared to non-SOEs, state-owned enterprises seem to be more preoccupied by their social objectives such as employees' welfare. However, they seem to have relatively less consideration for the firm's economic efficiency.

Table 3. The test of difference

EXEPAY and *EMPWAGE* denote, respectively, the executives' and employees average compensation. *GAP* represents the total pay-gap between executives and employees. *SUBSIDY* denotes the government subsidy received by the firm.

	Non-SOEs		SOEs		
Variables	N	Amount	N	Amount	t-statistics
EXEPAY	2177	48.12	2941	50.95	-3.68***
EMPWAGE	2177	5.67	2941	7.73	-13.42***
GAP	2177	10.95	2941	8.26	11.22***
SUBSIDY	2177	15.35	2941	15.68	-6.67***

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

Table 4 presents the coefficients of correlation between our variables. The results show that correlations are relatively weak and generally significant. The table also shows that the variable *SUBSIDY* is positively correlated with the pay-gap. The coefficients of correlation with *GAP, GAP1* are respectively 0.10, 0.21. However, the correlation between *SUBSIDY* and *GAP2* is relatively strong (0.90). The *t*-statistics reveal that the correlations are statistically significant at 1%. Further, we can assert that the coefficients of correlation between *ROA* and *GAP* and also between *ROA* and *GAP1* are positive (respectively 0.15 and 0.44) and significant at the 1% level. However, the correlation between *ROA* and *GAP2* is negative (-0.02) and significant at the 10% level. Overall, our results suggest a positive correlation between financial performance and the pay-gap but a negative correlation between financial performance and the pay-gap due to the government subsidies.

Table 4. Coefficients of correlation

GAP denotes the total pay-gap between executives and employees. *GAP1 and GAP2* represent, respectively, the pay-gap unrelated to government subsidy and the pay-gap due to the government subsidy. *EXEPAY* and *EMPWAGE* represent, respectively, the average compensation of the executives and employees. *SUBSIDY* denotes the government subsidy received by the firm. *SIZE, ROA* and *LEV* represent, respectively, firm's size, return/assets and firm's debt ratio.

Variable	GAP	GAP1	GAP2	EXEPAY	EMPWAGE	SUBSIDY	SIZE	LEV	ROA
GAP	1								
GAP1	0.31***	1							
GAP2	0.10***	0.22***	1						
EXEPAY	0.61***	0.37***	0.22***	1					
EMPWAGE	-0.26***	0.05***	0.14***	0.35***	1				
SUBSIDY	0.10***	0.22***	0.90***	0.22***	0.10***	1			
SIZE	0.16***	0.48***	0.45***	0.44***	0.34***	0.45***	1		
LEV	0.01	0.02**	0.12***	0.07***	0.10***	0.12***	0.41***	1	
ROA	0.15***	0.44***	-0.02*	0.25***	0.08***	0.002	0.06***	-0.39***	1

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

Table 5 presents the results of the regression model (1) on our full-sample firms. First, we note that the factor loading on *SUBSIDY* is positive and statistically significant for *EXEPAY* and *GAP*. The coefficients for *EXEPAY* and *GAP* are respectively 0.19 and 0.16 and *t*-statistics reveal that the results are significant at 5% and 1% respectively. Overall, our results suggest that an increase in the level of government subsidies leads to an increase in the executives' compensation and consequently to an increase of the pay gap between executives and employees.

Moreover, we make a first attempt to capture the impact of the nature of property on the relation between government subsidies and the pay-gap. To do this, we use a dummy variable for SOEs in this regression (D_{SOE}), which takes the value 1 for SOEs and zero for non-SOEs. Table 5 shows a positive relation between government subsidies and employees' compensation in SOEs. The coefficient of the D_{SOE} dummy variable is 1.22 and *t*-statistics reveal that the result is significant at 1%. Further, we note that coefficients for *SIZE* and *ROA* are mainly positive and significant. The coefficients are 13.03 for *SIZE* and 1.52 for *ROA* and *t*-statistics reveal that the results are significant at 1%. Our results, therefore, suggest a positive relation between firm size and the pay-gap and also between a firm's financial success and the pay-gap. Furthermore, we note a positive relation between the executives' shares and the executives' pay and between the executives' shares and the pay-gap. The coefficients of *ESHAR* are respectively 0.58 for *EXEPAY* and 0.03 for the *GAP*; *t*-statistics reveal that both results are significant at the 1% level. This result could indicate that the number of executives' shares may have a positive impact on managerial power and consequently on the executives' control over their own compensation, leading to a relatively higher pay-gap between executives and employees. Moreover, our results also show a negative impact of the major shareholder's number of shares and the pay-gap. The coefficient of *MSHR* for *GAP* is -0.012 and according to the *t*-statistics, the result is significant at 10%. This result could confirm the findings of Huang and Xi (2009) and Wu and Wu (2010) who argued that the existence of a major shareholder could reduce the managerial power and consequently, lead to a lower pay-gap between the executives and employees. Finally, factor loading on *LEV* reveals a positive relation between a firm's financial leverage and executives' pay. The coefficient is 0.04 and according to *t*-statistics, the result is significant at 5%.

