

# How Much Influence Does the Chinese State have over CEOs and Their Compensation?

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## Abstract

All that we know about the CEO labour market in China comes from studies of public listed companies and State-owned enterprises (SOEs). This paper is the first to examine the operation of the CEO labour market across all industrial sectors of the Chinese economy. We find that the influence of the State extends beyond SOEs into many privately-owned firms. Government is often involved in CEO appointments in domestic firms and, when this is the case, the CEO has less job autonomy and is less likely to have pay linked to firm performance. Nevertheless, we find that incentive schemes are commonplace and include contracts linking CEO pay directly to firm performance, annual bonus schemes, the posting of performance bonds, and holding company stock. The elasticity of pay with respect to company performance is one or more in two-fifths of the cases where CEOs have performance contracts, suggesting many face high-powered incentives. We also show that State-owned and domestic privately-owned firms are more likely than foreign-owned firms to use incentive contracts.

JEL Classification: G34; J31; J33; M12; M52; O16; P31

Key words: executive compensation; job autonomy; CEO's; China; the State

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## 1. Introduction

In the last few decades a huge privatisation programme has reduced State ownership of enterprises in China (Xu, 2011). Nevertheless, the State continues to play a pivotal role in the corporate sector through its ownership of firms and in appointing Chief Executive Officers (CEOs). Little is known about State influence within corporations since the economic reform programme began. This paper focuses on three issues, namely the influence the State has on the appointment of CEOs, the way CEOs are paid and how much decision-making autonomy CEOs have. To date evidence has been confined to the role State ownership plays in determining CEO compensation in large State-owned Enterprises (SOEs) (Mengistae and Xu, 2004) and public listed firms (Bryson et al., 2014). In this paper we extend the analysis to the executive labour market and CEO compensation across the whole industrial sector in China. We do so with World Bank Enterprise Data from surveys conducted in 2003 and 2005, two decades after the initial market-inspired reforms and a phenomenal period of economic growth.<sup>2</sup> We consider the role played by the State in CEO appointments and the autonomy CEOs have over decisions relating to production, investment and employment. Then we consider whether State involvement in corporations affects the way CEOs are paid, focusing primarily on the incidence and correlates of various aspects of CEO incentives.

We find the State is often involved in the appointment of CEOs and that, where the corporation is State-owned, CEOs have far less decision-making autonomy. Incentive schemes are commonplace and include contracts linking CEO pay directly to firm performance, annual bonus schemes, the posting of performance bonds, and holding company stock. The elasticity of pay with respect to company performance is one or more in two-fifths of the cases where CEO's have performance contracts, suggesting many face high-powered incentives. We show foreign-owned firms are less likely than State-owned and domestic, privately-owned firms to use incentive contracts. However, where government is involved in the CEO's appointment in a domestic, privately-owned firm, the CEO has less job autonomy and is less likely to have pay linked to firm performance.

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<sup>2</sup> See the Appendix for descriptions of the two data sets.

In Section Two we consider the role of the State in China's corporations and the possible implications for CEOs. Section Three analyses the links between State involvement in corporations and CEO's autonomy in making decisions. Section Four examines the degree to which CEOs in China are exposed to incentive contracts. Section Five estimates influences of CEO incentive contracts, focusing again on State ownership and State involvement in the appointment of CEOs before we discuss the results and conclude in Section Six.

## **2. The Role of the State in China's Corporations and Its Implications for CEOs**

The standard principal-agent problem described in the CEO compensation literature assumes CEOs are recruited to maximise shareholder value by raising the profitability of the firm but that, in the absence of perfect monitoring, CEOs may invest time in improving their own future career prospects, perhaps to the detriment of the firm (Holmström and Milgrom, 1991). Shareholders therefore use incentive mechanisms and the threat of dismissal to hold CEOs accountable.<sup>3</sup>

The Chinese setting is different because the State and economic activity are inextricably linked in China. The State exerts direct influence over corporations as the owner (principal). For example, despite divesting itself of many previously State-owned enterprises and reducing its stake in publicly listed firms in recent decades, the State continued to have a majority stake in over two-fifths of publicly listed firms in 2010, and these accounted for three-quarters of the employment in the sector and four-fifths of its output (Bryson et al., 2014). State ownership is also common in the economy as a whole. According to the World Bank 2003 Enterprise Survey, the mean State ownership stake in enterprises was 22%, ranging from 63% in the one-third of organizations which were SOEs, a 20% stake in public listed firms, one-sixth State ownership in cooperatives, and near-zero involvement in privately held firms. Twenty-one percent of corporations were majority State-owned, 12% were majority foreign-owned, and the remainder were majority domestically-owned.

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<sup>3</sup> For a review see Murphy (1999).

The State's influence extends beyond ownership to the appointment or endorsement of CEOs. In 2003 the State had direct influence over who was appointed to the CEO position in a quarter of all firms, directly appointing them in 12% of cases and rubber-stamping the firm's nominee in another 13% (Table 1). The role of the State was most prominent in firms that were majority State-owned with government directly appointing over one-third of CEOs and rubber-stamping firm nominees in another one-quarter of cases. In domestic and foreign firms, it was the Board of Directors that usually made appointments. But State involvement was not uncommon even in these firms. A similar picture emerges from the 2005 survey: CEOs were State appointments in around one-tenth (12%) of all firms, ranging from 48% in SOEs to only 2% in foreign-owned firms.

