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Political Promotion, CEO Compensation, and Their Effect on Firm Performance

Jerry Cao¹, Michael Lemmon², Xiaofei Pan³, Gary Tian⁴,

Abstract

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Keywords: Managerial incentives, political promotion, firm performance, CEO compensation

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Abstract

We investigate the impact of CEO's compensation-based and promotion-based incentives on firm performance in China, where the CEOs of most state-owned enterprises are government appointed and thus face dual incentives. We find that both monetary and political incentives are positively related to firm performance. More important, we pinpoint a substitution effect: the monetary compensation-based incentive is weaker when CEO incentives are heavily driven by political career concerns. Overall, the evidence suggests that, via a competitive arena in the external political job market, promotion helps mitigate weak incentives for CEOs in China. State control or political connection is not necessarily inconsistent with good economic incentives.

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1. Introduction

The main component of the market-oriented reform that has fueled China's great economic growth since 1978 is the corporatization and privatization of state-owned enterprises (SOEs). As a result of this reform, SOE managers have gained more autonomy and incentives, so SOE restructuring can be regarded as a success (Chen et al., 2009). Today, many SOEs are traded as public corporations whose shareholders are primarily concerned with preventing managerial self-interest behaviors and effectively motivating managers to enhance firm performance (Firth et al., 2006). One method for achieving these goals, according to Jensen and Murphy (1990) and Murphy (1998), is to base CEO pay on performance, a practice supported, albeit weakly, by empirical evidence from U.S. firms. In fact, Shirley and Xu (1998) do find that Chinese firms often use performance contracts for CEO compensation and that such contracts can boost firm performance substantially.

One distinct characteristic of China's listed firms is that the central government is the ultimate authority of personnel control in the corporate sector. As Li (1998) points out, starting in the early 1980s, the central government of China implemented a mandate for almost all bureaucrats at various levels aimed at appointing younger officials who were more familiar with capitalist ideas. Hence, in SOEs, top managers are often in a selection and evaluation process for bureaucratic promotion. According to research on the incentive role of politically controlled personnel systems, the likelihood of such political promotion for provincial officials is strongly related to their economic performance (Li and Zhou, 2005). Likewise, in SOEs, politically appointed CEOs can be promoted to higher bureaucratic ranks if they deliver positive economic performance. Thus, the managerial incentives for CEOs in China should include not only performance-based compensation but also performance-based political promotion. We therefore propose political promotion as an alternative incentive mechanism and empirically investigate the incentive role in SOEs of politically controlled personnel systems that act as competitive arenas in the political job market.

Even in the presence of explicit contracts, however, career concerns are important

implicit incentives (Gibbons and Murphy, 1992; Brickley, Coles and Linck, 1999). This is particularly relevant in China where CEOs of state-owned enterprises often have implicit political careers in addition to explicit CEO roles. We therefore conjecture that politically nominated CEOs, who have few outside job opportunities, will be more concerned about assessment by government officials than by outside managerial labor markets; especially given that political promotion up the political career hierarchy carries with it higher payment and more power. These latter provide managers with strong incentives to increase their probability of promotion and firm performance (Kale et al., 2009).

This paper makes a significant contribution to our understanding of how, in an institutional environment that is weak on effective corporate governance, alternative mechanisms based on managerial political promotion may provide China's executives with strong managerial incentives and ultimately enhance the performance and growth of the state economy. It thus enriches our understanding of the necessary conditions for economic growth in China, where SOEs often play a pivotal role in key industries.

Besides revealing significantly positive effects of compensation incentives and promotion incentives on firm performance, our empirical analysis indicates that the positive relation between CEO pay and firm performance weakens when the CEO is awarded the promotion incentive. Not only does this finding strongly suggest that the promotion incentive substitutes for the compensation incentive when the CEO is highly driven by political career concerns, but the positive relationship between these two incentive mechanisms and firm performance holds even after we correct for the potentially endogenous determination of CEO pay. A further analysis comparing SOEs with privately controlled firms (non-SOEs) finds that although compensation incentives are effective in both, the positive relationship between promotion incentives and firm performance holds only in SOEs. This finding suggests that CEOs in SOEs have strong incentives for political promotion, whereas CEOs in privately controlled firms focus only on their explicit incentives.