Table 5. The results of the regression model (1) on full-sample firms.

SUBSIDY denotes the government subsidy received by the firm. D_{SOE} represents a dummy variable that takes the value 1 for SOEs and 0 for non-SOEs. *SIZE, ROA* and *LEV* represent, respectively, firm's size, return/assets and firm's debt ratio. *ESHR* and *MSHR* denote, respectively, the number of shares of the executives and the major shareholder. *T*-statistics are in parenthesis. The regressions use Newey-West (1987) heteroskedasticity and autocorrelation consistent standard errors to calculate the significance levels for all coefficients.

Variable	GAP	EXEPAY	EMPWAGE
SUBSIDY	0.19**	1.58***	0.02
	(2.59)	(3.43)	(1.49)
D_{SOE}	-3.24***	-5.04**	1.12***
	(-5.00)	(-2.57)	(4.13)
SIZE	1.72***	13.03***	0.91***
	(4.46)	(11.78)	(6.02)
ROA	0.19***	1.52***	0.07***
	(6.64)	(9.97)	(3.22)
LEV	0.01	0.04**	-0.02
	(1.37)	(-2.56)	(-1.04)
ESHR	0.03***	0.58***	-0.02
	(2.96)	(3.51)	(-1.54)
MSHR	-0.01*	0.05*	0.02***
	(-1.96)	(1.83)	(3.38)
Alpha	-28.19***	-253.23***	-15.44***
	(-3.38)	(-10.85)	(-5.61)
IND /YEAR	Control		
N	5118	5118	5118
Adjusted R^2	0.10	0.34	0.24

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

Further, we subdivide our sample into State-owned and non-State-owned enterprises in order to compare the impact of government subsidies on the pay-gap based on the firms' nature of property. Table 6 presents the results for both categories of firms. First, we notice that the coefficients of *SUBSIDY* for *EXEPAY* are 1.79 for SOEs and 1.31 for non-SOEs. Further, we notice that the results are significant respectively at the 1% and 10% level. Second, we notice a positive and significant coefficient of *SUBSIDY* on *GAP* (0.23 and significant at 5%) for SOEs and no significant impact in non-SOEs. Overall, our results suggest that a government subsidy has a positive and relatively larger impact on the executives' compensation and consequently on the pay-gap in state-owned enterprises. Finally, our results suggest a positive impact of firm size and financial success on the pay-gap between executives and employees for both types of firms.

Table 6. The results of regression model (1) on SOE and non-SOE sub-samples.

SUBSIDY denotes the government subsidy received by the firm. *SIZE, ROA* and *LEV* represent, respectively, firm's size, return/assets and firm's debt ratio. *ESHR* and *MSHR* denote respectively the number of shares of the executives and the major shareholder. *T*-statistics are in parenthesis. The regressions use Newey-West (1987) heteroskedasticity and autocorrelation consistent standard errors to calculate the significance levels for all coefficients.