[INSERT TABLE 1]

China remains a one-party State governed by the Communist Party. Cao et al. (2012) showed that the political system offers strong career incentives to CEOs which may compensate for monetary incentives. We are able to glimpse the role that political advancement might play in the CEO labour market in China in Table 2 which shows the Communist Party membership of CEOs in 2003. Two-thirds of all CEOs were Party members. The figure varies markedly by ownership status: over nine-in-ten CEOs of SOEs are Party members, compared to two-thirds of those in private domestic firms and only one-quarter of those in the foreign-owned sector.<sup>4</sup> Furthermore, many CEOs hold senior positions in the Party, with around one-quarter holding the post of Party Secretary.

[INSERT TABLE 2]

Although this evidence points to an important role for the State in corporate affairs, this does not necessarily mean that politically motivated CEOs operate simply as

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<sup>4</sup> The low incidence of Party membership among CEOs of firms that are majority foreign-owned is partially explained by the prevalence of foreign CEOs in such firms. Around three-fifths (57%) of their CEOs are Chinese and, among this group, 44% are Party members.

"bureaucrats" with few incentives and little autonomy. This is because political preferment often depends on CEOs demonstrating business success (Xu, 2011). As early as the 1980s a market for corporate executives started to emerge as a result of government initiatives to reform SOEs. Prompted by career incentives to enhance the productivity and performance of SOEs, local government officials opened up competition for CEO posts in SOEs through auctions for managerial contracts (Xu, 2011). These contracts offered CEOs greater autonomy in corporate decision-making and replaced direct control from above with managerial incentives (Groves, 1995: 874), a process which received a further fillip with the programme of privatisation which began in the 1980s.

In the remainder of this paper we consider what difference State ownership and influence makes to the role CEOs play and how they are compensated. If State ownership leads to CEO "bureaucrats" we would expect to see a negative association between State involvement and CEO job autonomy and a negative association between State involvement and the use of incentive contracts. On the other hand, if the reforming ethos of the 1980s has persisted, one might anticipate quite the reverse.

### **3. State Involvement in Corporations and CEO Autonomy**

If China's CEOs were simply bureaucrats, paid to perform tasks required by the State, one might expect their behaviours to be governed by procedures laid down by the State, in which case they would have little of the operational autonomy which one normally associates with the position of CEO. The 2005 survey asks what degree of autonomy CEOs have over decisions relating to production, investment and employment, defining autonomy as non-intervention by government. As Table 3 indicates, CEOs generally have a high degree of autonomy over operational decision-making which means that firms' owners will be concerned to align CEO interests with those of the firm, whether it be through political preferment, financial incentives, or via the threat of dismissal. Six-in-ten (61%) CEOs score the maximum autonomy score.<sup>5</sup> However, there is heterogeneity

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<sup>5</sup> They tend to have more autonomy over production and employment than they do over investment decisions (figures not shown).

across firms both within and across ownership-type. CEOs in SOEs tend to have lower autonomy than those in other firms, with those in the private domestic sector having significantly more autonomy than others.<sup>6</sup>

[INSERT TABLE 3]

To see whether this relationship is a robust association that is independent of other firm and CEO characteristics, we ran linear estimation models for the probability of a CEO having "full autonomy" on the additive scale shown in Table 3, which combines autonomy on three dimensions of decision-making (production, investment and employment). These models are city fixed-effects models, allowing us to compare firms within the same city. There is a strong negative association between majority State ownership of the firm and CEO autonomy (Table 4, column 1). The State ownership effect is quantitatively large and statistically significant relative to all other forms of ownership. Furthermore, if the CEO was appointed by government this is associated with even lower CEO autonomy: a CEO is 13 per cent less likely to have "full autonomy" if appointed by government, *ceteris paribus*. However, the effect is confined to firms that are not State-owned (Table 4, columns 2 and 3).

If one focuses on each component of autonomy the differential between State ownership and other forms of ownership tends to be statistically significant throughout but the effects are largest with respect to decisions over investment and are least pronounced with respect to production issues.<sup>7</sup> The same pattern is apparent with respect to the association with government appointment.

It is therefore clearly the case that State involvement in corporations, whether through ownership or through the appointments process, is associated with CEO's having more limited decision-making autonomy.

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<sup>6</sup> We get similar results using the 2003 survey.

<sup>7</sup> These results are available from the authors upon request.

[INSERT TABLE 4]

#### **4. Is CEO compensation linked to firm performance and if so, how?**

The suspicion that the State appoints "bureaucrats" to CEO positions, together with a common assumption that political advancement is the preferred career path for many CEOs in China, suggests State-owned firms may be less likely than other firms to resort to incentive pay to resolve principal-agent problems. On the other hand, the State has a strong track record in experimenting with incentive structures in SOEs (Xu, 2011) and, more recently, in paving the way for the use of stock options and other incentive mechanisms in the publicly listed sector (Bryson et al., 2014).

[INSERT TABLE 5]

The 2005 survey indicates that two-thirds (67%) of firms linked their CEO's annual income directly to the company's performance (Table 5). What is more, in one-quarter (23%) of firms, these were "high powered" incentives in the sense that more than 10% of the CEO's annual income depended on whether or not the company's performance met the agreed target. Incentive contracts were common across all ownership types, though they were less common in foreign-owned firms than elsewhere.

[INSERT TABLE 6]

The 2003 survey contains more detail on the means by which firms can link CEO compensation to firm performance (Table 6). It distinguishes between being on an incentive plan which links CEO income to performance (what we term an incentive contract); receipt of a wage paid annually which, under the Chinese system, is a method of paying annual bonuses; and the payment of an upfront bond by the CEO which is recovered if the CEO meets the performance targets set under the contract.<sup>8</sup> One-quarter (28%) of CEOs in the survey were on incentive contracts. In most cases annual income was linked to performance measured in terms of both profits and sales.