Our paper is organized as follows. Section 2 reviews the relevant literature. Section 3 describes the incentive structure and develops our hypotheses. Section 4

presents the data sample and methodology, after which Section 5 outlines the empirical results and robustness tests. Section 6 concludes the paper.

2. Literature review

2.1 Executive compensation

Because most extant studies on CEO pay and firm performance are based on the agency theory paradigm, they conclude that CEO pay is based on a firm's past and current economic performance. That is, because of the separation of ownership and management, CEOs have the rights of final decision making and therefore enjoy and take advantage of the information asymmetries within firms to pursue their personal objectives. As a result, they are likely to expropriate shareholder wealth. Hence, academics argue, firms implement effective managerial compensation schemes to align the interests of managers and shareholders. Indeed, this assumption is supported by empirical evidence from developed countries (Conyon, 1997; Core et al., 1999; Hermalin and Wallace, 2001; Basu et al., 2007) and more recently from developing countries (Kato and Long, 2005; Firth et al., 2006, 2007; Angelo et al., 2007), which is complemented by extensive study on pay-performance sensitivity and elasticity (Jensen and Murphy, 1990; Firth et al., 2006; Kato et al., 2007).

Such studies, however, by focus only on the causality from firm performance to CEO pay, ignore the motivational effects of CEO pay on firms' future performance. This omission raises questions about the applicability of managerial compensation in China and implies a need for additional theory to explain the relationship between managerial compensation and firm performance. A viable alternative to agency theory for the case of China is the institutional theory first proposed by Bruce et al. (2005), which allows for the state's controlling influence over listed firms (Buck et al., 2008). From this perspective, CEO pay should be regarded not only as a reward for firm performance but also as a motivation for CEOs to increase shareholder wealth (Jensen and Murphy, 1990). Accordingly, because CEOs stand at the top of the corporate hierarchy and have the right of final decision making, research on China should take into account the motivational effects from CEO pay to firm performance in China's unique institutional environment.

Some extant studies have indeed addressed this aspect. For example, Buck et al. (2008), using the average top three executive's total compensation to proxy for top executive pay, find not only that such pay is positively and significantly related to firm performance in the 2000–2003 period but that the motivational effects of CEO pay are feasible and applicable to China. Indeed, the fact that the managerial compensation reported by listed firms consists of both basic salary and bonuses, excluding the value of stock options and restricted stocks, provides an excellent environment in which to study the responsiveness of CEO pay to firm performance, especially stock price. Indeed, this latter is particularly relevant given that the stock option formula (Black-Scholes) links CEO pay directly to stock price and compensation packages without long-term incentives are now highly attractive in China (Buck et al., 2008). An alternative view of agency theory's primary assumption of great divergence between the interests of managers and shareholders is offered by stewardship theory (Donaldson and Davis, 1989, 1991), which proposes that managers, rather than being motivated by individual goals, act as stewards whose motives are aligned with the shareholders.

2.2 Political connection and motivation

The politically connected firm—usually very large and operating in regulated industries—is a global phenomenon. Such firms not only benefit from the protection of the central government but have easy access to preferential treatment like bank loans and raw materials, lighter taxation, and relaxed regulations (Faccio, 2006; Faccio et al., 2006). Most particularly, according to Faccio's (2006) analysis of data from 20,202 publicly traded firms in 47 countries, politically connected firms are common in countries perceived as highly corrupt, in countries that impose restrictions on citizen foreign investment, and in more transparent systems. However, although this political connection can add company value, it also means political intervention. Hence, firms are also driven to achieve other non-profitable government objectives, such as maintaining employment levels and providing excessive job opportunities (Faccio et al., 2006).

According to cross-country data, however, politically connected firms perform worse than non-politically connected firms, meaning that the cost of political connection offsets the benefits it generates (Boubakri et al., 2008). Boubakri et al. (2008) therefore investigate the extent of political connections in newly privatized firms around the world using a 1980–2002 sample of 245 such firms headquartered in 27 developing countries and 14 developed countries. However, although they do show that politically connected privatized firms underperform their nonconnected counterparts, like the other studies mentioned, they fail to provide direct evidence of how political connections affect firm performance.

