

Career Concerns and “Unpaid” Executives*

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Abstract: A significant portion of CEOs in publicly-listed Chinese state-owned enterprises receive zero pay from the companies for which they work. Instead, they are paid directly by their controlling shareholder, which can be the Chinese government or parent firms that are controlled by the Chinese government. While their actual pay is unobservable, it is known to be low and contain few performance-based incentives. We explore how these parent-paid executives are motivated and whether the outcomes of this unusual incentive differ from conventional compensation. Consistent with career concerns as their main incentive, we find that these CEOs have a significantly higher probability of future promotion than other CEOs. Further analyses indicate that, compared to peers that directly pay their CEOs, firms with parent-paid CEOs have higher return on assets, asset turnover, and asset growth, and they engage in less tunneling. We also conduct an event study using the Split Share Structure Reform in 2006. The reform liberalized the Chinese stock market, thus redoubling the role of the market as an incentive and potential replacing promotion incentives. Our evidence is generally consistent with a reduction in the strength of promotion incentives following the reform.

Keywords: career concerns, promotion, Chinese SOEs, executive compensation

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1. Introduction

A surprisingly high portion of the executives of publicly-listed Chinese state-owned enterprises (SOEs) do not receive any compensation from the firms for which they work. During our sample period of 1999–2011, almost 40% of the highest ranked executives in publicly listed Chinese SOEs received zero pay, that is, the pay disclosed for these executive officers/directors in company filings with the Chinese stock exchange is zero.¹ The Chinese business community and popular press are puzzled over this phenomenon and often attribute it to the underdevelopment of the market system in China.² In this paper, we attempt to provide some insight into this unusual compensation practice. We posit that these executives are subject to strong incentives related to career concerns. We show support for this conjecture and evaluate the impact of the incentives on firm outcomes.

The Chinese press refers these executives as “unpaid”, which is a misnomer. Rather than being paid by the publicly-listed companies that officially employ them, most of these unpaid executives are actually paid by their controlling shareholder, with the details of the compensation undisclosed to the public. Controlling shareholders are either a government agency or a parent company controlled by the government. Compared to their peers who are directly paid by the publicly listed companies, compensation of the unpaid executives is unobservable, but is significantly lower³ and Chinese compensation schemes contain few performance-based incentives (Conyon and He 2011; Bryson et al. 2014). In the rest of the

¹ This is different from the case of undisclosed pay. When a firm chooses not to disclose the pay of an executive, the database reports the corresponding pay level as “undisclosed”.

² For example, Business magazine warned that zero pay is terrible, claiming that resulting disincentives could lead to worse consequences than overly high pay (Ma, 2009). Securities Daily reported that 346 CEOs of publicly-listed firms received zero pay in year 2012, and therefore “may not care about firm performance” (Jiao, 2013). More recently, China Securities Journal pointed out the executives in almost 300 firms received zero compensation, while their peers in other firms enjoyed a significant raise (Dai, 2016).

³ Starting in 2012, firms were required to disclose compensation even for CEOs who were paid by the parent. In untabled analysis for 2012, we find that total compensation is significantly lower for CEOs who were paid by the parent rather than by the company for which they worked.

paper, we refer the executives that are paid by their firms' controlling shareholders as "parent-paid" and those that are paid directly by their firms as "firm-paid".

This phenomenon of parent-paid Chinese executives is unique and differs significantly from a few other cases of compensation practice that may seem similar on the surface. For example, many tech company founders such as Google's Sergey Brin and Larry Page, Facebook's Mark Zuckerberg, Tesla's Elon Musk, choose to receive zero compensation or one dollar token pay. In these cases, the lack of pay is due to their enormous personal wealth (Hamm, Jung, and Wang, 2015), most likely created through their company share ownership. Clearly, this is not the case for Chinese CEOs, since these CEOs own very few shares of their companies, if any. Another case is where CEOs perform multiple responsibilities within the business group, but are only paid by the headquarters. This is common in family firms or firms owned by private equity investors. We rule out this possibility by controlling for potential part-time work status of the executives in our sample.

The uniqueness of these parent-paid executives stems from the fact their incentives are not only driven by the financial rewards alone. While they are significantly under-paid and under-incentivized through monetary compensation, other forms of incentives could make up the missing portion of motivation and discipline. In this paper, we argue that the parent-paid executives are strongly motivated through career. We investigate how career concerns may motivate parent-paid executives and whether outcomes differ from a pure conventional financial incentive approach.

We first investigate whether career concerns incentives differ between parent-paid and firm-paid CEOs. Career concerns are an incentive related to "concerns about the effect of current performance on future compensation" (Gibbons and Murphy, 1992, p. 468). Career concerns can be manifested through consideration of one's reputation, hope for promotion, or

avoidance of termination, etc. Fama (1980) suggests that competition in the labor market alone might give managers sufficient incentives without explicit agency contracts. In our setting, the primary labor market mechanism for CEOs to advance is promotion. We explore two types of promotions available to CEOs: 1) political promotion to a position as government official; or (2) business promotion to a higher-level title in the parent group or an executive position at a larger firm.

Using a dataset of 8,602 SOE firm-years between 1999 and 2011, we find that relative to firm-paid CEOs, parent-paid CEOs have a three times higher probability of receiving a promotion in the following year. Our results validate the conjecture that parent-paid CEOs have a strong incentive related to future promotion. Using two-stage models for our main analyses and further robustness tests, we rule out the possibility that the higher promotion probabilities are driven by selection of superior quality CEOs for the parent-paid contracts.

We next examine the association between performance outcomes and career concerns as a managerial incentive. Contrary to the concerns raised by the Chinese popular press, we do not find evidence that the performance of firms with parent-paid CEOs is inferior to their peers with paid CEOs. In fact, we find that firms with parent-paid executives tend to have higher return on assets, asset turnover, and asset growth.⁴ This result indicates that career concerns can effectively motivate CEOs.

It is possible that the strong promotion incentives drive parent-paid CEOs to act in preference to the parent company rather than minority shareholders. Prior research provides evidence that Chinese SOEs engage in “tunneling”—the transfer of resources from publicly listed subsidiaries to the government-owned parent firm. We examine tunneling as a potential

⁴ We also examine the performance outcomes measured as stock returns and growth in number of employees but do not find any statistically significant differences between the two groups. Sales growth is marginally greater for the firms with unpaid CEOs.

downside of the promotion incentives. However, we fail to find evidence that the firms with parent-paid executives tunnel more, as measured by net transfer to the parent firm and other accounting receivables. On the contrary, for the entire sample period, firms with parent-paid CEOs tunnel less via transfers than firms with firm-paid CEOs.

To more closely link our results to the composition of incentives, we conduct an event study using the Split Share Structure Reform in 2005 (hereafter, “reform”). The reform allows shares that were initially nontradable (typically owned by the government) to become freely traded in the stock market. The reform significantly mitigates conflicts between controlling and minority shareholders. It further privatizes and liberalizes the Chinese stock market and has affected the Chinese financial market in many ways, such as improving liquidity, operating efficiency, and corporate governance (Li et al. 2011; Chen et al., 2012; Liao et al. 2014; Ke et al. 2015). The reform reduces the need for internally generated incentive systems by strengthening the effects of external governance mechanisms, such as takeovers and monitoring by other groups of shareholders. We expect the incentive effect of promotion on parent-paid executives to become weaker after the reform, with incentives becoming more similar across parent-paid and firm-paid executives. The results of our analyses are generally consistent with our prediction. We find that the reform reduced the probability of future promotion for parent-paid CEOs, along with a decline in performance differences between firms with parent-paid versus firm-paid CEOs. We do not find any evidence supporting increased tunneling after the reform.

Our paper makes several contributions to the literature. First, it provides a unique natural experiment to empirically examine the effectiveness of career concerns relative to monetary incentives through performance-based pay. Career concerns have been difficult to examine with data from typical executive labor markets such as in North America, since they essentially represent an unobservable variable at individual level. Empirical studies have

provided support for the effectiveness of career concerns in various settings, such as mutual fund managers avoiding termination (Chevalier and Ellison 1999), CEOs near retirement seeking for board positions (Brickley et al, 1999), mid-level managers seeking promotions (Ederhof, 2011), and sports coaches facing intense labor market competition (Cadman and Cassar, 2014). This prior research could only use inexact measures such as the executives' age and tenure to proxy for career concerns. In contrast, Chinese SOEs offer a unique setting where the firm-paid and parent-paid executives face different incentive methods and where we can control for individual characteristics.

Second, we provide insights regarding a significant portion of firms that have been ignored in prior literature. CEOs of almost 40% of the firms in our sample that have parent-paid CEOs are generally omitted from research on Chinese compensation because their pay is not reported (e.g., Conyon and He 2011). This results in an incomplete picture of compensation practices and their impact on Chinese companies. Furthermore, prior research has shown that the pay-performance sensitivity in Chinese firms is significantly lower than that of comparable American firms (i.e., Conyon and He 2011; Bryson et al. 2014). The managerial incentive through performance-based pay seems to be especially low in publicly listed Chinese SOEs. We find evidence that career concerns can provide as strong (if not stronger) incentives as conventional performance-based pay and that this incentive scheme does not appear to lead to anti-productive behaviors such as tunneling. Our findings thus provide insights into why Chinese SOEs perform well despite their seemingly inadequate use of typical incentives.⁵

Third, given the prevalence of business groups in emerging markets and some developed countries, our findings have implications for design of employment contracts

⁵ This incentive scheme fits the Chinese setting, where parent-paid CEOs expect to be promoted and the Chinese government is constantly in need of executive talent. In a different market, the managerial labor may not enjoy the same relation between demand and supply.

involving unconventional incentive mechanisms. Prior literature suggests the mixed findings on tunneling in business groups (e.g., Johnson et al. 2000; Bertrand et al. 2002; Siegel and Choudhury 2012; Buchuk et al. 2014). Our results of less tunneling by parent-paid executives indicate that potential promotions provided by business groups may help explain the mixed findings.