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<sup>8</sup> See Bryson et al. (forthcoming) for a paper exploring the use of performance bonds in China.

One-fifth (19%) of CEOs were on annual pay contracts, and 11% paid a performance bond. Taken together, two-fifths (42%) of CEOs had their pay subject to performance based on at least one of these mechanisms and 15% were subject to more than one of these links between income and performance. These figures are lower than the incentive contract incidence in the 2005 survey due in part to differences between the two samples and the survey questions<sup>9</sup>, but the 2003 survey confirms that the incidence of incentive-based contracts for CEOs was lowest in foreign owned firms.

Incentives are often high powered. The median elasticity of pay with respect to company performance was 1.<sup>10</sup> The performance bonds paid by CEOs often constituted a sizeable proportion of their total annual income (Bryson et al., forthcoming).

The 2003 survey also asked whether CEOs held company stock, another potentially important way in which CEOs' performance can affect their wealth. Almost a third (30%) of CEOs held stock (Table 6, row 6). In 13% of domestically owned private firms the CEO actually held a majority stake in the firm as owner-manager.

The four incentive mechanisms identified in the 2003 survey are positively and significantly correlated, suggesting that they may complement one another, rather than operate as substitutes.<sup>11</sup>

This section clearly demonstrates that incentive payments are widespread among CEOs in China, that they take a variety of forms but appear complementary to one another, and that the link between pay and performance is quite substantial.

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<sup>9</sup> For example, average firm size is lower in the 2003 survey.

<sup>10</sup> Respondents were asked how much the CEO's income would increase if the performance measure increased by 1%. They were asked this for the first and second most important measures of performance used to make the decision. They were also asked the same question in relation to decreases in performance. Thus there are four questions asked. In each case the median elasticity of pay to performance was 1.0.

<sup>11</sup> The correlation coefficients for a CEO incentive contract and other incentive mechanisms are all statistically significant at a 99% confidence level and are: annual pay contract (bonuses) 0.29; performance bond 0.16; holds company stock 0.09. The correlation coefficients for annual pay contract and a performance bond is 0.05 and its correlation with performance bonds is 0.09. Again, both coefficients are statistically significant at a 99% confidence level. The only correlation that is not statistically significant is that between a performance bond and stock holding (0.003,  $p = 0.87$ ).



## 5. The State's Influence on CEO compensation

The overall impression from the two surveys is that incentive contracts were widely used to link CEO income to company performance in the mid 2000s and that, in many instances, these were high powered incentives which placed a sizeable percentage of CEO income at stake. However, there is quite a bit of variance in their usage, as is clear from the cross-tabulations with ownership. In this section we seek to isolate the association between CEO incentive contracts and the role of the State in corporations using multivariate analyses. In doing so, we control for other firm characteristics (such as size, industry and location), the firm's corporate governance arrangements, other policies used by the firm such as the threat of dismissal, and the characteristics of the CEO.

Models therefore take the following form:

$$1) \quad Comp_{ifc} = \beta_x CG_f + \beta_y Ind_i + \beta_z X_f + \beta CITY_c + \varepsilon_{fi}$$

where  $Comp_{ifc}$  is a dummy identifying contracts linking pay to performance for CEO  $i$  in firm  $f$  in city  $c$ ;  $CG_f$  is a vector of corporate governance variables in firm  $f$ , including whether the CEO was a government appointee;  $Ind_i$  are individual CEO demographic and job attributes;  $X_f$  are structural firm attributes which include the majority owner of the firm;  $CITY_c$  are the city fixed effects; epsilon is the error term and the betas are coefficients to be estimated. In practice, the absence of panel data means that we observe only one CEO per firm and so the  $i$  and  $f$  are non-separable.

We run separate models for the 2005 and 2003 data sets to establish how robust results are to alterations in sampling and populations. We present linear estimates with standard errors clustered to account for city-level sampling. There are two variants of the model specification for the 2003 data. The first mimics the specification for the 2005 analysis. The second extends the model to accommodate some variables that are only available in 2003, such as Communist Party membership. Furthermore, we use the richer data on the nature of incentives in the 2003 data to run the models on three variants of the incentive

contract, namely: a simple dummy identifying whether the CEO has a contract linking pay to firm performance; a dummy variable identifying any of the three incentive forms of contract (a link to performance; an annual bonus; and a performance bond); and finally a count of up to three identifying the number of types of incentive mechanism to which the CEO is subject.

Table 7 presents the factors associated with CEO incentive contracts in 2005. Table 8 then presents six models using the 2003 survey data. Columns 1, 3 and 5 in Table 8 are model specifications similar to those for Column 1 in Table 7 but for each of the three alternative incentive contract measures in turn (paid via a contract linking pay to performance, any of the three types identified, and the count of the three types of incentive contract). Columns 2, 4 and 6 run the same models but include additional controls that are only available in the 2003 data. The models explain between 7 and 13 per cent of the variance in incentive contracts, depending on the model specification and dependent variable.