The fact that the political connection phenomenon is more widespread in China than elsewhere is not the only reason this case offers an appropriate setting for study. China is also unique in that the state is usually the controlling shareholder of listed firms. Moreover, despite having launched the privatization of SOEs and listed them on the Shanghai and Shenzhen stock exchanges, the central government retains control over personnel, which results directly in listed firms' political connections. At the same time, a growing body of literature on the effects of political connections in China's listed firms suggests that political intervention results in low operating efficiency because these firms must still meet government objectives (Shleifer and Vishny, 1994; Shleifer, 1998; Sun and Tong, 2003; Wei et al., 2005; Fan et al., 2007). Other evidence suggests that politically connected firms perform worse than non-politically connected firms (Fan et al., 2007; Li et al., 2008) and that firms are likely to hire a CEO with political experience when confronted with economic distress or market failures (Li et al., 2006, 2008).

Fan et al. (2007) focus their research specifically on China's newly partially privatized firms. Based on data from 1993 to 2001, they not only find that politically connected CEOs underperform non-politically connected CEOs but document a negative effect of politically connected CEOs on firm performance measured by a three-year post-IPO stock return. Apparently, during the corporatization process, the market can distinguish firms with and without politically connected CEOs. Their results also reveal that despite largely granting operating decision rights to SOE

managers, the government retains ultimate decision rights over mergers and acquisitions, as well as over the disposal of shares and assets of these listed firms and the appointment of their CEOs.

In contrast, Li et al.'s (2008) study of the private enterprises that have evolved in China since 1978 documents a positive effect of politically connected CEOs on firm performance measured by ROA and ROE. They therefore argue that in China, where the weak institutional environment imposes higher costs on private enterprises and damages their performance, political connection and status can reduce these costs and improve firm performance. Therefore, to differentiate the political connection elements from the human capital elements, they add more variables into the regression to test whether the party membership dummy variable remains positive and significant. Their empirical results show that in privately owned enterprises, politically connected CEOs do indeed have a positive effect on firm performance and the enhancement of firm profitability.

Under this politically controlled personnel system, the Chinese central government is the ultimate authority over the selection, appointment, and dismissal of top executives in SOEs. Hence, politically appointed CEOs and top executives within this sector must also consider their political careers. In this context, therefore, the potential for political promotion motivates CEOs to work hard (Hong, 2009), and the need to improve the enterprises' economic performance motivates government to set up the political career concerns. Indeed, Qian and Xu (1993) find a significant positive correlation between a change in economic performance and a change in the region's political position. This finding is echoed by Li and Zhou's (2005) recent identification (based on provincial level data for China between 1979 and 1995) of a positive relationship between the likelihood of provincial leader promotion and their regional economic performance. All such evidence illustrates the effects of the politically controlled personnel system and political career motivations on positive performance.

The findings for regional officials also apply at the firm level. In particular, Groves et al. (1995) find that during the 1980s, managers in China's SOEs tend to be

promoted (demoted) following good (poor) firm performance. In contrast, Li et al.'s (2006) study of privately controlled listed firms in China relates entrepreneurs' political participation to market underdevelopment, showing particularly that the establishment of political connection in privately controlled firms can be a response to market failure in the transition economy. Similar evidence is provided by Hu and Leung (2008), whose analysis of 2001–2005 data for 696 listed SOEs finds a significantly positive association between the appointment of political executives and poor performance and financial distress. They also document a significant increase in firm performance following the appointment of political executives, a performance improvement not observed in firms that appoint managers without political background and experience.

To date, however, despite evidence that good firm performance leads to CEO promotion, no empirical research has addressed the incentive effect of promotion in the Chinese context. Therefore, to shed light on this issue, this paper provides evidence on the effectiveness of incentive mechanisms.

3. Institutional background and hypotheses

3.1 Managerial compensation in China's listed firms

Before the introduction of China's economic reforms, SOE managers were only agents and representatives of the central government. More specifically, they were bureaucrats appointed directly by the central personnel department. During that period, all profits realized by SOEs were to be repatriated to the central government, leaving no incentives for managers. Rather, these were paid according to the highly structured civil service pay scale, whose wage variations reflect only the differences in region, industry, and ranking.