Finally, our study shows unexpected consequences of the Split-Share Structure Reform on the incentives of SOEs. Prior literature emphasizes efficiency gains from increased marketization of stemming from the reform (i.e., Li et al. 2011; Chen et al., 2012; Liao et al. 2014). Our results indicate that the reform has damped the strength of career concern incentives for SOE executives and that after the reform, firm performance differences between companies with firm-paid and parent-paid CEOs narrow.

2. Background and hypotheses development

2.1. Career concerns

An economic agent can be motivated through various incentive schemes. An explicit incentive system typically includes a formal contract that specifies a pre-determined relation between the manager's performance and pay. In contrast, career concerns do not involve formal contracts. Instead, the agent exerts effort today in the hope for a reward tomorrow. This reward could be a new job, a promotion, avoiding termination, or simply a good reputation in the labor market. For example, a politician or a junior faculty member may work diligently in the hope of being reelected or tenured, despite the lack of performance-based pay in their compensation.

Holmstrom (1982) models career concerns through a two-period game, in which the agent's second-period pay depends on first-period performance. The agent must determine

how much effort to exert in the first period to maximize total utility across both periods. The principal tries to infer the agent's ability from the first-period performance and uses that information to determine second-period pay. In equilibrium, the agent exerts positive effort even when wages in both periods are fixed (zero pay-for-performance sensitivity).⁶

Empirical research on career concerns often uses age or job horizon as a proxy for strength of the incentive. For example, Gibbons and Murphy (1992) find that the general sensitivity of the executive's pay is significantly stronger for those who will retire soon than for those who still have many years until retirement. This is because younger executives have stronger career concerns and can be motivated without performance-based pay. On the contrary, compensation for older executives must be explicitly linked to their performance for them to be motivated. Chevalier and Ellison (1999) study the behavior of mutual fund managers and their incentive to avoid termination. They find that young managers herd to avoid unsystematic risk and stay in their jobs. Yim (2013) finds that younger CEOs are more aggressive in mergers and acquisitions, since acquisitions tend to significantly increase a CEO's future compensation.

Of course, career concerns are not limited to young managers. For example, CEOs near retirement, who seek post-retirement board positions, demonstrate significantly better performance (Brickley et al, 1999). Although Gayle et al. (2015) suggests that career concerns are most effective at the middle ranks, Ederhof (2011) finds evidence that mid-level managers, who have weaker chance to be promoted to the top level, have fewer incentives related to career concerns and receive stronger bonus-based incentives,.

China offers a unique experimental setting in which to examine incentive issues related to career concerns. Due to its political ideology and rapidly expanding economy, the

⁶ Note that the incentive provided by career concerns is not without flaws: agents typically over-exert earlier in their careers and under-exert later.

incentive mechanisms used in China and other parts of Asia often differ from those in western economies. Research indicates lack of a link between CEO pay and firm performance.⁷ Firth, Fung, and Rui (2006a) find evidence that Chinese SOEs with government agencies as their largest shareholders do not use performance-related pay for their executives. Pay-performance sensitivity for firms controlled by private block holders is quite low even, although CEO pay appears to be positively related to stockholders' wealth, firm profits, or both (Conyon and He 2011). Due to the lack of performance-related pay, the Chinese market is an interesting setting to study alternative incentive mechanisms.

2.2. Institutional setting

As China transitions to a market economy, Chinese SOEs have become increasingly more market-oriented and the Chinese government has sought to enhance SOE efficiency. However, due to social and political concerns SOEs continue to be subject to government interference (Shleifer and Vishny, 1997). The government can compel SOE firms to enter government-favored industries, pay additional taxes, increase local employment regardless of need, or provide social services to alleviate fiscal and employment problems (Bai and Xu, 2005; Bai et al. 2006). SOEs also are subject to fulfilling governmental objectives (Lin and Li 2008). For example, the mission set out for the Chinese SOEs, under the 11th five-year plan (2006–2010), was to “grow bigger and stronger” and, under the 12th five-year plan (2011–2015), to “upgrade economic structure and pursue excellence.” These objectives do not necessarily align with market incentives.

Representing the government, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) regulates and supervises SOEs at both national and local levels. SASACs appoint, evaluate, compensate, dismiss, and promote

⁷ Relatedly, Kato and Long (2006) find a weak link between turnover and performance for listed firms controlled by the state, although they do not explore whether the turnover was due to a promotion or demotion.

SOE executives. Although SASACs have tried to promote incentive pay that links firm performance measures such as profit, profitability, and Economic Value Added[®] to salaries, their efforts have largely been unsuccessful. This is largely because SASAC decisions often reflect political priorities of the government rather than market-based considerations. The majority of executive salaries still depend on firm location, industry, firm size, and the executive's bureaucratic rank, job type, and personal qualifications.

The majority of SOE executives come either from the bureaucratic system or from internal SOE promotions. Due to social concerns, the government has imposed regulations capping executive compensation at some multiple of the average pay of employee.⁸ Moreover, SASACs are conservative with respect to providing high-powered incentives such as equity compensation. Even in the rare cases when executives do get some equity incentives, it is still difficult for them to pocket the gains from increased stock value. These granted stocks are thus more window-dressing than genuine compensation (Chen et al. 2013).

Career incentives play a large role for SOE executives. After serving in SOEs for a length of time, many SOE executives obtain government positions. An example is Gang Xiao, the former chairman of Bank of China (a central SOE), who was promoted by becoming the chairperson of China Securities Regulatory Commission in 2013 (the regulator of Chinese stock market). SOE executives can also be promoted through transfer to other SOE. On May 27, 2016, Zou Lei, the chairman of Harbin Electric Corp., became the chairman of Dongfang Electric Corp., and Zefu Si, the general manager of Dongfang Electric Corp., became the chairman of Harbin Electric Corp. In both cases, the new positions were

⁸ For instance, in 2004, SASAC issued "Interim measures on compensation of managers in central enterprises". It specified that base salary of a manager could not exceed 5 times of average employee salary in SOEs. Starting in 2015, SOEs controlled by the central government face further requirements that limit the level of executive pay.

with larger companies, resulting in more prestigious positions. Appendix A provides an example of the structure of a typical local-level SOE.

2.3. Research on compensation incentives in Chinese SOEs

Prior literature has examined performance-based managerial incentives in the Chinese SOE setting, although the findings are inconsistent. Mengistae and Xu (2004) find that unlisted SOE executives' pay is linked to firm performance. Groves et al. (1995) find that management turnover in unlisted SOEs is negatively related to firm performance. Firth et al. (2006b) find that listed SOEs exhibit turnover-performance sensitivity. Cao et al. (2011) find a strong relation between executive pay and accounting performance measures for SOEs. However, other studies provide conflicting evidence of performance-based incentives. Firth et al. (2006a) find no evidence of pay-for-performance sensitivity in firms controlled directly by government agencies, although they find a positive sensitivity in firms controlled by the government through multiple layers. Ke et al. (2012) find no relation between executive turnover and firm performance in SOEs.

Related to our study, Cao et al. (2014) examine the substitution effect between the political motivation and monetary incentives. Specifically, they find that monetary incentives (based upon levels of compensation) are weaker when CEO incentives are driven by political career concerns. However, their regression models examine the relation between current year promotion and current year performance. Career concerns should be measured ex ante—the expectation of promotion provides the incentive. Further, because Cao et al. (2014) include monetary compensation in their analyses, the large number of parent-paid executives are missing from their sample.

A substantial literature has examined implications of political connections as a proxy for career concerns. Li et al. (2008) find that politically connected CEOs in privately owned

enterprises have a positive effect on firm performance and enhance profitability. Fan et al. (2007) focus their research specifically on China's newly partially privatized firms. Based on data from 1993 to 2001, they find that three-year post-IPO stock returns are lower for firms with politically connected CEOs than for those with nonpolitically connected CEOs. In contrast, using data from 2001 to 2005, Hu and Leung (2009) find a significant increase in firm performance following the appointment of political executives in SOEs--performance improvement that does not occur in firms that appoint managers without political backgrounds and experience. Overall, the results in this literature do not find a consistent association between political connections and firm performance. It therefore remains an open question how political connections affect CEO behavior.

We argue that political connection is not necessarily a good proxy for career concerns as an incentive mechanism. While political connections may increase the number of available jobs, promotions are more likely to be based on performance while on the job. Promotions for CEOs are also likely to be business rather than political in nature (in our sample, they are twice as likely) and are therefore less likely to be driven by political connections. Our setting thus provides a much cleaner proxy for career concerns by using the probability of future promotion. Our models also control for the CEO's work history in the government, which has an indirect relation with these incentives.