[INSERT TABLE 7]

We focus the discussion on firm ownership, the role government plays in appointing CEOs, and Communist Party membership of the CEO. But we also briefly discuss the links between performance pay and CEO autonomous decision-making.<sup>12</sup>

In the 2005 analyses, when ownership and a dummy for government involvement in CEO appointments are entered alone (not shown in the table), without controls, majority state ownership is associated with a higher probability of a CEO being paid under an incentive contract than those in other firms. However, the only difference that is robust to the inclusion of controls is that between state-ownership and foreign ownership: foreign

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<sup>12</sup> It is perhaps worth noting that other variables operate in a fashion that is consistent with theory. For instance, Rosen (1990: 3) argued that the market will allocate the most talented CEOs to the largest firms “where the marginal productivity of their actions is greatly magnified over the many people below them to whom they are linked”. It is not surprising, therefore, that incentive contracts are more prevalent in larger firms in both the 2005 and 2003 data sets.

owned firms are significantly less likely to use incentive contracts for CEOs (column 1).<sup>13</sup> The 20 percentage point differential is large. However, government involvement in the appointment of the CEO is negatively associated with the use of CEO incentive contracts. When splitting the sample into firms where the state holds a majority stake and those where it does not, it is apparent that the role of government in appointments is only significant where the firm is majority-owned by government (columns 2 and 3).

From a principal-agent perspective it makes sense to incentivise CEO's via a performance pay contract if the CEO has sufficient autonomy to make meaningful operational decisions affecting the firm's fortunes. Both surveys distinguish between CEO's autonomy over decision-making in three domains: production, employment and investment. In the 2005 survey the likelihood of employing a CEO on an incentive contract rises with autonomy over production matters, but falls where the CEO has greater autonomy over investment decisions, while autonomy over employment-related matters (hiring, firing and wages) is not significantly associated with incentive contracts. These findings seem to hold in both the state-owned and non-state owned sectors (columns 2 and 3). This negative association between incentive contracts and investment autonomy makes intuitive sense since principals may be concerned that a CEO's judgement regarding the appropriateness of an investment decision may be clouded by any direct personal interest in the impact of that decision. For example, CEO's may choose to forego investment opportunities in the short-run, even if they are in the best interests of the firm, if making the investment negatively affects the short-term company performance metrics used in an incentive contract to reward CEO's.

[INSERT TABLE 8]

In Table 8 we turn to similar analyses for the 2003 survey. The negative significant association between incentive contracts and foreign ownership is also apparent in the 2003 data regardless of model specification and across the three incentive contract

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<sup>13</sup> This result holds when replacing majority ownership variables with any ownership, with the percentage owned by each owner type, or by the registered ownership status of the firm.

measures (Table 8). There is also a negative association between the use of CEO incentive contracts and the appointment of the CEO by government, one that is statistically significant in four of the six models. This is consistent with the possibility that government may have a direct interest in appointing more “bureaucratic” CEOs capable of achieving political and social objectives, rather than CEO’s intent on maximising firm performance.

We see further influence of government influence in the corporate sector in terms of the link between Communist Party membership and CEO status. There is a positive and significant correlation between being a Party Secretary or Deputy Party Secretary (denoted by “high rank in the CP”) and being paid for performance. This is consistent with the idea that firms use incentive contracts to attract the most talented employees to the position of CEO since achievement of high status in the Communist Party is often viewed as a marker of ability (Li et al., 2007).<sup>14</sup> However, we cannot discount the possibility that status in the Communist Party simply proxies the quality of individuals’ political connections which gives them access to the best education and jobs.

In 2003, the use of incentive contracts is positively associated with autonomy in employment decision-making, whereas autonomy in production is not significant. But, as in the 2005 survey, the 2003 survey reveals a negative association between investment autonomy and the use of incentive contracts.

## **6. Conclusion**

This paper is the first to examine the operation of the CEO labour market across all industrial sectors of the Chinese economy. We do so using World Bank enterprise data for the first part of the 21st Century. Incentive schemes are commonplace and include contracts linking CEO pay directly to firm performance, annual bonus schemes, the posting of performance bonds, and holding company stock. These incentive mechanisms appear to complement rather than substitute for one another. The elasticity of pay with

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<sup>14</sup>Incentive contracts are often used to attract the best managers to a firm since they can expect to earn more where their pay is a function of their higher productivity (Lazear, 2000).

respect to company performance is one or more in two-fifths of the cases where CEOs have performance contracts, suggesting many face high-powered incentives.

We find government involvement in the appointment of a CEO reduces the likelihood that the CEO will receive an incentives-based contract, perhaps because governments appoint “bureaucrats” to perform roles which incorporate social and political as well as economic goals. However, the link between state ownership and the use of CEO contracts is not so clear cut: indeed, it appears that foreign-owned firms are the least likely to use CEO incentive contracts, perhaps reflecting the fact that it was the state that had originally sponsored and promoted managerial incentives in SOEs.

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**Table 1: Who Appoints the CEO's?***Column percentages*

	<b>Majority Owner:</b>				
	<b>Domestic</b>	<b>Foreign</b>	<b>State</b>	<b>No majority</b>	<b>All</b>
Firm nominates, govt approves	11	4	24	9	13
Government appointment	6	2	37	12	12
Board of Directors appoints	40	74	15	67	38
Decided at shareholders' meeting	13	5	1	3	10
Appointed at employees' meeting	1	0	2	0	1
Other	28	15	21	9	25
Unweighted N	1661	169	503	33	2366

Note: authors' calculations from the World Bank Investment Climate Survey 2003. Figures are column percentages.

**Table 2: Communist Party Position of CEOs***Column percentages*

	<b>Majority Owner:</b>				
	<b>Domestic</b>	<b>Foreign</b>	<b>State</b>	<b>No Majority</b>	<b>All</b>
Party Secretary	20	9	34	45	23
Deputy Party Secretary	5	1	16	0	7
Committee or Executive Member	11	3	23	6	13
Ordinary member	28	12	19	16	25
Not a member	37	74	8	32	33
Unweighted N	1651	163	505	31	2350

Note: authors' calculations from the World Bank Investment Climate Survey 2003. Figures are column percentages.