In the early stage of reform, CEO pay was constrained based on the equality or near equality of the pay differential between top executives and workers (Firth et al., 2006). In 1985, however, the Ministry of Labor suggested that CEO pay be linked to firm economic performance to provide profit-oriented incentives (Yueh, 2004). Since privatization in the early 1990s, the compensation decision has been the responsibility

of company boards, who have gradually applied the performance-based pay systems that research suggests are efficient (Groves et al., 1995; Mengistae and Xu, 2004).

3.2 Personnel control systems and political promotion in China

Under the corporatization and privatization of SOEs in China, most decision-making rights have shifted from the state to the firm level. However, although the state has decentralized authority in most aspects, as previously mentioned, it retains control over personnel and has ultimate authority over the selection, appointment, and dismissal of top SOE executives. In SOEs affiliated with the central government, this personnel decision is in the hands of the State Asset Supervision and Administration Commission (SASAC), but in other SOEs, it is decentralized to local SASACs. The state is also likely to control personnel decision in other enterprises whose involvement with the state gives them sufficient motivation to be politically connected (Li et al., 2006).

Because of this control by the state and/or state-related agents, CEOs in the Chinese corporate sector are often politically appointed. Because such politically appointed CEOs are most concerned about their human capital assessment by the internal political labor market, the government controlled personnel system—itsself motivated by government pursuance of better firm economic performance—uses promotion (demotion) of CEOs based on good (poor) firm performance as a managerial incentive (Groves et al., 1995). We thus formulate the following two hypotheses:

H1: CEO pay has positive effects on firm performance.

H2: Political promotion has positive effects on firm performance.

We further conjecture that in China, where managerial incentives are often weak because institutions lack efficient corporate governance and job market for CEOs is less developed, implicit managerial political career concerns can substitute for weak monetary incentives of CEO pay:

H3: The CEO pay effect is weaker when CEOs have more political career

concerns.

4. Sample and methodology

4.1 Data

We first collect political connection and promotion information manually by searching the listed firm's annual reports and comparing accounting and corporate governance data for all listed firms in China from 2002 to 2007. Consistent with prior studies, we delete ST and PT² firms from our population because including them will bias our results. To address the specially regulated industry consideration, we also exclude financial industry firms with unique accounting standards. Finally, we exclude observations with missing information. Our final sample consists of 1,219 listed firms and 3,160 firm-year observations. All study data are taken from the Chinese Stock and Market Accounting Research (CSMAR) and SinoFin databases, which are also used in prior studies on China (Kato and Long, 2005; Firth et al., 2006).

4.2 Methodology

To test our hypotheses, we apply the following regression:

$$\begin{aligned} Performance_{it} = & \alpha_0 + \alpha_1 Pay_{it} + \alpha_2 Promotion_{it} + \alpha_3 Pay_{it} * Promotion_{it} \\ & + \alpha_4 Size_{it} + \alpha_5 Board_{it} + \alpha_6 Pond_{it} + \alpha_7 Lev_{it} + \alpha_8 Invest_{it} \\ & + \alpha_9 Age_{it} + \alpha_{10} Tenure_{it} + Industry + Year + \varepsilon_{it} \end{aligned} \quad (1)$$

where *Performance* and *Size* represent firm performance and firm size, respectively; *Board* is the board size, and *Pond* is the proportion of independent directors. *Lev* represents the firm's leverage level and *Invest*, its future investment opportunities. *Promotion* is a dummy variable coded 1 if CEO turnover resulted from promotion, and *Political* is a dummy variable coded 1 if the CEO has a political background.

4.3 Variable definitions

Political promotion. We collect information on the CEOs' political connections manually from listed firm's annual reports from 2002 to 2007. For each firm in each

² ST and PT stand for special treatment and particular transfer. The stock exchanges flag a listed firm ST when irregularities appear in its financial or accounting statement or PT when it shows consecutive negative earnings for 3 years.

year, we compile a CEO profile that includes age, gender, education, experience, and professional background. Based on this profile, we trace CEOs' political connections by examining whether they are current or former officers of either the central government, the local government, or the military, and whether they are affiliated with government cadres at various levels or members of the National People's Congress (NPC), the Chinese People's Political Consultative Conference (CPPCC), or the Chinese Communist Party (CCP). We then trace the turnover of politically connected CEOs using the promotion or demotion information from their profiles. Our proxy for *Promotion* is a dummy variable equal to 1 if the politically connected CEO is promoted and 0 otherwise.