2.4. Hypothesis development

Unlike firm-paid CEOs, parent-paid CEOs are less likely to have contracts that include performance-based pay. Their pay is fixed, based on their pay grade and seniority. Although they may receive nonmonetary perquisites, granting of these benefits does not appear to be performance-based. This means that the SOEs cannot rely on monetary incentives to provide incentives for the parent-paid CEOs. We therefore argue that the

primary performance incentive for these executives is the possibility of promotion (i.e., career concerns) (Holmstrom 1982). A higher likelihood of promotion increases the strength of the incentive, so stronger incentives related to career concerns should manifest in a higher likelihood of future promotion for parent-paid CEOs in comparison with firm-paid CEOs. Our first hypothesis is therefore:

H₁: Ceteris paribus, relative to firm-paid CEOs, parent-paid CEOs have higher probability of future promotion.

Given the incentive related to promotion for parent-paid CEOs, a natural question that arises is the effectiveness of this incentive, especially in comparison with the CEOs' firm-paid peers. It is possible that this type of contract results in stronger incentives for managers to perform. Of course, assuming incentive mechanisms are applied in an optimal way, *ceteris paribus* there should be no difference in performance outcomes under the different incentive schemes. However, off equilibrium results can always occur. For example, parent-paid CEOs may have better connections with the government and thus may enjoy an unfair advantage. On the other hand, the parent SOE may put the CEOs in place to extract resources from the company for the controlling shareholder, which would result in lower levels of financial performance and lower efficiency. It is thus an empirical question whether the promotion incentives related to career concerns result in the company performing better relative to more traditional compensation contracts, which place a higher weight on explicitly defined performance-based pay. This leads to our second hypothesis, with two parts.

H_{2a}: Ceteris paribus, financial performance of companies with parent-paid CEOs does not differ significantly from companies with firm-paid executives.

H_{2b}: Ceteris paribus, operational efficiency in companies with parent-paid CEOs does not differ from companies with firm-paid executives.

While a private firm seeks to maximize its profit due to market incentives, SOE interests at least partially reflect those of the government. Thus SOEs often maximize a weighted average of firm profit and the welfare of other parties in the economy. Thus, SOEs may place more emphasis on firm growth, because a larger organization is more likely to fulfill the societal needs of more jobs and goods. Further, unlike a private firm, an SOE may consider employment as a high priority and have incentives to overproduce (Bova, 2015).

An additional factor is that the parent companies for our sample firms are not necessarily publicly traded. These untraded parent firms are also SOEs and are even more likely to have a broader objective than publicly traded subsidiaries. These firms also lack sufficient external monitoring to discipline managers. If possible promotion provides effective incentives for achieving the parent SOE's goals, parent-paid CEOs should be more likely to focus on overall growth. We should therefore observe higher growth in firms with parent-paid CEOs relative to firms with firm-paid CEOs:⁹

H_{2c}: Ceteris paribus, growth in companies with parent-paid CEOs is significantly higher than in companies with firm-paid executives.

It is possible that parent-paid executives are appointed to siphon wealth to the SOE parent. Prior research provides evidence that Chinese CEOs engage in “tunneling,” which is a transfer of subsidiary resources to the parent firm. Jiang, Lee, and Yue (2010) find that from 1996–2006 a significant amount of funds was siphoned from hundreds of Chinese firms to controlling shareholders in the form of “other receivables.” Most of these intra-company loans did not accrue interest. Even when there was interest charged, neither interest nor principle was typically paid back. Jiang et al. (2010) find significant negative impacts on the

⁹ Consistent with our earlier arguments, to the extent that the unpaid CEO overly-emphasizes growth, overall financial performance may be hurt.

affiliates' financial performance related to tunneling. Cheung et al. (2010) find negative impacts of tunneling particularly for local (as opposed to central government) SOEs.¹⁰

In our setting, the association between tunneling and whether the CEO is officially paid by the company is not straightforward. If the parent-paid CEO is placed in the company to extract resources, then there should be more tunneling. Wang and Xiao (2011) examine the association between tunneling and executive compensation and incentives and an inverse relation between pay-performance incentives and tunneling. Since parent-paid CEOs have lower pay-performance sensitivity, they may tunnel more. On the other hand, due to stronger career concerns incentives, parent-paid CEOs may have stronger incentives to run the business successfully and thus would be less likely to tunnel:

H₃: Ceteris paribus, tunneling by companies with parent-paid CEOs does not differ from tunneling by companies with firm-paid CEOs.

Thus far, we have argued that parent-paid CEOs' behaviors are predominantly affected by promotion incentives, since other types of incentives such as monetary pay for performance and market incentives play a small role in their contracts. However, if the nature of incentives changes, we expect to see a change the strength of promotion incentives.

The Split Share Structure Reform of 2005 significantly changed the structure of incentives within the Chinese financial market. Prior to the reform, the Chinese A-share stock market had a "split share" structure, featuring two types of shares: tradable and non-tradable. The non-tradable shares (constituting about two-thirds of the stocks in the A-share market) were stocks primarily owned by the Chinese government and affiliates. The split share structure was a legacy from the partial

¹⁰ A firm is a local SOE if its largest shareholder is the local government or an entity whose ultimate owner is a local government.

privatization of the Chinese economy and caused problems such as market illiquidity, operating inefficiency, and poor corporate governance (Sun and Tong, 2003; Wei et al., 2005).

The reform allowed the formerly non-tradable shares in the A-share market to gradually free float, with some SOE firms selected for pilot tests and other firms following shortly afterward. By the end of year 2007, almost all stocks in the Chinese A-share market were converted to tradable shares. Research has provided empirical evidence consistent with improved market incentives following from the reform, with better risk sharing (Li et al., 2011), improvements to SOE performance (Liao et al. 2014), improved corporate governance (Cumming et al., 2011), and reduced cash holdings by SOE firms (Chen et al., 2012).

We argue that the reform affects incentives for SOE firm executives overall and will differentially impact firm-paid versus parent-paid CEOs. After the reform, market incentives become more effective because SOE block holders can now exit (Hope et al. 2015) and the corporate control market becomes an active tool for the government (Ke et al. 2015). The reform thus allows the market to more strongly discipline CEOs through mechanisms such as takeovers and enhanced monitoring by other groups of shareholders, rather than having to rely on promotion incentives. We thus conjecture that the shift toward market discipline will reduce the intensity of promotion incentives provided. Because we expect parent-paid CEOs to initially have the strongest promotion incentives, as both types of firms become more exposed to market incentives, we expect that parent-paid CEOs will face a larger reduction in promotion incentives:

H4: Relative to the pre-reform period, the probability of future promotion for parent-paid CEOs decreases after the reform.

3. Data and sample selection

Our initial sample consists of all local SOEs listed in Shanghai and Shenzhen stock exchanges from 1999–2011.¹¹ We exclude firms in the financial industry and those with missing information, resulting in a total of 8,602 final firm-year observations.

We choose 1999 as the beginning of our sample period because that is when publicly listed firms in China started to systematically report executive compensation. Sample firms' financial information, compensation information, and governance information are from the China Stock Market and Accounting Research database (CSMAR). Following prior literature (Firth et al. 2006b; Kato and Long, 2006; and Ke et al. 2012), we refer to the “chairperson of the board,” the highest-ranked executive in the database, as the CEO of the sample firm. We manually collect other executive characteristics from their published biographies. We also manually collect information about each CEO's next job after s/he leaves the listed firm by reading the firms' announcements and news reports.

We separate our sample into parent-paid and firm-paid CEOs. We define a CEO as parent-paid if s/he receives no compensation from the listed firm and as firm-paid CEO if compensation is greater than zero. Table 1 contrasts the sample sizes of firm-paid CEOs and parent-paid CEOs by year. Among the total of 8,602 firm-year observations, 3,379 (approximately 40%) report that the CEO receives zero compensation from the firm. The percentage of parent-paid CEOs is quite stable across the sample period, indicating persistence of this unusual compensation practice.

(Insert Table 1 here)

¹¹ We focus on local SOEs because there are greater promotion opportunities for CEOs of these firms.

4. Empirical results

4.1. Univariate analyses

Table 2A provides some univariate statistics for the firm-paid and parent-paid CEO samples. Parent-paid CEOs are older and more likely to be male. On average, firm-paid CEOs are 50.4 years old and parent-paid CEOs are almost 51 years old. Both groups are predominately male. While these figures differ from a statistical perspective, the values are not economically different. There are much greater differences across the subsamples in other areas. Parent-paid CEOs are more likely to have work experience in the Chinese government, including in the military (42.1% for parent-paid versus 34.6% for paid), implying a closer tie with the government than for firm-paid CEOs.¹² Parent-paid CEOs are also less likely to hold dual positions (chairperson of the board and general manager) in the firm (2.0% for parent-paid versus 18.9% for paid), indicating that they are less engaged in firm operations. The average tenure of the CEOs does not significantly differ between parent-paid and firm-paid CEOs (4.467 years versus 4.558 years respectively). Parent-paid CEOs are much more likely to hold a job title in the parent company (77.4% versus 45.8% for firm-paid CEOs). In addition to job titles in the listed firm and its subsidiaries, parent-paid CEOs on average have 1.8 other job titles, which is significantly more than the average of 1.3 job titles for firm-paid CEOs.¹³

We examine two types of promotions: (1) political promotion to a position as government official or (2) business promotion to a higher-level title in the parent group or an executive position at a larger firm. Overall, 8.6% of the parent-paid CEOs experience a promotion, compared with only 2.7% of firm-paid CEOs. This difference between the groups

¹² We note, however, that there are a significant number of cases where the same CEO appears in our sample as paid in one year and unpaid in another year. This means that the choice of contract is not CEO-specific. We also find that the type of contract can differ from year to year within the same firm.