Variables	State-owned enterprise			Non-state-owned enterprise		
	GAP	EXEPAY	EMPWAGE	GAP	EXEPAY	EMPWAGE
SUBSIDY	0.23**	1.79***	0.14	0.10	1.31*	0.12
	(2.12)	(3.06)	(1.48)	(0.45)	(1.71)	(1.16)
SIZE	0.87***	11.28***	1.00***	3.81***	17.73***	0.70***
	(4.53)	(10.37)	(5.39)	(3.42)	(7.29)	(2.78)
ROA	0.14***	1.46***	0.08***	0.20***	1.47***	0.05**
	(4.63)	(7.41)	(2.65)	(4.19)	(6.09)	(2.17)
LEV	-0.00	-0.10*	-0.03***	0.00	-0.02	-0.00
	(-0.15)	(-1.86)	(-2.75)	(0.27)	(-0.33)	(-0.08)
ESHR	0.14***	0.36*	-0.05	-0.01	-0.10	-0.01
	(3.08)	(1.72)	(-1.35)	(-0.35)	(-0.66)	(-0.65)
MSHR	-0.01	0.04	0.02***	-0.01	0.09	0.02*
	(-1.32)	(0.81)	(2.91)	(-0.37)	(0.93)	(1.71)
Alpha	-12.27***	-211.40***	-15.10***	-72.15***	-362.87***	-12.64***
	(-3.04)	(-8.85)	(-4.42)	(-3.00)	(-7.19)	(-2.65)
IND /YEAR	Control			Control		
N	2941	2941	2941	2177	2177	2177
Adjusted R^2	0.09	0.38	0.22	0.13	0.32	0.24

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

Further, we subdivide our sample into hard-constrained (HCS) and soft-constrained (SCS) subsidies. We obtain 4614 SCSs and 1381 HCSs. Table 7 presents the respective impact of each type of government subsidy on the pay-gap. Our results show that soft-constrained subsidies seem to have a relatively larger impact on executives' pay and consequently, on the pay-gap between executives and employees. The coefficients for *EXEPAY* and *GAP* are respectively 0.26 (significant at 5%) and 1.89 (significant at 1%). Moreover, our results indicate a positive impact of hard-constrained subsidies on executives' pay and on the pay-gap. According to *t*-statistics, however, the results are not statistically significant. Overall, our results suggest that while hard-constrained subsidies seem to have no significant impact on executives' compensation and the pay-gap, soft-constrained subsidies seem to increase managerial power, leading to an increase of executives' compensation and consequently to a larger pay-gap between the executives and employees.

Table 7. Results of regression model (1) on soft-constraint and hard-constraint subsidy sub-sampled firms.

SUBSIDY denotes the government subsidy received by the firm. D_{SOE} represents a dummy variable that takes the value 1 for SOEs and 0 for non-SOEs. *SIZE, ROA* and *LEV* represent respectively firm's size, return/assets and firm's debt ratio. *ESHR* and *MSHR* denote, respectively, the number of shares of the executives and the major shareholder. *T*-statistics are in parenthesis. The regressions use Newey-West (1987) heteroskedasticity and autocorrelation consistent standard errors to calculate the significance levels for all coefficients.

Variables	Soft-constraint subsidies			Hard-constraint subsidies		
	GAP	EXEPAY	EMPWAGE	GAP	EXEPAY	EMPWAGE
SUBSIDY	0.26**	1.89***	0.10	0.021	0.33	0.10
	(2.51)	(4.39)	(1.47)	(0.17)	(0.91)	(0.46)
D_{SOE}	-3.41***	-5.40***	1.10***	-2.47***	-2.90	1.67***
	(-5.12)	(-2.69)	(3.88)	(-3.60)	(-1.14)	(4.48)
SIZE	1.76***	13.10***	0.93***	1.18***	12.59***	1.08***
	(4.30)	(11.53)	(6.01)	(4.40)	(8.22)	(3.42)
ROA	0.18***	1.54***	0.07***	0.16***	1.45***	0.07
	(6.16)	(10.21)	(3.47)	(4.04)	(3.79)	(1.02)
LEV	0.01	-0.05	-0.02**	0.02*	-0.03	-0.04***
	(1.11)	(-1.19)	(-2.39)	(1.66)	(-0.32)	(-3.10)
ESHR	0.03	0.09	-0.03	0.06	0.16	-0.04
	(0.94)	(0.71)	(-1.48)	(1.27)	(0.50)	(-0.70)
MSHR	-0.01	0.05	0.02***	-0.03*	0.03	0.03*
	(-0.90)	(0.99)	(3.24)	(-1.88)	(0.30)	(1.86)
Alpha	-29.52***	-255.90***	-15.28***	-16.00***	-225.70***	-11.57*
	(-3.27)	(-10.40)	(-5.24)	(-2.97)	(-6.89)	(-1.86)
IND /YEAR	Control			Control		
N	4614	4614	4614	1381	1381	1381
Adjusted R^2	0.11	0.34	0.22	0.09	0.34	0.30

*　　Significant at the 10 percent level.