Managerial compensation. Since 1998, China's listed firms have been disclosing the information on managerial compensation in their annual reports. Although long-term incentives like stock options and restricted stocks have been exercised since 2006, these data are reported separately, so an executive's total compensation comprises basic salary, bonus, and other cash compensation. We thus define the proxy for CEO pay as the log of this total CEO compensation.

Firm performance. Our primary measures of firm performance in the regressions are return on assets (ROA) and return on sales (ROS), defined as the ratio of net income to the book value of total assets and the ratio of net income to sales, respectively. Consistent with the literature, we also perform a robustness analysis using two additional measures of firm performance, annual stock monthly return (RET) and Tobin's Q (Q) measured as the ratio of the sum of the market value of equity and the book value of debt to total assets.

Table 1 lists the definitions of all variables, including the control variables, those whose potential effects on firm performance are empirically documented in prior studies, especially those on China (Davies et al., 2005; Chen et al., 2009).

Table 1. Variables and Definitions

Variable	Definition
<i>Panel A: Managerial compensation</i>	
CEO compensation (CPAY)	Log of total cash compensation for CEO
<i>Panel B: Firm performance</i>	
Return on assets (ROA)	Net income/total assets
Stock return (RET)	Annual stock monthly return
Tobin's Q	Market value/replacement value ^a
Return on sales (ROS)	Net income/sales
<i>Panel C: CEO characteristics</i>	
CEO age (<i>Age</i>)	Log of the age of the CEO
CEO tenure (<i>Tenure</i>)	Log of the number of years as the firm's CEO
CEO duality (<i>Duality</i>)	Equals 1 if CEO also chairs the board
New CEO (<i>New</i>)	Equals 1 for first year as CEO
Retiring CEO (<i>Retire</i>)	Equals 1 if CEO's age is more than 62
Inside CEO (<i>Insider</i>)	Equals 1 if CEO is promoted from inside
Number of employees (<i>NTop</i>)	Log of the number of total employees
<i>Panel D: Firm characteristics and corporate governance</i>	
Firm size (<i>Size</i>)	Log of total assets
Board size (<i>Board</i>)	Log of the number of directors on the board
% of independent directors (<i>Pond</i>)	Proportion of independent directors on the board
Leverage (<i>Lev</i>)	Total debts/total assets in book value
Investment opportunity (<i>Invest</i>)	Total assets growth ratio
Largest shareholder (<i>Largest</i>)	Percentage of shares owned by the largest shareholder
Managerial ownership (<i>Mowner</i>)	Percentage of shares owned by the CEO

^aMarket value is measured as the sum of the market value of equity and the book value of debt; replacement value is measured using the book value of total assets.

4.4 Sample statistics

Table 2 lists the statistics on all study variables for the total 2002–2007 sample. Panels A and B detail CEO compensation and measures of firm performance, panel C presents summary statistics for measures of CEO and firm characteristics and corporate governance, and panel D gives detailed information on the frequency of CEO political promotion.

Table 2. Summary Statistics for All Variables

Variable	Mean	Median	Lower quartile	Higher quartile
<i>Panel A: Executive compensation</i>				
CEO pay	299,472	221,500	118,590	370,000
<i>Panel B: Firm performance</i>				
ROA (%)	2.26	2.64	0.84	5.12
RET (%)	39.69	-3.96	-24.35	68.21
Tobin's Q	1.16	0.96	0.81	1.24
ROS (%)	-0.043	0.039	1.49	9.82
<i>Panel C: CEO characteristics, firm characteristics, and corporate governance</i>				
CEO age	45.65	45	41	50
CEO tenure	2.55	2	1	3.75
Firm size (million)	3,940	1,770	1,010	3,390
Leverage (%)	49.71	50.25	36.92	62.10
Investment (%)	15.37	8.93	-0.12	21.73
Board size	9.76	9	9	11
Independent directors	3.13	3	3	4
Largest ownership (%)	40.65	39.03	27.27	54.20
<i>Panel D: Frequency of political promotion by year</i>				
2002 ^a	3			
2003 ^a	1			
2004 ^a	6			
2005	105			
2006	86			
2007	71			

Note: The statistics represent the averages of the 6 years from 2002 to 2007. All value variables are in China's currency, the RMB.