¹³ Note that the CSMAR dataset only systematically provides information of job titles in other firms starting in 2001.

in the probability of future promotion (either political promotion or business promotion) after they leave the publicly listed firms is both statistically and economically significant. When we further divide the probability of promotion into business and political promotions, the parent-paid group exhibits significantly higher level of promotions in both categories than the firm-paid group by 1.2% (for political promotions) and 4.7% (for business promotions). This result provides preliminary evidence that these two groups of CEOs face different incentive schemes and supports our contention that political incentives are not driving the behaviors that we examine. Specifically, relative to their firm-paid peers, the parent-paid group is more likely to be incentivized by promotions rather than monetary pay.

We find further differences across CEO types at the firm level. Firms with parent-paid CEOs are significantly larger, with mean total assets of RMB 4.5 billion, which is almost 10% higher than for firms with firm-paid CEOs. The largest shareholder for firms with parent-paid CEOs has an average stock holding of 45.5%, which is 4.5% more than the average government stock holding in the firm-paid group. CEO share ownership is quite small for both groups, although statistically higher for firm-paid CEOs.¹⁴ On average, the parent-paid executives own 26,357 shares, significantly lower than 557,056 shares by the firm-paid executives. The two groups of firms are similar with respect to the degree of leverage and the percentage of independent directors on board of directors.

In general, operating performance is similar across samples, although average sales growth and asset turnover for the parent-paid group are significantly higher than for firms with firm-paid CEOs ($p < .01$ for both). Although both groups have a negative average stock return, the parent-paid group's return is about 2% less negative than the firm-paid group.

¹⁴ Many tech company founders, such as Google's Sergey Brin and Larry Page, Facebook's Mark Zuckerberg, Tesla's Elon Musk, choose to receive zero compensation due to their enormous personal wealth, most likely created through their ownership of company shares. Clearly, this is not the case for Chinese CEOs, since these CEOs own very few shares or their companies.

Both groups have similar administrative expenses, changes in total assets, and changes in the number of employees.

Following Cheung et al (2010), Jiang et al. (2010) and Jian and Wong (2010), we use two proxies for tunneling: “*Transfer*” and “*OtherAR*.” *Transfer* is defined as total amount of fund transfers through related party transactions from the listed firm to its parent company and/or other firms in the same group over total assets. *OtherAR* is defined as the firm’s balance of other receivables over total assets. Although tunneling via “*Transfer*” does not differ significantly by CEO type, tunneling via *OtherAR* is significantly higher in the firm-paid sample.

Table 2B provides descriptive statistics on CEO turnovers in our sample by turnover type. Out of the 1624 cases of CEO turnover, more than 56% occurred in the firm-paid group (a smaller portion of the overall sample). Parent-paid CEOs are significantly more likely than firm-paid CEOs to leave due to a promotion, accounting for almost 73% of the total promotion cases. Turnover in all the other categories of turnover, including control right transfer, retirement, demotion, and criminal discharges, happens much more frequently for firm-paid CEOs.

(Insert Table 2 here)

4.2. Parent-paid CEOs and future promotion

To test whether compared to their firm-paid peers, parent-paid CEOs have a higher probability of being promoted (H1), our analysis employs a two-stage Heckman test. This

mitigates the possible selection issue, that better candidates for promotion are given parent-paid positions.¹⁵:

$$Ppaid_t = \beta_0 + \beta_1 IndustryPay_t + \beta_2 Age_t + \beta_3 Gender_t + \beta_4 Dual_t + \beta_5 AROA_t + \beta_6 SalesGrowth_t + \beta_7 Size_t + \beta_8 Leverage_t + \beta_9 Largest_t + \beta_{10} CEOshare_t + \beta_{11} Government_t + \varepsilon_t \quad (1a)$$

$$Promotion_{t+1} = \beta_0 + \beta_1 Ppaid_t + \beta_2 Age_t + \beta_3 Gender_t + \beta_4 Dual_t + \beta_5 AROA_t + \beta_6 SalesGrowth_t + \beta_7 Size_t + \beta_8 Leverage_t + \beta_9 Largest_t + \beta_{10} CEOshare_t + \beta_{11} Government_t + \beta_{12} IMR_t + \varepsilon_t \quad (1b)$$

The first stage (1a) is a maximum likelihood probit regression on *Ppaid*, which represents the type of incentive the CEO faces. *Ppaid*, takes value 1 if the CEO is parent-paid and 0 otherwise. The first stage employs *IndustryPay* as an instrumental variable while controlling for all other control variables in regression model (1b). *IndustryPay* is defined as the percentage of parent-paid executives in the SOEs from same industry. High industry percentage of parent-paid executives may indicate industry norm, and thus positively relate to a firm's parent-pay practice. The opportunities of future promotion are mainly determined by local government where a SOE is located, and are not necessarily related to the industry norm. The dependent variable for the second stage (1b) is the future probability of promotion (*Promotion*), which is a dummy variable that equals 1 if the CEO leaves his firm for a job in government, a higher position in the parent group, or an executive position of a larger firm in year t+1 and 0 otherwise. We analyze three alternative promotion-related dependent variables: *PoliticalP* and *BusinessP* are related to promotions, and *Demotion*, which represents the opposite of a promotion. *PoliticalP* is a dummy variable that equals 1 if the CEO leaves for a job in government in year t+1 and 0 otherwise. *BusinessP* is a dummy variable that equals 1 if the CEO leaves for higher position in the parent group or executive position of a larger firm in year t+1 and 0 otherwise. *Demotion*, is a dummy variable, taking

¹⁵ A CEO may be pre-selected into a certain incentive mechanism due to his or her personal traits. For example, s/he may exhibit a particularly strong political ambition and may respond more to career concerns rather than to monetary incentives.

the value 1 when the reason of turnover is due to reasons other than retirement, control right transfer, or promotion.

We include a battery of control variables to separate the promotion incentive from promotion based upon CEO characteristics and firm performance. *Age* is the CEO's age. *Gender* is a dummy variable that equals 1 if the CEO is male and 0 otherwise. *Dual* is a dummy variable, taking value of 1 if a chairman is also the general manager of the listed firm and 0 otherwise. *Government* is a dummy variable that equals 1 if the CEO had worked for the government or military before joining the listed firm and 0 otherwise.¹⁶ *AROA* is the average of return on assets (net income deflated by average assets) during CEO's tenure in a given firm. *Sales growth* is firm sales in year *t* minus sales in year *t*-1, deflated by sales in year *t*-1. *Size* is natural logarithm of the firm's total assets. *Leverage* is the ratio of the firm's total liabilities over total assets. *Largest* is the percentage of the firm's stockholdings owned by the largest shareholder whose ultimate owner is the Chinese government. *CEOshare* is the percentage of shares owned by a CEO. *IMR* is the inverse mills ratio computed from the first-stage regression (1a). We also include fixed effects for industry and year.

Table 3 provides the results of our regression models (1a and 1b). In Column (1), the first stage probit, *IndustryPay* is positively associated with *Ppaid*, indicating that a CEO is more likely to receive compensation from the parent firm when there is a high percentage of executives paid by their parent companies in the same industry. We also find that companies with higher sales growth are more likely to have parent-paid CEOs. CEOs with a title of general manager and better ROA during the tenure are less likely to have parent-paid

¹⁶ This variable has been used previously to investigate implicit incentives related to the CEO's political connections (e.g., Li et al. 2008; Hu and Leung 2009).

contracts. By contrast, CEOs with prior government history and with fewer equity holdings are also more likely to have parent-paid contracts.¹⁷

The coefficients of *Ppaid* are significantly positive for all three measures of future promotion, and significantly negative for demotion. In the *Promotion* model (column 2), the value of the coefficient of *Ppaid* (0.65) implies that holding other variables at the mean value, there is a marginal 6.3% increase in the general promotion probability in parent-paid firms. In the remaining models, we find being parent-paid is associated with 1.0% (4.9%) probability of being promoted to a political (business) position, and 3.1% reduction in the probability of being demoted.¹⁸

Results for control variables are generally in alignment with our expectations. *AGE* is significantly negatively associated with the probability of future promotion, likely because the Chinese government in principle does not promote any official who is older than 60.¹⁹ This effect is stronger in the *PoliticalP* model than in the *BusinessP* model since business promotions are less subject to the age cap. In addition, we find holding dual positions in a firm (*Dual*), is significantly related to the probability of having a firm-paid position, but is not significantly related to promotion. A CEO's work experience in the government also plays a significant role in future promotion, although only for political promotions; it has no significant effect on the chance of business promotion. Surprisingly, *AROA* is not related to business promotions. But it is strongly negatively associated with demotions, indicating that CEOs with better operating performance during the tenure are less likely to be demoted.