**Table 3: Job autonomy Among CEOs In China, 2005**

	<i>Row percentages</i>		
<b>Majority ownership status:</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
State	34	28	38
Collective	21	23	56
Corporation	19	23	58
Private	11	17	72
Foreign	18	21	61
No majority owner	20	25	56

Note: authors' calculations from the World Bank Investment Climate Survey 2005. Respondents asked to score their autonomy using an 8-item scale where 0=1-19% autonomy and 7=100% autonomy. Our scale sums scores on the three issues covered, namely production, investment, employment. Low scores are 0-16; medium scores are 17-20; high score is the maximum 21. Figures are row percentages. N=12,265.

**Table 4: Influences on CEO Job Autonomy**

Dependent variable: Full autonomy of CEO	[1] Coeff.		[2] Coeff.		[3] Coeff.	
<b>Firm Characteristics:</b>						
Majority ownership: State	ref.					
Private	0.160 ***					
	[9.19]					
Collective	0.056 ***					
	[2.69]					
Corporation	0.091 ***					
	[5.33]					
Foreign	0.147 ***					
	[7.03]					
No majority ownership	0.097 ***					
	[3.38]					
Size (Log of employees)	-0.017 ***	-0.019 ***		-0.003		
	[-4.57]	[-4.85]		[-0.31]		
Age (Log of years)	-0.020 ***	-0.022 ***		-0.029 *		
	[-2.91]	[-2.92]		[-1.82]		
<b>CEO Characteristics:</b>						
CEO appointed by government	-0.128 ***	-0.195 ***		-0.027		
	[-8.11]	[-9.80]		[-0.96]		
CEO tenure	0.006 ***	0.007 ***		0.004		
	[5.98]	[6.18]		[1.22]		
CEO education	-0.033 ***	-0.035 ***		-0.018		
	[-6.83]	[-6.85]		[-0.97]		
<b>Corporate Governance:</b>						
Type of Board of Directors (BOD): None	ref.	ref.		ref.		
BOD with CEO/Chair separation	-0.040 ***	-0.039 ***		-0.005		
	[-3.21]	[-3.39]		[-0.14]		
BOD with CEO/Chair duality	0.026 **	0.039 ***		-0.027		
	[2.28]	[3.27]		[-0.69]		
Senior executives have previously been fired	-0.032 ***	-0.040 ***		0.016		
	[-2.95]	[-3.39]		[0.49]		
Constant	0.813 ***	0.967 ***		0.572 ***		
	[21.07]	[27.65]		[4.55]		
Adjusted R <sup>2</sup>	0.125	0.100		0.020		
Number of obs.	11817	10274		1543		

OLS regressions. All models incorporate industry dummies and control city fixed effects.

Model 1: full sample.

Model 2: firms that are not majority State-owned.

Model 3: firms that are majority State-owned.

t statistics in brackets; \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

**Table 5: Performance Pay Among CEOs In China, 2005**

<b>Majority ownership status:</b>	<i>Cell percentages</i>		
	<b>Any</b>	<b>Low Powered</b>	<b>High Powered</b>
State	71	47	23
Collective	64	47	17
Corporation	73	47	25
Private	67	43	23
Foreign	50	31	17
No majority owner	71	44	26
All	67	44	23

Note: authors' calculations from the World Bank Investment Climate Survey 2005. Figures are cell percentages. Respondents asked "Is the CEO's annual income directly related to the company's performance?" Unweighted N=12,242. Follow up questions ask how CEO's income increases/decreases if company performance exceeds/fails the target with 7 categorical responses recording the percentage change running from 1-5% to >61%. "Low powered" identifies incentive contracts with <11% income at stake. "High powered" identifies incentive contracts with 11% or more income at stake. Columns 2 and 3 based on unweighted N=11,938.

**Table 6: Types of CEO Performance Pay**

	<i>Cell percentages</i>				
	<b>Majority Owner:</b>				
	<b>Domestic</b>	<b>Foreign</b>	<b>State</b>	<b>No majority</b>	<b>All</b>
Incentive plan linking income to firm performance	28	20	20	18	28
Annual pay contract (Nian Xin Zhi)	20	26	16	18	19
Performance Bond	11	3	17	9	11
Any of 3 above	42	39	42	39	42
More than 1 of 3 above	15	9	16	6	15
Holds company stock	37	23	8	6	30
Unweighted N	1676	171	519	33	2399

Note: authors' calculations from the World Bank Investment Climate Survey 2003. Figures are cell percentages. For row 1 question: "Does the CEO have any incentive plans linking his/her income to firm performance?" Row 2 question: "Is the CEO's wage paid annually (Nian Xin Zhi)?" Row 3 question: "Did the CEO post a security deposit?" Row 6 question: "Does the CEO own company stocks?"