^a Because information is missing from the observations, the numbers for promotional frequency between 2002 and 2004 are small.

5. Empirical results

5.1 Regression results from the OLS estimation

We report our findings on the incentive effects of CEO pay and political promotion on firm performance in Table 3. The first column reports the results when ROA is used as the firm performance measure; the second column, those when ROA is replaced with ROS. Across these two specifications, the coefficients on both CEO pay and CEO political promotion are positive and statistically significant at the 1% level. These estimated results provide primary evidence in support of the hypotheses that CEO compensation and promotion positively affect firm performance.

Table 3. Regression of Incentive Effects on Firm Performance

OLS regression on firm performance		
Dependent variable	ROA	ROS
Constant	-0.395***(-9.42)	-0.748***(-9.01)
<i>Pay</i>	0.015***(10.15)	0.029***(9.86)
<i>Promotion</i>	0.171***(2.56)	0.522***(3.97)
<i>Pay*Promotion</i>	-0.120**(-2.15)	-0.039***(-3.63)
<i>Size</i>	0.169***(11.91)	0.029***(9.93)
<i>Lev</i>	-0.207***(-43.96)	-0.337***(-24.44)
<i>Invest</i>	0.045***(14.62)	0.081***(13.08)
<i>Largest</i>	0.021***(2.69)	0.032***(2.06)
<i>Board</i>	0.002(0.38)	-0.003(-0.35)
<i>Pond</i>	0.026(1.40)	0.001(0.00)
<i>Age</i>	-0.017*(-1.89)	-0.011(-0.16)
<i>Tenure</i>	0.008***(5.29)	0.009***(3.08)
<i>Industry</i>	Included	Included
<i>Year</i>	Included	Included
Adjusted R2	0.4804	0.2709
Obs	3160	3160

Note: Firm performance, measured by either ROA or ROS, is the dependent variable. *Pay* = CEO pay, defined as the log of CEO total compensation; *Size* = the log of total firm assets, *Lev* = the ratio of total debts to total assets; *Invest* = the firm's future investment opportunity, defined as the growth rate of firm total assets; *Largest* = the proportion of shares held by the largest shareholder; *Board* = the log of the total number of directors on the board; *Pond* = the percentage of independent directors; *Age* = the log of CEO age, and *Tenure* = the log of years that the CEO has been CEO of the firm. *Promotion* is a dummy variable coded 1 if the CEO is promoted and 0 otherwise. *T*-statistics, computed using the White (1980) heteroscedasticity robust standard error, are in parenthesis. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 3 also reveals some interesting results for the interaction term, *Pay*Promotion*, whose coefficients are negatively related to firm performance in all specifications. This finding clearly indicates that political promotion can serve as a substitute for a CEO pay scheme. Most particularly, once CEOs are promoted, the managerial compensation scheme incentives can be less efficient, which provides some evidence that CEO pay scheme incentives are indeed weaker when CEOs are driven by political career concerns. Not surprisingly, given that explicit incentives (salary, bonus, and other cash compensation) are quite low in China (Firth et al., 2006), our results also show that implicit incentives play a more important role than explicit ones in motivating CEOs. One implication of this result is that, consistent

with Gibbons and Murphy's (2002) finding that career concerns are important implicit incentives, in the context of China, managerial career concerns either substitute for or at least fail to dominate CEO monetary incentives.

In line with Chen et al. (2009), among the control variables, firm size and investment opportunity are positively related to firm performance. Specifically, the coefficient on *Largest* is positive and significant, while that on *Lev* is negative and significant in both regressions. The signs of the coefficients for the control variables are broadly similar to those reported in the literature. In contrast, board characteristics show no significant impact on firm performance, reflecting China's relatively weak corporate governance system (Buck et al., 2008). CEO tenure, however, is positively and significantly related to firm performance, which suggests that incumbent CEOs are willing to deliver good firm performance.

Table 4 lists the results after the total sample is divided into two subsamples, SOEs and privately controlled firms (non-SOEs), with firm performance measured by either ROA or ROS as the dependent variable. The coefficient on CEO pay is positive and significant across both groups, indicating that an effective pay scheme has been exercised extensively. The results also show that political promotion incentives are positive and significant only in SOEs.