¹⁷ However, as our further analyses explore, having a parent-paid contract is neither firm- nor CEO-specific as across time, our data include a significant number of CEOs experiencing and a significant number of firms offering both types of contracts.

¹⁸ For the dependent variable, we also try a lag of two years and three years, i.e. *Promotion_{t+2}* and *Promotion_{t+3}*, and the results remain generally the same.

¹⁹ The retirement age for government employees is 60 for men and 55 for women. Male (female) officials with higher rank than provincial governor can retire at 65 (60). The explicit age cap is part of an effort to lower Chinese government officials' average age.

(Insert Table 3 here)

Since the coefficient of IMR is insignificant in all models, we address the potential selection issue in an alternative way. We examine a subsample of CEOs whose compensation contracts have been switched, either from firm-paid to parent-paid or from parent-paid to firm-paid. This switch offers a unique setting to control for pre-selection effects. As before, we include variables for CEO characteristics and firm performance. Controlling for these factors, we expect to see a decrease (increase) in the probability of promotion when the CEO switches from parent-paid to firm-paid (paid to parent-paid), which would be consistent with a greater use of promotion incentives when the CEO is parent-paid.

Using subsamples of CEOs who switched contracts, matched with CEOs who did not switch, our logistic regression model is

$$\begin{aligned} Promotion_{t+1} = & \beta_0 + \beta_1 Switch_t + \beta_2 Age_t + \beta_3 Gender + \beta_4 Dual_t + \beta_5 ROA_t \\ & + \beta_6 Sales\ Growth_t + \beta_7 Size_t + \beta_8 Leverage_t + \beta_9 Largest_t + \beta_{10} CEOshare_t \\ & + \beta_{11} Government_t + \varepsilon_t, \end{aligned} \quad (2)$$

where *Switch* is one of two variables: *Ppaid to Fpaid* and *Fpaid to Ppaid*. For CEOs switching from parent-paid to firm-paid, we match with CEOs who are parent-paid during their entire tenure and construct the dummy variable *Ppaid to Pay*, which equals 1 if a CEO receives a positive salary and 0 otherwise. For CEOs switching from firm-paid to parent-paid, we match CEOs who switch from firm-paid to parent-paid with CEOs who are paid directly by their firms during their entire tenures and construct the dummy variable *Fpaid to Ppaid*, which equals 1 if a CEO receives no salary and 0 otherwise.²⁰ We expect *Ppaid to Fpaid* to be negatively associated with a CEO's future chance of promotion and *Fpaid to Ppaid* to have positive association.

²⁰ Most CEOs who switch do so only once. Consideration of multiple switches does not impact our inferences.

Table 4 reports results of the promotion analysis for CEOs switching from parent-paid to firm-paid versus their matched parent-paid peers. We find that switching from parent-paid to firm-paid ($Ppaid$ to $Fpaid = 1$) significantly hurts a CEO's future chance of business promotion. Specifically, switching from a parent-paid contract to a firm-paid contract is associated with a 4.1% reduction in the probability of future business promotion.²¹ Table 5 reports regression results for CEOs switching from firm-paid to parent-paid versus their matched firm-paid peers. $Fpaid$ to $Ppaid$ has significant positive coefficients for all the measures of promotion and a significant negative coefficient for demotion. Column (1) indicates a 5.1% increase in the overall likelihood of promotion, mainly driven by business promotions (an increase of 1.7%). In Table 5, column 4 shows a significant reduction in the probability of demotion for switching from being firm-paid to parent-paid.

(Insert Table 4 and Table 5 here)

In summary, the analyses on CEOs' incentive method and future promotion provide evidence in support of H1, that is, that parent-paid CEOs have strong incentives related to their career concerns. While they may not receive performance-based pay in the current period, parent-paid CEOs enjoy a significantly higher probability of being promoted.

4.3. Parent-paid CEOs and firm performance

Assuming the two different types of incentive mechanism are applied appropriately in equilibrium, *ceteris paribus* there should be no difference in the CEOs' performance outcome. However, based upon our univariate analysis results, we examine whether CEOs with promotion incentives perform differently than their firm-paid peers. To test for

²¹ The change in contract may result from a secondary selection mechanism. We examine the impact of a change in the strength of the promotion and market incentives in our test of hypothesis H4 to further isolate changes in incentives from other factors that may affect the probability of promotion.

differences in performance across contract types (H2a and H2b), controlling for selection issues as before, we adopt the following two-stage model:

$$Ppaid_t = \beta_0 + \beta_1 IndustryPay_t + \beta_2 Age_t + \beta_3 Dual_t + \beta_4 Size_t + \beta_5 Leverage_t + \beta_6 Largest_t + \beta_7 CEOShare_t + \beta_8 Government_t + \beta_9 Idirector_t + \varepsilon_t, \quad (3a)$$

$$Performance_t = \beta_0 + \beta_1 Ppaid_t + \beta_2 Age_t + \beta_3 Dual_t + \beta_4 Size_t + \beta_5 Leverage_t + \beta_6 Largest_t + \beta_7 CEOShare_t + \beta_8 Government_t + \beta_9 Idirector_t + \beta_{10} IMR + \varepsilon_t, \quad (3b)$$

where the first-stage regression predicts the probability of a CEO being granted with a parent-paid contract, and the second-stage regression examines the effect of parent-paid incentive mechanism on firm performance. *Performance* is measured with different variables, depending on the hypothesis we are testing. For tests of H2a, *Performance* is either *ROA*, which is defined as the firm's net income deflated by its average assets, or *RET*, which is the firm's annual buy-and-hold stock return adjusted by market return. For our test of H2b, *Performance* is *Asset turnover*, which is total sales divided by average total assets. For our tests of H2c, *Performance* is *Sales growth*, which is the firm's sales in year t minus sales in year t-1 and then deflated by sales in year t-1; $\Delta Assets$, the percentage change in total assets; and $\Delta Employees$, log change in the number of employees. These variables capture different aspect of firm performance, especially given the specific nature of Chinese SOEs. *ROA* is the traditional accounting measure for a firm's profitability. *RET* captures a firm's success from the perspective of the financial market. *Asset turnover* measures how efficiently the firm can turn its assets into sales. *Sales growth*, $\Delta Assets$, and $\Delta Employees$ measure the firm's speed of expansion. Expansion is especially meaningful for SOEs, since government-owned enterprises emphasize growth in business scale.

In the first stage regression (untabed), our instrumental variable is positively related to whether a CEO receives compensation from the parent company. Table 6 presents results

for the second-stage regression model (3b).²² We focus our discussion on *Ppaid*, which is our variable of interest. Among the six measures of firm performance, *ROA* is positively associated with *Ppaid* with a statistical significance at 5% level. Specifically, having a parent-paid CEO is associated with 0.5% increase in a firm's return on assets, after controlling for other important variables. Moreover, *Ppaid* is positively associated with $\Delta Asset$, which is significant at the 1% level, implying that a parent-paid CEO is associated with 2.9% of growth in the company's asset growth. However, *Ppaid* is not significant in explaining stock return, asset turnover, sales growth, or the change in the company's number of employees. In sum, we find that firms with parent-paid CEOs do not perform worse than those with firm-paid CEOs. We provide evidence that firms with parent-paid CEOs outperform the control group along some dimensions of performance. We thus find partial support for hypotheses H2a and H2b.

In addition to our variable of interest, several of the control variables are significantly related to the different performance measures. Company size (*Size*) is generally positive and significant in explaining firm performance, indicating that larger firms tend to perform better. *Leverage* is generally negatively associated with firm performance, implying that a more indebted firm is less likely to perform well. The percentage of government ownership, *Largest*, is positively and significantly associated with *ROA* and $\Delta Assets$. Thus the more shares the Chinese government has in a firm, the better the firm seems to perform better in *ROA* and growth of assets. We also control for CEO characteristics as potentially explaining firm performance outcomes. Although CEO share ownership in Chinese SOE firms is generally low, ownership (*CEOShare*) is positively associated with sales growth and asset growth. Whether a CEO holds dual titles in a firm (*Dual*) is significantly associated with all measure of performance, but negative with *ROA* and positive with all other measures. The

²² Due to space considerations, the first stage model results are untabled, but are available from the authors.

CEO's age has mixed results and does not seem to consistently affect firm performance.

Whether a CEO has a government background relates positively to ROA, but negatively with stock return and asset turnover. Further, the inverse Mills ratio is statistically significant in all six columns of the table, indicating there is indeed a selection issue in the analyses of parent-paid incentive's effect on firm performance.

(Insert Table 6 here)

4.4. Parent-paid CEOs and tunneling

Hypothesis H3 explores the association between CEO incentives and tunneling. Because we provide arguments both consistent with and contradictory to tunneling by firms with parent-paid CEOs, we do not have any specific sign predictions. For our hypothesis test, we replace the dependent variable in model (3b) with two proxies for tunneling. Following Cheung et al. (2010), Jiang et al. (2010), and Jian and Wong (2010), *Transfer* is defined as total amount of fund transfers through related party transactions from the listed firm to its parent company, other firms in the same group, or both over total assets. *OtherAR* is defined as the firm's balance of other receivables over total assets.