**　　Significant at the 5 percent level.

*** Significant at the 1 percent level.

5.2 The Impact of the Pay-Gap on Firm's Financial Success

In this paper, we also examine the impact of the pay-gap between executives and employees on a firm's financial success. Therefore, we run the regression model (2) in order to examine the respective impacts of *GAP1* (pay-gap excluding the portion caused by government subsidy) and *GAP2* (pay-gap due to the government subsidy) on two financial success indicators, ROA_{t+1} and ROE_{t+1} for our full-sample companies as well as for SOEs and non-SOEs.

Table 8 presents our results from regression (2) with ROA_{t+1} as the dependent variable. First, we notice a positive impact of *GAP1* on ROA_{t+1} for our full-sample companies as well as for SOEs and non-SOEs. The coefficients are, respectively, 1.44 (significant at 1%), 2.52 (significant at 5%) and 0.73 (significant at 10%). Further, our results also suggest a negative and significant impact of *GAP2* on ROA_{t+1} for our full-sample firms and SOEs. The corresponding coefficients are -1.08 (significant at 5%) for our full-sample firms and -2.53 (significant at 5%) for SOEs. Overall, our results suggest a positive relation between the pay-gap (excluding the portion caused by government subsidy) and a firm's financial success and a negative relation between the pay-gap (the portion caused by government subsidy) and firm's financial success.

Table 8. Results of regression model (2) with ROA_{t+1} as dependent variable.

GAP1 and GAP2 represent, respectively, the pay-gap unrelated to government subsidy and the pay-gap due to the government subsidy. *SUBSIDY* denotes the government subsidy received by the firm. D_{SOE} represents a dummy variable that takes the value 1 for SOEs and 0 for non-SOEs. *SIZE, ROA* and *LEV* represent, respectively, firm size, return/assets and firm's debt ratio. *ESHR* and *MSHR* denote respectively the number of shares of the executives and the major shareholder. *T*-statistics are in parenthesis. The regressions use Newey-West (1987) heteroskedasticity and autocorrelation consistent standard errors to calculate the significance levels for all coefficients.

Variables	Full-sample	SOE	Non-SOE	SCS	HCS
GAP1	1.44***	2.52**	0.73*	1.40***	1.56*
	(3.00)	(2.43)	(1.91)	(2.65)	(1.76)
GAP2	-1.08**	-2.53**	1.36	-1.26**	0.17
	(-2.05)	(-2.39)	(1.50)	(-2.31)	(0.51)
D_{SOE}	3.83**			3.94**	5.47
	(2.48)			(2.20)	(1.53)
ROA	0.29***	0.20	0.41***	0.30***	0.17
	(3.27)	(1.34)	(3.52)	(3.11)	(0.69)
SIZE	-2.10***	-1.85**	-2.44	-2.09**	-2.65
	(-2.59)	(-2.05)	(-1.17)	(-2.29)	(-1.57)
LEV	-0.06***	-0.04***	-0.04***	-0.05***	-0.09***
	(-7.40)	(-5.56)	(-4.87)	(-7.04)	(-2.64)
ESHR	-0.03*	-0.32**	0.02*	-0.02	-0.14*
	(-1.76)	(-2.27)	(1.68)	(-1.46)	(-1.71)
MSHR	0.02***	0.03**	0.02**	0.02***	0.07
	(3.32)	(2.28)	(1.99)	(3.03)	(1.60)
Alpha	33.75**	24.70**	44.65**	34.99**	36.67*
	(2.55)	(1.97)	(1.69)	(2.28)	(1.69)
IND/YEAR	Control				
N	5115	2938	2177	4611	1381
Adjusted R^2	0.40	0.39	0.38	0.41	0.40

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

Table 9 presents the results of the regression (2) with ROE_{t+1} as the dependent variable. First, we notice that *GAP1* has a positive impact on ROE_{t+1} for full-sample companies as well as for SOEs and non-SOEs. The coefficients of the regression are 4.47 (significant at 5%) for full-sample companies, 8.65 (significant at 5%) for SOEs and 3.13 (significant at 10%) for non-SOEs. Second, we note a negative impact of *GAP2* on ROE_{t+1} for our full-sample companies as well as for SOEs. The coefficients of regression are respectively   -4.40 and -9.44. According to *t*-statistics both results are significant at 5%. Overall, these results are similar to the previous results suggesting that the pay-gap (excluding the portion caused by government subsidy) affects positively the firm's economic performance while the pay-gap due to government subsidy seems to have a negative impact on a firm's financial success.