Table 4. Regression of Incentive Effects of Firm Performance on the Subsamples

<i>Panel A: OLS regression on SOEs</i>		
Dependent variable	ROA	ROS
Constant	-0.432***(-9.88)	-0.803***(-8.25)
<i>Pay</i>	0.018***(11.61)	0.032***(9.55)
<i>Promotion</i>	0.186***(2.88)	0.545***(3.81)
<i>Pay*Promotion</i>	-0.013**(-2.51)	-0.042***(-3.56)
<i>Size</i>	0.142***(9.94)	0.029***(9.08)
<i>Lev</i>	-0.189***(-28.47)	-0.321***(-20.25)
<i>Invest</i>	0.041***(13.32)	0.077***(11.04)
<i>Largest</i>	0.027***(3.46)	0.047***(2.69)
<i>Board</i>	0.004(0.69)	0.007(0.53)
<i>Pond</i>	0.013(0.71)	-0.028(-0.71)
<i>Age</i>	-0.002(-0.20)	-0.015(-0.72)
<i>Tenure</i>	0.006***(3.90)	0.009***(2.77)
<i>Industry</i>	Included	Included
<i>Year</i>	Included	Included
Adjusted R2	0.4086	0.2818
Obs	2242	2242
<i>Panel B: OLS regression on privately controlled firms</i>		
Constant	-0.443***(-4.19)	-0.735***(-3.99)
<i>Pay</i>	0.011***(2.97)	0.022***(3.60)
<i>Promotion</i>	0.149(0.83)	0.456(1.49)
<i>Pay*Promotion</i>	-0.009(-0.64)	-0.032(-1.27)
<i>Size</i>	0.024***(6.26)	0.029***(4.27)
<i>Lev</i>	-0.213***(-27.69)	-0.37***(-13.33)
<i>Invest</i>	0.049***(6.56)	0.085***(6.64)
<i>Largest</i>	0.031(1.34)	0.026(0.68)
<i>Board</i>	0.007(0.45)	-0.011(-0.43)
<i>Pond</i>	0.053(1.15)	0.067(0.84)
<i>Age</i>	-0.031(-1.55)	0.014(0.41)
<i>Tenure</i>	0.012***(3.29)	0.009(1.53)
<i>Industry</i>	Included	Included
<i>Year</i>	Included	Included
Adjusted R2	0.5420	0.2581
Obs	918	918

Note: All variables are defined as in Table 3. *T*-statistics, computed using the White (1980) heteroscedasticity robust standard error, are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

5.2 Endogeneity

Much cross-country evidence has been offered to suggest that firm performance determines managerial compensation and is the most effective mechanism for

aligning the interests of management and shareholders (Murphy, 1999; Core et al., 1999; Conyon, 1997; Kato and Long, 2005; Firth et al., 2007). In this sense, we consider both firm performance and CEO pay to be endogenous. Therefore, to re-estimate the first regression, we apply a two-stage least square (2SLS) technique that allows selection of the instrumental variables. Based on Kale et al. (2009), we include the median value of the CEO pay for firms in the same two-digit CSRC (China Securities Regulatory Commission) code. The results are given in Table 5.

Table 5. Regression of Incentive Effects on Firm Performance: 2SLS Estimation

2SLS estimation of incentive effects on firm performance		
Dependent variable	ROA	ROS
Constant	-3.842***(-7.82)	-0.704***(-7.23)
<i>Pay</i>	0.195***(7.50)	0.029***(5.65)
<i>Promotion</i>	0.246**(2.85)	0.497***(2.93)
<i>Pay*Promotion</i>	-0.187***(-2.60)	-0.038***(-2.73)
<i>Size</i>	0.128***(7.32)	0.022***(6.21)
<i>Lev</i>	-0.180***(-23.48)	-0.318***(-19.96)
<i>Invest</i>	0.332***(10.22)	0.061***(9.46)
<i>Largest</i>	0.181*(1.91)	0.056***(2.98)
<i>Board</i>	0.067(1.02)	0.001(0.50)
<i>Pond</i>	0.074(0.37)	0.022(0.55)
<i>Age</i>	-0.117(-1.13)	0.008(0.43)
<i>Tenure</i>	0.051***(2.99)	0.007**(2.13)
<i>Industry</i>	Included	Included
<i>Year</i>	Included	Included
Adjusted R2	0.3622	0.2857
Obs	3160	3160