Table 7 presents results of second-stage regression model (3b). Results indicate that *Ppaid* is significantly negatively associated with *Transfer*, indicating that companies with parent-paid CEOs engage in *less* tunneling. Having a parent-paid CEO is associated with an average of 0.6% less net transfer to the related parties. *Ppaid* is not significantly related to *OtherAR*. While our univariate results indicate a nonzero level of tunneling for our firms, this activity is lower in firms with parent-paid executives. Thus, it does not appear that parent-paid CEOs are put in place to extract resources for the parent SOE.

(Insert Table 7 here)

4.6 The Split Share Structure Reform

While our results show that parent-paid CEOs have stronger incentives from career concerns, and companies with parent-paid CEOs exhibit different performance along some dimensions, there are some unresolved issues in interpreting our results. For example, the result that CEOs who switch between firm-paid and parent-paid contracts face different probabilities of (and hence incentives for) promotion may indicate secondary sorting by the companies. CEOs who are originally seen as less (more) talented and given a firm-paid (parent-paid) position but then elevated (reduced) to an parent-paid (firm-paid) position once their true type becomes known would produce results similar to those reported in our tables 4 and 5. Our controls for CEO characteristics and firm performance in those models may not fully control for this possibility. To provide some additional insights, we examine a setting where the relative strength of the internal career concerns and market incentives changes due to exogenous changes in the regulatory environment.

As we conjecture in H4, the Split Share Reform strengthened SOE market incentives and likely impacted the nature of compensation incentives.²³ Specifically, since the reform strengthens external monitoring, promotion incentives for the parent-paid CEOs may be relatively weakened.

The reform provides a powerful test of the career concerns because it entailed staggered adoption. The reform started on April 29, 2005. Four hundred and three firms finished complying in 2005, 866 in 2006, 103 in 2007, 29 in 2008, and 17 between 2009 and 2011. By the end of 2012, 10 firms had yet to complete adoption.

To test H4, we adapt equation (3b) by including a dummy variable (*Reform*) for the period after firms' reform adoption and an interaction term $Ppaid \times Reform$, which is an

²³ Before the reform, 37.78% of CEOs were parent-paid. Afterward, the ratio increases to 41.36%. This increase is significant at the 1% level.

interaction term between CEO payment type and the time period.²⁴ If the reform weakens the use of promotion incentives for parent-paid CEOs, we would expect to see a negative coefficient of the interaction term.

Table 8 provides the results of the regression analysis. Similar to results of prior analyses, *Ppaid* is positive and significant in the first three columns and negative and significant in the 4th column. Consistent with H4, the coefficient of *Ppaid x Reform* is significantly negative in the third column, indicating a reduced probability of a business promotion for parent-paid CEOs. Note that *Reform* is largely insignificant, implying little change in the probability of CEO promotion after the reform for firm-paid CEOs.²⁵ F tests of *Reform + Ppaid x Reform* suggest that, after the reform, there still a significant difference in the probability of promotion between being firm-paid and parent-paid, although the difference in probability of promotions within business between parent-paid and firm-paid narrows and the probability of demotion decreases less for parent-paid CEOs.. These results provides evidence that the incentives provided to firm-paid and parent-paid CEOs moved closer together after the reform.²⁶

(Insert Table 8 here)

Although not directly related to our hypothesis H4, as an additional test we investigate the impact of the reform on firm performance and tunneling behavior. As market incentives become more important for all firms, there may be a greater focus on financial performance. We thus expect an improvement in financial performance for all companies.

²⁴ Because the sample pre- and post-Reform is constant, selection is not an issue and we do not use a two-stage model.

²⁵ Disclosure requirements for compensation information underwent several changes during our sample period. From 1999 to 2001, Chinese listed firms were only required to disclose a range of compensation for their CEOs. From 2001 to 2005, disclosure requirements were expanded to include the sum of total compensation for the three highest-paid executives. Finally, starting from 2006, all listed firms must report each individual executive's total compensation, which is the sum of salary, bonus, stipends, and other benefits. Since unpaid CEOs' compensation was not disclosed until 2012, which is after our sample period, changes in disclosure do not affect our tests of H4.

²⁶

This improvement may differ across firms with firm-paid versus parent-paid CEOs, however. As market incentives become stronger after the reform and consistent with our results in table 8, differences in incentives for firm-paid versus parent-paid CEOs likely become less extreme. If so, there should be less difference in financial performance between the two sets of firms. In addition, market objectives, such as improved ROA, should become more important than SOE-specific objectives, such as sales growth or tunneling. In untabled results, we find that the Reform was associated with improvements in ROA, stock market return, asset turnover, sales growth, and a decrease in tunneling through other receivables. This positive impact of the reform on ROA, and sales growth was significantly less for parent-paid firms, however. These results are consistent with closer alignment of incentives across parent-paid and firm-paid CEOs. We also find that both types of tunneling decreased significantly more for parent-paid firms.

Overall, we find that the Split Share Structure Reform provided stronger link between executive incentives and stock market performance for all firms. In the course of doing so, it weakened the strength of future promotion as an incentive for SOE CEOs. This implies that the Chinese government is now relying on more market-based incentives to motivate the SOEs' executives. Furthermore, we find the superior financial performance related to parent-paid CEOs has also diminished after the reform, although the amount of tunneling is significantly less for these firms.

4.7. Robustness tests

Our results provide evidence that parent-paid CEOs are associated with a significantly higher chance of future promotion. One may argue that these CEOs do not work full time in their companies, but rather oversee activities and operations both inside and outside the firms simultaneously. This is a common phenomenon with family-owned firms, where executives

may work at the group headquarters while responsible for a subsidiary at the same time. To account for this effect, we control for the CEOs' dual positions when testing Hypothesis 1. We argue when a CEO possesses both titles of Chairperson of the Board and General Manager of the firm, it is highly unlikely that s/he does not work full time at the company. In untabled results, the basic finding that being parent-paid increases (decreases) the probability of promotion (demotion) holds, although CEOs with dual titles have a significantly higher probability of promotion than other parent-paid CEOs.

In a further untabled test, we examine whether being near retirement affects a CEO's chance to be promoted. A CEO's career horizon plays a potentially important role in his or her incentive at work. A CEO who is close to retirement is more likely to play an end game, resulting in a weakened effect of incentives. This effect is especially pronounced in China due to the mandatory age cap for government officials. If the incentive effect of having a parent-paid policy is effective, we expect that it will mitigate the retirement effect. Our results are consistent with this conjecture. As expected, a CEO who is closer to mandatory retirement age is less likely to be promoted. The magnitude of the coefficient estimate and the level of statistical significance are especially strong in the case of political promotions, which is consistent with political promotion being more strictly capped. However, we find that parent-paid CEOs who are near the mandatory retirement age continue to have a higher probability of promotion, indicating that, even when near the mandatory retirement age, parent-paid CEOs are still more likely to be promoted to a political position.

Another factor that may impact promotion decisions for our sample firms is turnover in the local government. Turnover creates uncertainty regarding promotion decisions for existing SOE CEOs. New political leaders may reevaluate the competence and the loyalty of subordinates, which potentially results in greater SOE turnover. On the other hand, if a parent-paid executive has pre-arranged career path, turnover within the political hierarchy

can provide an opportunity for career progression. We construct a dummy variable to measure government turnover, *Local Turnover*, which takes value 1 if there is turnover of the governor in the province where the ultimate controlling owner of a listed firm resides, and 0 otherwise.

The results of this robustness check are presented in Table 9. We find weak evidence that that government turnover significantly affects the probability of political promotions, although it decreases the probability of demotions. We continue to find evidence that parent-paid CEOs have a higher promotion (lower demotion) probability after controlling the uncertainty from government turnover. To mitigate the concerns of selection effects, we further control the number of job titles CEOs hold in other firms, including in the parent company. Our results of two-stage model remain qualitatively the same.

(Insert Table 9 here)

The last robustness check we perform involves the perquisites our sample CEOs may receive. It is well known that Chinese executives enjoy non-cash perquisites in addition to their monetary compensation. This non-cash compensation has performance implications (Yermack 2006; Rajan and Wulf 2006) and may drive our results on performance. To mitigate this alternative explanation, we construct a proxy for perquisites, *Mperk*.

Unlike the United States, China does not require listed firms to disclose executive perks. Therefore we rely on administrative expense (*Admin Expense*) to estimate the amount of perquisite compensation. Following Luo et al. (2011), we regard the abnormal level of administrative expenses as *Mperk*. The normal level of administrative expenses (*Nexp*) is

estimated by using the following equation for each year and for each industry:

$$\frac{\text{Admin expense}_t}{\text{Assets}_{t-1}} = \beta_0 + \beta_1 \frac{1}{\text{Assets}_{t-1}} + \beta_2 \frac{\Delta \text{Sales}_t}{\text{Assets}_{t-1}} + \beta_3 \frac{\text{PPE}_t}{\text{Assets}_{t-1}} + \beta_4 \frac{\text{Inv}_t}{\text{Assets}_{t-1}} + \beta_5 \text{LnEmployee}_t \quad (4)$$

Admin Expense_t is total administrative expenses, excluding annual provisions of asset impairments and direct compensation for directors and top executives. *Assets_{t-1}* is lagged total assets. ΔSales_t is change in sales. *PPE_t* is net value of property, plant, and equipment. *Inv_t* is year-end value of inventories. *LnEmployee_t* is natural log of number of employees. *Mperk* is calculated as the difference between *Admin Expense* and *Nexp*.