**Table 7: OLS of the Probability that a CEO's Pay is Linked to Performance, 2005**

Dependent variable: CEO incentive contract	[1] Coeff.		[2] Coeff.		[3] Coeff	
<b>Firm Characteristics:</b>						
Majority ownership: State	ref.					
Private	-0.016 [-1.02]					
Collective	-0.003 [-0.16]					
Corporative	0.015 [1.02]					
Foreign	-0.203 [-10.27]	***				
No majority ownership	-0.02 [-0.79]					
Size (Log of employees)	0.028 [8.10]	***	0.023 [5.83]	***	0.055 [6.04]	***
Age (Log of years)	-0.006 [-.094]		0.005 [0.63]		-0.02 [-2.07]	**
<b>CEO Characteristics:</b>						
CEO appointed by government	-0.064 [-4.36]	***	-0.018 [-0.92]		-0.10 [-4.33]	***
CEO tenure	0.002 [2.30]	**	0.002 [2.05]	**	0.003 [1.17]	
CEO education	0.044 [8.75]	***	0.038 [7.09]	***	0.040 [2.34]	**
Production autonomy of CEO	0.014 [3.07]	***	0.019 [3.20]	***	0.015 [1.65]	*
Investment autonomy of CEO	-0.016 [-5.65]	***	-0.018 [-5.33]	***	-0.01 [-2.72]	***
Employment autonomy of CEO	-0.003 [-0.57]		-0.006 [-0.99]		0.001 [0.11]	
<b>Corporate Governance:</b>						
Type of Board of Directors (BOD): None	ref.		ref.		ref.	

BOD with CEO/Chair separation	0.044	***	0.013		0.065	**
	[3.59]		[0.95]		[2.22]	
BOD with CEO/Chair duality	0.035	***	0.024	*	0.055	***
	[2.94]		[1.85]		[6.04]	
Senior executives have previously been fired	0.057	***	0.071	***	0.011	
	[5.73]		[6.51]		[0.41]	
Constant	0.290	***	0.317	***	0.185	
	[6.64]		[7.11]		[1.52]	
Adjusted R2	0.088		0.069		0.137	
Number of obs	11817		10274		1543	

OLS regressions. All models incorporate industry dummies and control city fixed effects.

Model 1: full sample.

Model 2: firms that are not majority State-owned.

Model 3: firms that are majority State-owned.

t statistics in brackets; \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

**Table 8: OLS Models for CEO Incentive Contracts, 2003**

Dependent variable: Incentive contracts	[1] Coeff.		[2] Coeff.		[3] Coeff.		[4] Coeff.		[5] Coeff.		[6] Coeff.	
<b>Firm characteristics:</b>												
Majority ownership: State	ref.		ref.		ref.		ref.		ref.		ref.	
Domestic	-0.049		-0.041		-0.027		-0.017		-0.049		-0.031	
	[-1.46]		[-1.21]		[-0.77]		[-0.48]		[-0.84]		[-0.52]	
Foreign	-0.225	***	-0.181	***	-0.145	***	-0.121	**	-0.338	***	-0.287	***
	[-4.17]		[-3.50]		[-2.62]		[2.17]		[-4.43]		[-3.50]	
No majority ownership	-0.199	**	-0.180	*	-0.130		-0.126		-0.336	**	-0.327	*
	[-2.36]		[-1.98]		[-1.12]		[-1.04]		[-2.08]		[-1.86]	
Size (Log of employees)	0.017	**	0.016	**	0.026	***	0.022	**	0.053	***	0.045	***
	[2.73]		[2.33]		[3.48]		[2.59]		[4.32]		[3.50]	
Age (Log of years)	-0.039	**	-0.049	***	-0.005		-0.014		-0.006		-0.026	
	[-2.47]		[-3.00]		[-0.30]		[-0.86]		[-0.26]		[-0.97]	
<b>CEO characteristics:</b>												
CEO tenure	0.001		0.001		0.002		0.002		0.001		0.001	
	[0.60]		[0.72]		[0.51]		[0.56]		[0.28]		[0.32]	
Education: Less than graduate degree	ref.		ref.		ref.		ref.		ref.		ref.	
Has graduate degree	0.082	**	0.074	*	0.056		0.046		0.123	**	0.102	*
	[2.34]		[2.08]		[1.54]		[1.24]		[2.23]		[1.79]	
Has postgraduate degree	0.153	***	0.147	***	0.149	***	0.138	***	0.313	***	0.29	***
	[4.67]		[4.38]		[3.76]		[3.45]		[5.45]		[4.99]	
Production autonomy of CEO	0.004		0.004		0.003		0.004		-0.007		-0.005	
	[0.43]		[0.51]		[0.40]		[0.53]		[-0.48]		[-0.38]	
Investment autonomy of CEO	-0.021	***	-0.022	***	-0.021	***	-0.022	***	-0.026	**	-0.028	**
	[-3.02]		[-3.11]		[-3.23]		[-3.39]		[-2.18]		[-2.26]	
Employment autonomy of CEO	0.01	*	0.012	*	0.002		0.004		0.018		0.022	*
	[1.76]		[2.09]		[0.20]		[0.50]		[1.54]		[1.89]	
CEO appointed by government	-0.045		-0.045		-0.09	***	-0.093	***	-0.156	***	-0.165	***
	[-1.45]		[-1.37]		[-4.25]		[-4.52]		[-3.65]		[-3.76]	