Note: All variables are defined as in Table 3. *T*-statistics, computed using the White (1980) heteroscedasticity robust standard error, are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Once endogeneity is taken into account, the coefficient on *Pay* is positively related to both ROA and ROS, with estimates statistically significant at the 1% level. However, although the coefficient on *Promotion* is positive and significant in both regressions, the interaction term between CEO pay and promotion has a negative and significant effect on firm performance. Again, these results support our hypotheses that incentive contracts for CEOs have positive effects on firm performance. Therefore, the 2SLS analysis offers significant support for the positive relationship between explicit and

implicit incentives and firm performance. For the other control variables, the results shown in Table 5 are consistent with those in Table 3, which again indicates the determinants of firm performance in China.

5.3 Additional tests

We repeat our analysis by re-estimating the first regression using two alternative measures of firm performance employed in previous studies: stock return (RET) and Tobin's Q (Q). This further analysis, whose results are reported in Table 6, focuses primarily on incentive variables. Consistent with our hypothesis, CEO pay in particular is positively and significantly related to firm performance in both specifications. Likewise, the coefficients of the promotional variables, although insignificant, are positive. Among the control variables, the board characteristics are significantly related to firm stock market performance and firm value, and the coefficients of the other variables are broadly similar to those reported in Table 3.

Table 6. Regression of Incentive Effects on Firm Performance: Additional Analysis

OLS regression on firm performance		
Dependent variable	RET	Q
Constant	-2.56***(-3.53)	3.38***(6.53)
<i>Pay</i>	0.18***(6.91)	0.18***(9.71)
<i>Promotion</i>	0.45(0.39)	0.27(0.32)
<i>Pay*Promotion</i>	-0.25(-0.25)	-0.02(-0.23)
<i>Size</i>	0.07***(2.98)	-0.18***(-10.26)
<i>Lev</i>	-0.04(-0.46)	0.49***(8.56)
<i>Invest</i>	0.69***(13.09)	0.17***(4.37)
<i>Largest</i>	-0.85***(-6.22)	-0.77***(-7.83)
<i>Board</i>	-0.17*(-1.65)	-0.14*(-1.90)
<i>Pond</i>	0.93***(2.96)	0.68***(3.04)
<i>Age</i>	-0.03(-0.16)	-0.09(-0.85)
<i>Tenure</i>	0.02(0.65)	0.03*(1.64)
<i>Industry</i>	Included	Included
<i>Year</i>	Included	Included
Adjusted R2	0.1064	0.1165
Obs	3160	3160

Note: Firm performance measured by RET and Q is the dependent variable. All other variables are defined as in Table 3. *T*-statistics, computed using the White (1980) heteroscedasticity robust standard error, are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

6. Conclusions

In China, because the government retains control over the choice, appointment, and dismissal of top executives in state-related enterprises, CEOs face a dual system of outside managerial labor market and internal political labor market. However, the political nature of the latter market provides them with an informal incentive mechanism whose impact on CEO efficiency this analysis attempts to determine. We also examine whether politically motivated incentives can substitute for formal incentives like CEO compensation. In addition, we test whether, as most extant literature suggests, political connections, particularly in partially privatized firms, have a negative impact on firm performance (Fan et al., 2007; Boubakri et al., 2008). As these earlier analyses ignore the political job market outside government controlled institutions, our paper fills a void in the understanding of China's tremendous success in state-related sectors despite weak incentives and poor governance.

Specifically, we find that CEO's political incentives for promotion have a positive effect on firm performance. More important, we find that promotion-based incentives substitute for compensation-based incentives. For example, compensation-based incentives are less effective when the incumbent CEO is likely to be promoted. Overall, our analysis indicates that both formal (pay scheme) and informal (political promotion) incentives are effective, the latter because they provide a competitive arena for politically appointed CEOs with limited outside options in formal managerial job markets. We also report the new empirical finding that CEO's political career concerns not only provide strong incentives but indirectly align CEOs' interests with those of shareholders. Thus, the competitive political arena acts as an informal incentive mechanism for CEOs, one that mitigates the weak corporate governance in China. Overall, the evidence suggests that state control or political connection is not necessarily inconsistent with poor economic incentives.

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