Table 10 presents the results on the impact of executive perks. After controlling executive perks, we find that firms with parent-paid CEOs continue to have higher ROA and asset turnover and less tunneling through related party transfers.

(Insert Table 10 here)

5. Conclusion

We examine an unusual phenomenon of Chinese executives receiving zero pay from the firms for which they work. Rather than paid by their immediate employer, these executives are paid by their SOE parent companies. We find that these CEOs are strongly motivated and disciplined by the opportunity of future promotion. Indeed, compared to their firm-paid peers, parent-paid CEOs have a three times higher probability of being promoted. We also find that firms with parent-paid CEOs outperform their peer firms and engage in less tunneling from the subsidiaries to the controlling parent firms. The results are robust to alternative means of controlling for endogeneity and prescreening effects.

To provide additional evidence regarding promotion-related incentives, we conduct an event study using the Split Share Structure Reform in 2006. This reform resulted in a

strengthening of market incentives for all SOEs in China. We find evidence consistent with this increased in emphasis on market incentives resulting in movement away from use of promotion incentives. Our evidence indicates a reduction in the use of promotion incentives, with the probability of promotion for parent-paid CEOs declining following the reform. Furthermore, consistent with movement away from SOE-related incentives and toward market incentives, we find that after the reform, performance characteristics, including financial performance (ROA, stock market returns, and sales growth) and tunneling in the form of inter-company loans with the parent, become more similar for firms that have firm-paid versus parent-paid CEOs.

Our setting provides a unique opportunity to empirically explore the effectiveness of career concerns relative to monetary incentives through performance-based pay. Prior research could only use inexact measures such as the executives' age and tenure to proxy for career concerns. The Chinese SOE setting provides allows a stronger analysis of career concerns, because the firm-paid and parent-paid executives face demonstrably different incentives.

Our results also illuminate executive compensation mechanisms in Chinese SOEs and help explain how parent-paid CEOs can have strong incentives to perform, even in the absence of strong pay-performance incentives. We show that the concerns raised by the Chinese popular press about a lack of performance incentives are ungrounded and that the firms with parent-paid CEOs do at least as well as, if not better than, the control group with firm-paid CEOs.

References

- Bai, C.-E., and Xu, L.C., 2005. Incentives for CEOs with multitasks: evidence from Chinese state-owned enterprises. *Journal of Comparative Economics* 33: 517–539.
- Bai, C.-E., Lu, J., and Tao, Z., 2006. The multitask theory of state enterprise reform: empirical evidence from China. *American Economic Review* 96 (2): 353–357.
- Bertrand, M., P. Mehta, and S. Mullainathan. 2002. Ferreting Out Tunneling: An Application to Indian Business Groups. *Quarterly Journal of Economics* 117:121–48.
- Bova, F. 2015. State-Owned enterprises, competition, and disclosure. Working paper. Available at SSRN: <http://ssrn.com/abstract=2605541>.
- Brickley, J. A., J. S. Linck, and J. L. Coles, 1999. What happens to CEOs after they retire? New evidence on career concerns, horizon problems, and CEO incentives. *Journal of Financial Economics* 52(3): 341–377.
- Bryson, A., Forth, J., and M. Zhou, 2014. Same or Different? The CEO Labour Market in China's Public Listed Companies. *The Economic Journal* 124: 90–108.
- Buchuk, D., B. Larrain, F. Muñoz, and F. Urzúa I., 2014. The internal capital markets of business groups: Evidence from intra-group loans, *Journal of Financial Economics* 112 (2): 190–212.
- Cadman, B., and G. Cassar. 2014. Explicit and implicit incentives: Longitudinal evidence from NCAA football head coaches employment contracts. Working paper.
- Cao, J., Lemmon, M. L., Pan, X., Qian, M., and Tian, G. 2014. Political Promotion, CEO Incentives, and the Relationship between Pay and Performance. Available at SSRN: <http://ssrn.com/abstract=1914033>.
- Cao, J., X. Pan, and G. Tian, 2011. Disproportional ownership structure and pay-performance relationship: Evidence from China's listed firms. *Journal of Corporate Finance* 17(3): 541–554.
- Chen, Q., X. Chen, K. Schipper, Y. Xu, and J. Xue. 2012. The Sensitivity of Corporate Cash Holdings to Corporate Governance. *Review of Financial Studies* 25: 3610–3644.
- Chen, Zhihong, Yuyan Guan, and Bin Ke, 2013. Are Stock Option Grants to Directors of State-Controlled Chinese Firms Listed in Hong Kong Genuine Compensation? *The Accounting Review* 88(5): 1547–1574.
- Cheung, Y. L., Rau, P. R., and Stouraitis, A. 2010. Helping hand or grabbing hand? Central vs. local government shareholders in Chinese listed firms. *Review of Finance* 14: 669–694.
- Chevalier, Judith, and Glenn Ellison, 1999. Career Concerns of Mutual Fund Managers. *The Quarterly Journal of Economics* 114 (2): 389–432.
- Canyon, M. J., and He, L., 2011. Executive compensation and corporate governance in China. *Journal of Corporate Finance* 17: 1158–1175.

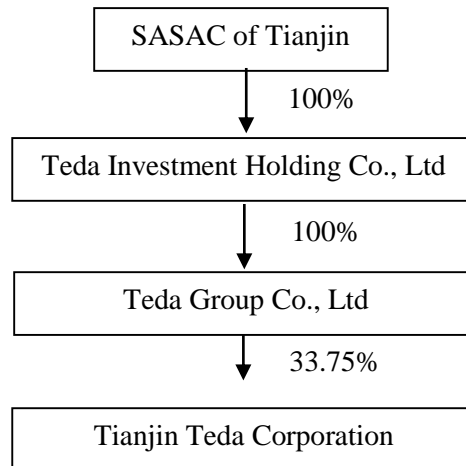
- Cumming, D., and W. Hou. 2013. Valuation of restricted shares by conflicting shareholders in the Split Share Structure Reform. *European Journal of Finance* 20: 778–802.
- Dai, Xiaohe. 2016. Almost 300 executives received zero pay out of 2537 companies that disclosed executive compensation. *China Securities Journal*. Retrieved from <http://stock.qq.com/a/20160429/012084.htm>.
- Dewatripont, M., Jewitt, I., and Tirole, J. 1999. The Economics of Career Concerns, part II: Application to missions and accountability of government agencies. *The Review of Economic Studies* 66(1): 199–217.
- Ederhof, M., 2011. Incentive Compensation and Promotion-Based Incentives of Mid-Level Managers: Evidence from a Multinational Corporation. *The Accounting Review* 86 (1): 131–153.
- Fama, E.F., 1980. Agency problems and the theory of the firm. *Journal of Political Economy* 88, 288–307.
- Fan, J., Wong, T.J., and Zhang, T., 2007, Politically Connected CEOs, Corporate Governance, and Post-IPO Performance of China's Newly Partially Privatized Firms. *Journal of Financial Economics* 84, 330–357.
- Fan, J., Wong, T.J., and Zhang, T., 2013. Institutions and organizational structure: the case of state-owned corporate pyramids. *The Journal of Law, Economics, and Organization* 29 (6): 1217–1252.
- Firth, M., Fung, P., and Rui, O. M. 2006a. Corporate performance and CEO compensation in China. *Journal of Corporate Finance* 12, 693–714.
- Firth, M., Fung, P., and Rui, O.M., 2006b. Firm performance, governance structure, and top management turnover in a transitional economy. *Journal of Management Studies* 43, 1289–1330.
- Gayle, G.L., Golan, L., and Miller, R.A., 2015. Promotion, turnover, and compensation in the executive labor market. *Econometrica* 83(6): 2293–2369.
- Gibbons, Robert, and Murphy, Kevin, 1992, Optimal Incentive Contracts in the Presence of Career Concerns: Theory and Evidence. *Journal of Political Economy* 100(3): 468–505.
- Groves, T., Hong, Y., McMillan, J., and Naughton, B., 1995. China's evolving managerial labor market. *Journal of Political Economy* 103: 873–92.
- Hamm, S.J.W., M.J. Jung, and C. Wang. 2015. Making sense of one dollar CEO salaries. *Contemporary Accounting Research* 32(3): 941–972.
- Holmstrom, B. 1982. Managerial Incentive Problems: A Dynamic Perspective. In *Essays in Economics and Management in Honor of Lars Wahlbeck* (Helsinki: Swedish School of Economics).
- Hope, Ole-Kristian, and Wu, Han, and Zhao, Wuyang, 2015. Blockholder Exit Threats in the Presence of Private Benefits of Control: A Quasi-Experiment from China's Split-Share Structure Reform. 2015 Canadian Academic Accounting Association (CAAA) Annual Conference. Available at SSRN: <http://ssrn.com/abstract=2538197>