Table 9. Results of regression model (2) with ROE_{t+1} as the dependent variable.

GAP1 and GAP2 represent, respectively, the pay-gap unrelated to government subsidy and the pay-gap due to the government subsidy. *SUBSIDY* denotes the government subsidy received by the firm. D_{SOE} represents a dummy variable that takes the value 1 for SOEs and 0 for non-SOEs. *SIZE, ROA* and *LEV* represent respectively firm's size, return/assets and firm's debt ratio. *ESHR* and *MSHR* denote, respectively, the number of shares of the executives and the major shareholder. *T*-statistics are in parenthesis. The regressions use Newey-West (1987) heteroskedasticity and autocorrelation consistent standard errors to calculate the significance levels for all coefficients.

Variable	Total sample	SOE	Non-SOE	SCS	HCS
GAP1	4.47**	8.65**	3.13*	3.29**	4.20*
	(2.50)	(2.07)	(1.72)	(2.19)	(1.59)
GAP2	-4.40**	-9.44**	0.85	-3.48**	2.31
	(-2.28)	(-2.27)	(0.31)	(-2.22)	(0.34)
D_{SOE}	12.11**			8.71*	12.97
	(2.05)			(1.68)	(0.93)
ROA	0.13	0.05	0.13	0.22**	0.09
	(1.16)	(0.27)	(0.93)	(2.15)	(0.30)
SIZE	-6.52**	-6.45*	-10.81	-4.56*	-6.45
	(-2.12)	(-1.71)	(-1.58)	(-1.73)	(-0.98)
LEV	-0.05***	0.04	-0.01	-0.04***	-0.10**
	(-4.03)	(0.78)	(-0.23)	(-3.27)	(-1.96)
ESHR	-0.13**	-1.20**	0.06*	-0.09*	-0.34
	(-2.15)	(-2.04)	(1.72)	(-1.82)	(-1.03)
MSHR	0.06**	0.10**	0.05*	0.05**	0.16
	(2.56)	(1.97)	(1.72)	(2.25)	(1.09)
Alpha	100.90**	79.71	197.35	72.55*	77.69*
	(2.05)	(1.58)	(1.54)	(1.68)	(1.67)
IND/YEAR	Control				
N	5115	2938	2177	4611	1381
Adjusted R^2	0.40	0.39	0.38	0.41	0.40

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

Finally, we attempt to analyze the combined effects of the pay-gap and government subsidy on a firm's financial success. Thus, we subdivide our full-sample and our subsamples (SOEs, non-SOEs, HCSs, SCSs) based on the level of subsidies received by the firms into three subsamples (high-subsidy, average-subsidy and low-subsidy). We exclude the average-subsidy firms and we construct a new subsample with high and low subsidy firms. Therefore, we use a dummy variable D_{HL} that takes the value 1 for high-subsidy and 0 for low-subsidy firms. Further, we use the product of D_{HL} and *GAP* in order to construct an independent variable $D_{HL}.GAP$ and we run the regression model (3) on our full-sample as well as on our subsamples in order to analyze the robustness of our results.

Table 10 reports the results of regression model (3). First, we notice that factor loading on *GAP* is positive and significant for the full sample and also for all subsamples. The coefficient for the full sample is 0.04 and according to *t*-statistics, the result is significant at the 5% level. Further, we notice that the coefficients of *GAP* for SOEs and non-SOEs are respectively 0.05 and 0.03; t-statistics reveal that the results are significant at the 5% level. Overall, our results suggest that that a pay-gap between executives and employees has a positive impact on a firm's financial success. Second, we note that factor loading on $GAP.D_{HL}$ is mainly negative and significant. Our results show a

negative coefficient for the full sample (-0.02, significant at the 5% level), for SOEs (-0.04 significant at the 5% level) and for SCSs (-0.02, significant at the 5% level). Our results also suggest a positive relation between $GAP.D_{HL}$ and ROA_{t+1} in non-SOEs and HCSs. According to t-statistics, however, the results are not statistically significant. Overall, our results suggest that while the pay-gap between executives and employees seems to have a positive impact on a firm's financial success, the combination of pay-gap and government subsidy seems to cause a decline in a firm's financial performance.

Table 10. Results of regression model (3) with ROA_{t+1} as the dependent variable.