*Continued*

*Table 8 continued*

Dependent variable: Incentive contracts	[1]		[2]		[3]		[4]		[5]		[6]	
	Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.	
<b>Corporate governance:</b>												
Type of Board of Directors (BOD): None	ref.		ref.		ref.		ref.		ref.		ref.	
BOD with CEO/Chair separation	0.093	***	0.002		0.094	**	0.012		0.175	***	0.006	
	[3.26]		[0.07]		[2.35]		[0.29]		[2.92]		[0.10]	
BOD with CEO/Chair duality	0.069	**	-0.035		0.12	***	0.023		0.162	***	-0.034	
	[2.85]		[-1.55]		[4.37]		[0.78]		[4.74]		[-0.93]	
Senior executives have previously been fired	0.163	***	0.161	***	0.145	***	0.145	***	0.279	***	0.277	***
	[5.97]		[5.54]		[5.78]		[5.54]		[7.00]		[6.58]	
<b>Additional controls only available for 2003 data:</b>												
CP status: not a CP member			ref.				ref.				ref.	
High rank in CP			0.019				0.045				0.089	**
			[0.86]				[1.70]				[2.23]	
CP Member			-0.014				-0.021				-0.02	
			[-0.64]				[-0.82]				[-0.45]	
CP status missing			0.005				-0.01				-0.07	
			[0.06]				[-0.07]				[-0.35]	

*Continued*



Table 8 continued

Dependent variable: Incentive contracts	[1]		[2]		[3]		[4]		[5]		[6]	
	Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.	
Stock ownership: no stock	ref.		ref.		ref.		ref.		ref.		ref.	
CEO owns 1-49% of stock			0.043				0.04		*		0.07	
			[1.65]				[1.75]				[2.28]	
CEO owns 50%+ of stock			-0.004				0.008				0.005	
			[-0.11]				[0.19]				[0.08]	
Don't know how much stock CEO owns			0.136		*		0.2		***		0.357	
			[1.96]				[3.38]				[2.54]	
Promotion from within			0.04		**		0.026				0.065	
			[2.42]				[1.00]				[1.44]	
Independent member(s) on Board			0.067		***		0.064		**		0.152	
			[4.07]				[2.85]				[3.37]	
Employee rep on Board			0.127		***		0.108		***		0.211	
			[5.70]				[4.59]				[4.82]	
CEO experience before current post			-0.003		*		-0.004				-0.001	
			[-1.82]				[-1.08]				[-0.31]	
Chinese			0.019				-0.057				-0.109	
			[0.45]				[-1.19]				[-1.17]	
Constant	0.17	**	0.156	*	0.253	***	0.321	***	0.216	*	0.335	**
	[2.45]		[1.85]		[3.32]		[3.93]		[1.83]		[2.27]	
Adjusted-R <sup>2</sup>	0.109		0.124		0.089		0.101		0.109		0.128	
Number of obs.	2203		2203		2203		2203		2203		2203	

OLS regressions. All models incorporate industry and city dummies.

Model 1, 2: Dependent variable is “paid via a contract linking pay to performance.”

Model 3, 4: Dependent variable is “Whether or not three types of incentive contracts (incentive plan linking income to firm performance, annual pay contract (Nian Xin Zhi) or performance bond) identified.”

Model 5, 6: Dependent variable is “the count of the three types of incentive contract.”

t statistics in brackets.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

### *Data Appendix*

We use data from two World Bank Enterprise Surveys ([www.enterprisesurveys.org](http://www.enterprisesurveys.org)). Our primary data source is the 2005 World Bank Investment Climate Survey undertaken by the National Bureau of Statistics in China. It covers 12,400 firms located in 120 cities throughout China. One hundred firms are surveyed in each city except in the four largest cities (Shanghai, Tianjin, Beijing and Chongqing) where 200 were surveyed. All provincial capitals are sampled together with cities selected based on the economic size of the province. Firms were randomly selected within the ten largest industries in each province (by value added). Consequently, the survey covers all major cities and is broadly representative of China as a whole.

We also use the World Bank Enterprise Survey from 2003. This comprises a sample of 2,400 enterprises from 18 cities: 150 from each of 12 larger cities and 100 from each of 6 smaller cities. Of the cities surveyed, four are in the northeast (Benxi, Changchun, Dalian and Harbin), four along the coast (Hangzhou, Jiangmen, Shenzhen and Wenzhou), four in the central region (Changsha, Nanchang, Wuhan and Zhengzhou), and six in the western region (Chongqing, Guilin, Kunming, Nanning, Lanzhou and Xi'an). Both surveys are completed by the most senior manager at the firm. The rationale for using both surveys is two-fold. First, although smaller than the 2005 survey, the 2003 survey contains information on aspects of executive compensation and corporate governance which are absent from the 2005 data. Second, the sample frames are different for the two surveys. For example, the 2003 survey consists of smaller firms, and they are not drawn from the same locations as the 2005 survey. Thus running similar multivariate analyses on both samples provides an opportunity to establish the external validity of findings based on the 2005 survey. Simple descriptive statistics from the two surveys are presented below.

In both surveys the term "General Manager" is used to identify the CEO, but throughout the paper we refer to this executive as the CEO.