GAP represents the total pay-gap between executives and employees. D_{HL} denotes a dummy variable that takes the value 1 for high-subsidy and 0 for low-subsidy firms. D_{SOE} represents a dummy variable that takes the value 1 for SOEs and 0 for non-SOEs. $SIZE$, ROA and LEV represent, respectively, firm's size, return/assets and firm's debt ratio. $ESHR$ and $MSHR$ denote respectively the number of shares of the executives and the major shareholder. T-statistics are in parenthesis. The regressions use Newey-West (1987) heteroskedasticity and autocorrelation consistent standard errors to calculate the significance levels for all coefficients.

Variables	Full sample	SOE	Non-SOE	SCS	HCS
GAP	0.04**	0.05**	0.03**	0.02*	0.01*
	(2.17)	(2.47)	(2.14)	(1.89)	(1.71)
D_{HL}	0.30**	0.55***	-0.46	0.11*	-0.08
	(2.23)	(3.02)	(-1.29)	(1.71)	(-0.14)
$GAP.D_{HL}$	-0.02**	-0.04**	0.05*	-0.02**	0.03
	(-2.30)	(-2.05)	(1.86)	(-2.16)	(0.68)
D_{SOE}	-0.55***			-0.79***	-0.55
	(-2.98)			(-4.02)	(-1.47)
ROA	0.53***	0.51***	0.41**	0.24***	0.35**
	(22.22)	(15.47)	(2.21)	(2.59)	(2.00)
SIZE	0.24***	0.18*	0.51***	0.54***	0.63***
	(2.71)	(1.67)	(13.75)	(20.37)	(14.57)
LEV	-0.04***	-0.04***	-0.05***	-0.04***	-0.03**
	(-6.63)	(-4.60)	(-4.44)	(-6.47)	(-2.55)
ESHR	-0.03	-0.008	0.003	-0.007	-0.005
	(-0.23)	(-0.39)	(0.19)	(-0.54)	(-0.22)
MSHR	0.008	0.003	0.009	0.009*	-0.004
	(1.51)	(0.45)	(0.86)	(1.67)	(-0.35)
Alpha	-3.35*	-2.64	-6.40*	-3.40*	-6.45*
	(-1.89)	(-1.19)	(-1.78)	(-1.88)	(-1.69)
IND/YEAR	Control				
N	3412	1960	1451	3075	944
Adjusted R^2	0.40	0.39	0.37	0.39	0.44

*   Significant at the 10 percent level.

**   Significant at the 5 percent level.

*** Significant at the 1 percent level.

6. Conclusions

We present evidence that government subsidies had a positive impact on the gap between the executives' and employees' compensation in China during the period 2007-2013. Our study shows that government subsidies result in a significant increase in the executives' compensation while they have no significant impact on employees' compensation. Our findings suggest that the compensation of the executives in the firms that received government subsidies have shown a significantly higher growth relative to that of the employees. Consequently, our results suggest that the pay-gap between Chinese executives and employees, to some extent, has increased because of the government subsidies.

Our study also showed that the impact of government subsidy on the pay-gap was relatively larger and more significant in the Chinese state-owned enterprises. Our results show that government subsidies seem to cause a higher increase in executives' compensation in SOEs although they do not seem to have any significant impact on SOE employees' wages. Consequently, the pay-gap between executives and employees seems to be larger in Chinese state-owned enterprises. Moreover, our results suggest a larger and more significant impact of soft-constraint subsidies on the pay-gap in Chinese companies compared to hard-constraint subsidies.

Finally, our results suggest a relation between the pay-gap and a firm's financial success. In our study, we broke the pay-gap down into the portion due to the government subsidy and the portion unrelated to the subsidy. Our results show that the pay-gap unrelated to the government subsidy has a positive impact on a firm's economic performance while the pay-gap due to the subsidy seems to have a negative impact on firm's financial success. Our results confirm those from Milgrom and Roberts (1992); Henderson and Fredrickson (2001); Lin et al. (2003) and Chen (2006) suggesting that the pay-gap resulting from government subsidies may weaken the pay-gap's tournament effect for the firms.

References

Adams, R. & D. Ferreira. (2007). A theory of friendly boards. *Journal of Finance, 62*, 217-250. https://doi.org/10.1111/j.1540-6261.2007.01206.x

Bebchuk, L. A. & J. M. Fried. (2004). *Pay without performance: the unfulfilled promise of executive compensation*. Harvard University Press.

Bergstrom, F. (2000). Capital subsidies and the performance of firms. *Small Business Economics, 14*, 183-193. https://doi.org/10.1023/A:1008133217594

Bu, D. L., H. Shalchian, & C. Y. Zhang. (2015). Steady compensation, overconfident executives and overinvestment: Evidence from Chinese corporations. *International Research Journal of Applied Finance, 6*(7), 465-478.

Bu, D. L. & Z. Yu. (2012). Who received government subsidy?--Based on 2007-2010 China's listed companies. *Public Finance Research*, (8), 59-63.

Carpenter, M. A. & W. G. Sanders. (2004). The effects of top management team pay and firm internationalization on MNC performance. *Journal of Management, 30*(4), 509-528. https://doi.org/10.1016/j.jm.2004.02.001

Chen, X.C., W. J. Lee & J. Li. (2003). Chinese tango: government assisted earnings management. Working Paper Tsinghua University. https://doi.org/10.2139/ssrn.408800

Chen, X. & J., Li. (2001). Research of the effect of local 2001government financial behavior on improving companies' performance. *Journal of Accounting Research*, (12), 20-28.

Chen, D. H. (2003). Local government, corporate governance and subsidy income-evidence from China's securities market. *Journal of Finance and Economics*, (9), 16-22.

Chen, Z. (2006). The causes and consequences for the different levels of the executives' remuneration. *South China Journal of Economics, 3*, 59-69.

Conyon, M. J. (1997). Corporate governance and executive compensation. *International Journal of Industrial Organization, 15*(4), 493-509. https://doi.org/10.1016/S0167-7187(96)01032-6

De Long, J. B. & L. H. Summers. (1991). Equipment investment and economic growth. *The Quarterly Journal of Economics, 106*, 445-502. https://doi.org/10.2307/2937944

Fama, E. F. & K. R. French. (1997). Industry cost of equity, *Journal of Financial Economics, 43*(2), 153-193. https://doi.org/10.1016/S0304-405X(96)00896-3

Du, X. Q., J. H. Guo & Y. Lei. (2009). Political connections and corporate performance of private listed companies: government intervention or guanxi? *Journal of Financial Research, 11*, 158-173.

Faccio, M. (2003). Politically connected firms: Can they squeeze the state?, Working paper, Vanderbilt University. https://doi.org/10.2139/ssrn.444960

Faccio, M., R. W. Masulis, & J. J. McConnell. (2006). Political connections and corporate bailouts. *Journal of Finance, 61*(6), 2597-2635. https://doi.org/10.1111/j.1540-6261.2006.01000.x

Fang, J. X. (2011). The asymmetry of the executive power and the change of company's wage. *Economic Research Journal, 4*, 107-120.

Fisman, R. (2001). Estimating the value of political connections. *American Economic Review, 91*, 1095-1102. https://doi.org/10.1257/aer.91.4.1095

Garvey, G. T. & G. Hanka. (1999). Capital structure and corporate control: The effect of antitakeover statutes on firm's leverage. *Journal of Finance, 54*(2), 519-546. https://doi.org/10.1111/0022-1082.00116

Girma, S., H. Gorg, & E. Stroblb. (2007). The effect of government grants on plant level productivity. *Economics Letters, 94*(3), 439-444. https://doi.org/10.1016/j.econlet.2006.09.003

Grinstein, Y. & P. Hribar. (2004). CEO compensation and incentives: Evidence from M&A bonuses. *Journal of Financial Economics, 73*(1), 119-143. https://doi.org/10.1016/j.jfineco.2003.06.002

Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics, 7* (1), 85-107. https://doi.org/10.1016/0165-4101(85)90029-1

Henderson, A.D. & J. W. Fredrickson. (2001). Top management team coordination needs and the CEO pay gap: a competitive test of economic and behavioral views. *Academy of Management Journal, 44*(1), 96-117. https://doi.org/10.5465/3069339

Hirshleifer, D. & Y. Suh. (1992). Risk, managerial effort and project choice. *Journal of Financial Intermediation, 2*, 308-345. https://doi.org/10.1016/1042-9573(92)90004-W

Huang, Z. Z., & Q. Xi. (2009). Does salary system consider the external supervision--evidence from China's listed companies. *Nankai Business Review, 1*, 49-56.

Hu, X. Y. (2006). The political identity of the private enterprise's entrepreneur and the private enterprise's financing convenience--based on Zhejiang top 100 private enterprises. *Management World, 5*, 107-141.