**Appendix Table A1: Descriptive statistics, 2005**

Variable	Obs	Mean	Std. Dev.	Min	Max
Whether CEO Pay linking to Firm Performance	11817	0.669	0.470	0	1
<b>Corporate governance:</b>					
Type of Board of Directors (BOD): No BOD	11817	0.279	0.449	0	1
BOD with CEO/Chair separation	11817	0.357	0.479	0	1
BOD with CEO/Chair duality	11817	0.364	0.481	0	1
Fire or demotion of CEO, last 4 years	11817	0.222	0.416	0	1
<b>CEO characteristics:</b>					
CEO tenure (years)	11817	6.399	4.721	1	56
Education of CEO	11817	5.575	0.994	1	7
CEO appointed by government	11817	0.119	0.324	0	1
Production autonomy of CEO	11817	7.410	1.490	1	8
Investment autonomy of CEO	11817	6.868	2.054	1	8
Employment autonomy of CEO	11817	7.305	1.587	1	8
<b>Firm characteristics:</b>					
Majority ownership: State	11817	0.131	0.337	0	1
Collective	11817	0.082	0.275	0	1
Legal persons	11817	0.259	0.438	0	1
Private	11817	0.367	0.482	0	1
Foreign	11817	0.130	0.337	0	1
No majority ownership	11817	0.031	0.174	0	1
Size (Log of employees)	11817	5.619	1.473	1.8	13.5
Age (Log of years)	11817	2.277	0.786	1.1	4.9
Coefficient of variance in sales, last 3 years	11817	0.324	0.251	0	1.7
Number of power outages annually (divide by 100)	11817	0.114	0.239	0	4
Industry: Petroleum	11817	0.014	0.119	0	1
AgProcess	11817	0.079	0.269	0	1
BlackMetal	11817	0.040	0.196	0	1
ChemFiber	11817	0.004	0.063	0	1
ChemMat	11817	0.116	0.321	0	1
ClothShoeHat	11817	0.017	0.127	0	1
ColorMetal	11817	0.028	0.164	0	1
CommunicateEquip	11817	0.046	0.210	0	1
Craft	11817	0.009	0.093	0	1
DrinkManufacture	11817	0.014	0.117	0	1
EduSportGood	11817	0.003	0.057	0	1
Electronics	11817	0.069	0.254	0	1

*Continued*

*Appendix Table A1 continued*

Variable	Obs	Mean	Std. Dev.	Min	Max
FoodManufacture	11817	0.020	0.140	0	1
Furniture	11817	0.004	0.067	0	1
GeneralEquip	11817	0.087	0.282	0	1
Instruments	11817	0.005	0.069	0	1
Leather	11817	0.012	0.107	0	1
Medical Equip	11817	0.034	0.182	0	1
Metal	11817	0.030	0.170	0	1
NonMetal	11817	0.105	0.306	0	1
Paper	11817	0.019	0.137	0	1
Plastic	11817	0.027	0.163	0	1
Printing	11817	0.005	0.069	0	1
Recycle	11817	0.000	0.016	0	1
Rubber	11817	0.002	0.040	0	1
SpecificEquip	11817	0.040	0.196	0	1
Textile	11817	0.077	0.267	0	1
Tobacco	11817	0.003	0.059	0	1
TransEquip	11817	0.079	0.270	0	1
WoodProcessing	11817	0.011	0.105	0	1

**Appendix Table A2: Descriptive statistics, 2003**

Variable	Obs	Mean	Std. Dev.	Min	Max
Paid via a contract linking pay to performance	2203	0.286	0.452	0	1
Any of the three types identified	2203	0.429	0.495	0	1
The count of the three types of incentive contract	2203	0.606	0.796	0	3
<b>Corporate governance:</b>					
Type of Board of Directors (BOD): No BOD	2203	0.489	0.500	0	1
BOD with CEO/Chair separation	2203	0.268	0.443	0	1
BOD with CEO/Chair duality	2203	0.243	0.429	0	1
Fire experience of senior executives	2203	0.176	0.381	0	1
CEO appointed by government	2203	0.124	0.330	0	1
<b>CEO characteristics:</b>					
CEO tenure (years)	2203	5.730	4.223	1	33
Has graduate degree	2203	0.680	0.466	0	1
Has postgraduate degree	2203	0.155	0.362	0	1
Production autonomy of CEO	2203	7.082	1.699	1	8
Investment autonomy of CEO	2203	5.694	2.624	1	8
Employment autonomy of CEO	2203	6.568	2.135	1	8
<b>Firm characteristics:</b>					
Majority ownership: Domestic	2203	0.698	0.459	0	1
Foreign	2203	0.070	0.255	0	1
State	2203	0.218	0.413	0	1
No majority ownership	2203	0.014	0.118	0	1
Industry: Clothing	2203	0.147	0.354		
Food	2203	0.029	0.168	0	1
Metals and machinery	2203	0.064	0.245	0	1
Electronics	2203	0.225	0.417	0	1
Chemicals and pharmaceuticals	2203	0.036	0.187	0	1
IT services	2203	0.084	0.277	0	1
Telecommunications	2203	0.003	0.052	0	1
Accounting and finance	2203	0.069	0.253	0	1
Advertising and marketing	2203	0.064	0.244	0	1
Other services	2203	0.112	0.316	0	1
Auto and auto components	2203	0.168	0.374	0	1
Size (Log of employees)	2203	4.869	1.495	0.0	11.2
Age (Log of years)	2203	2.297	0.885	0.7	4.0

*Continued*

*Appendix Table A1 continued*

Variable	Obs	Mean	Std. Dev.	Min	Max
<b>Additional controls only available in 2003</b>					
CP status: Not member	2203	0.326	0.469	0	1
High rank in CP	2203	0.420	0.494	0	1
CP Member	2203	0.241	0.428	0	1
CP status missing	2203	0.013	0.112	0	1
Stock ownership: No stock	2203	0.695	0.461	0	1
CEO owns 1-49% of stock	2203	0.181	0.385	0	1
CEO owns 50%+ of stock	2203	0.102	0.302	0	1
Don't know how much stock CEO owns	2203	0.022	0.148	0	1
Promotion from within	2203	0.356	0.479	0	1
Independent member(s) on Board	2203	0.166	0.372	0	1
Employee rep on Board	2203	0.235	0.424	0	1
CEO experience before current post (years)	2203	1.422	2.863	0	22
Chinese	2203	0.959	0.199	0	1

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