Jenkins, J.C., K.T. Leicht, & A. Jaynes. (2006). Do high technology policies work? High technology industry employment growth in US metropolitan areas 1988-1998. *Social Forces, 85*(1), 267-296. https://doi.org/10.1353/sof.2006.0128

Johnson, S. & T. Mitton. (2003). Cronyisme and capital controls: Evidence from Malaysia. *Journal of Financial Economics, 67*, 351-382. https://doi.org/10.1016/S0304-405X(02)00255-6

Kong, D. M., S. S. Liu, & Y. N. Wang. (2013). Market competition, property right and government subsidies. *Economic Research Journal, 2*, 55-67.

Lin, J. Q., Z. H. Huang, & Y. X. Lin. (2003). The pay gap among the group of executives, the company's performance and the governance structure. *Economic Research Journal, 4*, 31-40.

Lin, Y. F., & Z. B Li. (2004). The policy burden, moral hazard and the budget constraint. *Economic Research Journal, 2*, 17-27.

Liu, H. (2002). Research on the accounting system's change path of the government subsidy. *Modern Economic Science, 2*, 80-84.

Lu, R. (2007). The power of management, pay gap and the company's performance. *South China Journal of Economics, 7*, 60-70.

Lu, R. (2008). The sensitivity analysis among the managerial power, compensation and performance: Empirical evidence from China's listed companies. *Contemporary Economics*, (7), 107-112.

Lv, J. Q., & D. D. Yu. (2011). Government subsidies for scientific research innovation and companies R&D expense: extrusion, replacement or incentive? *Forum on Science and Technology in China, 8*, 21-28.

Lu, Z. F., X. Y. Wang, & P. Zhang. (2012). Have state-owned enterprises paid higher wages? *Economic Research Journal, 3*, 28-39.

Milgrom, P. & J. Roberts. (1992). *Economics, Organization and Management*. Englewood Cliffs, NJ: Prentice~ Hall. 1992.

Murphy, K. J. (1999). *Executive compensation, Chapter 38, Handbook of Labour Economics*. https://doi.org/10.1016/S1573-4463(99)30024-9

Pan, Y., Y. Y. Dai, & C. X. Li. (2009). Government subsidies of the political relationship and the companies with financial distress--empirical evidence from China's IT companies. *Nankai Business Review, 5*, 6-17.

Roberts, B. E. (1990). A dead senator tells no lies: Seniority and the distribution of federal benefits. *American Journal of Political Science, 34*, 31-58. https://doi.org/10.2307/2111510

Shleifer, A. & R. W. Vishny. (1994). Politicians and Firm. *The Quarterly Journal of Economics, 109*(4), 995-1025. https://doi.org/10.2307/2118354

Shleifer, A., & R. W. Vishny. (1998). *The Grabbing Hand: Government Pathologies and Their Cures*. Harvard University Press.

Song, F., & A. V. Thakhor. (2006). Information control, career concerns, and corporate governance, *Journal of Finance, 61*(4), 1845-1896. https://doi.org/10.1111/j.1540-6261.2006.00891.x

Tang, Q. Q. & D. L. Luo. (2007). An empirical study on the motivation and effect of government subsidy. *Journal of Financial Research, 6*, 149-163.

Tosi, H. L., S. Werner, J. P. Katz, & L. R. Gomez-Mejia. (2000). How much does performance matter? A meta-analysis of CEO pay studies. *Journal of Management, 26*(2), 301-339. https://doi.org/10.1177/014920630002600207

Tzelepis, D. & D. Skuras. (2004). The effects of regional capital subsidies on firm's performance: An empirical study. *Journal of Small Business and Enterprise Development, 11*(1), 121-129. https://doi.org/10.1108/14626000410519155

Wren, C., & M. Waterson. (1991). The direct employment effects of financial assistance to industry. *Oxford Economic Papers, 43*(1), 116-138. https://doi.org/10.1093/oxfordjournals.oep.a041982

Wang, X. F., & B. Liu. (2008). The enterprise performance and employee compensation: the source of social harmony--empirical evidence from China's listed companies. *Journal of Chongqing University (Social Science Edition), 6*, 61-65.

Wu, Y. H. & S. N., Wu. (2010). Executives' remuneration: incentives or self-interest? --Evidence from China's listed companies. *Accounting Research, 11*, 40-48.

Zhou, Q. X., & W. P. Zhu. (2010). Incentive and constraints of tournament effect. *China Economic Quarterly, 9*(2), 571-596.