- Hu, Fang, and Leung, Sydney C. M. 2008. Appointment of Political Top Executives and Subsequent Performance and Corporate Governance: Evidence from China's Listed SOEs. Working paper, City University of Hong Kong.
- Jian, Ming, and T.J. Wong, 2010. Propping and Tunneling through Related Party Transactions. *Review of Accounting Studies* 15(1), 70–105.
- Jiang, Guohua, Charles Lee, and Heng Yue, 2010. Tunneling through intercorporate loans: The China experience. *Journal of Financial Economics* 98 1–20.
- Jiao, Yue. 2013. 346 CEOs of publicly-listed firms received “zero pay” last year. *Securities Daily*. Retrieved from <http://www.ccstock.cn/stock/gupiaoyaowen/2013-05-07/A1167994.html>.
- Johnson, S., R. LaPorta, F. Lopez-de-Silanes, and A. Shleifer. 2000. Tunneling. *American Economics Review, Papers and Proceedings* 90: 22–27.
- Kato, T.K., and Long, C.X., 2006. CEO turnover, firm performance, and enterprise reform in China: Evidence from micro data. *Journal of Comparative Economics* 34: 796–817.
- Ke, B., O. Rui, and W. Yu, 2012. Hong Kong stock listing and the sensitivity of managerial compensation to firm performance in state-controlled Chinese firms. *Review of Accounting Studies* 17(1), 166–188.
- Ke, B., Wei Yu, and Ying Zheng, 2015. Do Government Controllers Use the Corporate Control Market to Help Improve the Performance of Publicly Listed Chinese SOEs? Available at SSRN: <http://ssrn.com/abstract=2625873>.
- Li, Hongbin, Lingsheng Meng, Qian Wang, and Li-An Zhou, 2008. Political connections, financing and firm performance: Evidence from Chinese private firms. *Journal of Development Economics* 87 (2): 283–299.
- Li, K., T. Wang, Y. L. Cheung, and P. Jiang. 2011. Privatization and Risk Sharing: Evidence from the Split Share Structure Reform in China. *The Review of Financial Studies* 24: 2499–2525.
- Liao, L., B. Liu, and H. Wang. 2014. China's Secondary Privatization: Perspectives from the Split-Share Structure Reform. *Journal of Financial Economics* 113 (3): 500–518.
- Lin, J. Y., and Z. Li. 2008. Policy Burden, Privatization and Soft Budget Constraint. *Journal of Comparative Economics* 36: 90–102.
- Luo, Wei, Yi Zhang, and Ning Zhu, 2011. Bank ownership and executive perquisites: New evidence from an emerging market. *Journal of Corporate Finance* 17: 352–370.
- Ma, Guangyuan. 2009. Terrible “zero pay.” *Business* 6: 64.
- Mengistae, T., and Colin Xu, L., 2004. Agency Theory and Executive Compensation: The Case of Chinese State-Owned Enterprises. *Journal of Labor Economics* 22(3): 615–637.
- Rajan, Raghuram G., and Julie Wulf, 2006. Are perks purely managerial excess? *Journal of Financial Economics* 79 (1): 1–33.
- Sun, Q., and Tong, W. H. 2003. China Share Issue Privatization: The Extent of its Success. *Journal of Financial Economics* 70(2): 183–222.

- Shleifer, Andrei, and Robert Vishny, 1997. Politicians and firms. *Quarterly Journal of Economics* 109 995–1025.
- Siegel, J., and P. Choudhury, 2012. A Reexamination of Tunneling and Business Groups: New Data and New Methods. *Review of Financial Studies* 25(6): 1763–1798.
- Wang, Kun, and Xing Xiao, 2011. Controlling shareholders' tunneling and executive compensation: Evidence from China. *Journal of Accounting and Public Policy* 30(1): 89–100.
- Wei, Z., Xie, F., and Zhang, S. 2005. Ownership structure and firm value in China's privatized firms: 1991–2001. *Journal of Financial and Quantitative Analysis* 40(1): 87–108.
- Yermack, D., 2006. Flights of fancy: Corporate jets, CEO perquisites, and inferior shareholder returns. *Journal of Financial Economics* 80 (1): 211–242.
- Yim, Soojin, 2013. The acquisitiveness of youth: CEO age and acquisition behavior, *Journal of Financial Economics* 108 (1): 250–273.

Appendix A: Illustration of the structure of a local SOE

Tianjin Teda Corp is a listed SOE, stock code 000652. It is controlled by the government of Tianjin city through two layers. The following figure illustrates the ownership structure:



Huiwen Liu was the chairman of Tianjin Teda Corp from 1997 to 2011, receiving no compensation from the listed firm. He was also the chairman of Teda Investment Holding Co. from 2006 to 2011. In May 2011, at the age of 57, he resigned all his titles to become the chairman of Bohai Property Insurance Co., an unlisted SOE with a revenue of RMB1.5 billion, which is much smaller than the RMB51 billion revenue of Tianjin Teda Corp. His successor, Jun Zhang, the general manager of Teda Group Co. since 2008, became the chairman of Tianjin Teda Corp. Jun Zhang did not receive compensation from the listed firm either. After two years of service at the listed firm, at the age of 46, he was promoted to vice president of Teda Investment Holding in February 2013.

Table 1 Sample Distribution

	Firm-paid CEOs	Parent-paid CEOs	Total
1999	365	233	598
2000	399	276	675
2001	433	277	710
2002	443	266	709
2003	438	253	691
2004	445	241	686
2005	412	251	663
2006	398	236	634
2007	393	256	649
2008	367	276	643
2009	371	268	639
2010	375	280	655
2011	384	266	650
Total	5223	3379	8602

Table 2A Comparison between Samples of Firm-paid CEOs and Parent-paid CEOs

	Parent-paid CEO (1)			Firm-paid CEO (2)			(2) - (1)
	N	Mean	median	N	Mean	median	
Age	3379	50.955	51	5223	50.41	51	-0.545***
Gender	3379	0.967	1	5223	0.96	1	-0.007*
Government	3379	0.421	0	5223	0.346	0	-0.075***
Dual	3379	0.02	0	5223	0.189	0	0.170***
Tenure	3379	4.467	3	5223	4.558	4	0.091
Shareholdertitle	2869	0.774	1	4455	0.458	0	-0.316***
Titles	2869	1.765	1	4455	1.294	1	-0.471***
Promotion	3379	0.086	0	5223	0.027	0	-0.059***
BusinessP	3379	0.063	0	5223	0.016	0	-0.048***
PoliticalP	3379	0.023	0	5223	0.011	0	-0.011***
Demotion	3379	0.065	0	5223	0.092	0	4.473***
Assets (billions)	3379	4.576	2.091	5223	3.979	1.717	-0.596***
Leverage	3379	0.506	0.496	5222	0.505	0.501	-0.001
CEOshare	3379	0.000	0	5223	0.001	0	0.001***
Largest	3379	0.453	0.455	5223	0.41	0.396	-0.043***
Idirector	3379	0.282	0.333	5223	0.28	0.333	-0.002
ROA	3379	0.031	0.033	5223	0.028	0.031	-0.002
Sales growth	3379	0.227	0.134	5223	0.184	0.138	-0.043***
RET	3379	-0.016	-0.052	5223	-0.036	-0.058	-0.020**
Asset turnover	3379	0.7	0.575	5222	0.654	0.537	-0.047***
Δ assets	3379	0.167	0.09	5222	0.159	0.092	-0.009
Δ employees	3026	-0.026	0	4606	-0.006	0.008	0.02
Admin Expense	3379	0.046	0.038	5222	0.047	0.039	0.001
Transfer	3379	0.006	0	5222	0.008	0	0.002
OtherRA	3379	0.05	0.018	5222	0.054	0.023	0.004**

Age: a CEO's age; Gender: dummy variable, 1 if a CEO is male; Government, a dummy variable, 1 if a CEO worked for government or military; Dual: dummy variable, 1 if the chairman is also general manager; Tenure, the number of years as CEO; Shareholdertitle, a dummy variable, 1 if a CEO has a job title in the parent company; Titles, the number of titles a CEO has other than those in a listed firm; Promotion, a dummy variable, 1 if a CEO leaves for a job in government, a higher position in the parent group, or an executive position of a larger firm in year t+1; PoliticalP, a dummy variable, 1 if a CEO leaves for a job in government in year t+1; BusinessP, a dummy variable, 1 if a CEO leaves for higher position in the parent group or an executive position of a larger firm in year t+1; Assets, total assets in billions; Leverage, total liabilities deflated by total assets; CEOshare: the percentage of stock owned by a CEO; Largest: the percentage of stock owned by the largest shareholder; Idirector, the percentage of independent directors on board; ROA: net income deflated by average assets; Sales growth: sales in year t minus sales in year t-1, deflated by sales in year t-1; RET: annual buy-and-hold stock return adjusted by market return; Asset turnover: total sales divided by average total assets; Δ assets: percentage change in total assets; Δ employees: log change in number of employees; Admin Expense: administrative expenses excluding annual provisions for asset impairments and total executive and director compensation, deflated by total assets; Transfer: funds transferred from the listed firm to its parent company and/or other firms in the same group; OtherRA: other receivables divided by total assets. ***, **, and * denote significant differences across subsamples at the 1%, 5%, and 10% levels, respectively.

Table 2B CEO Turnovers by Type

	total	Firm-paid		Parent-paid	
		N	Percent	N	Percent
All Turnovers	1624	914	56.28%	710	43.72%
Promotion	466	126	27.04%	340	72.96%
Change in control right	219	149	68.04%	70	31.96%
Retirement	235	156	66.38%	79	33.62%
Demotion	704	483	68.61%	221	31.39%
Charges	83	54	65.06%	29	34.94%

Demotion is defined as turnovers due to reasons other than retirement, change in control right, or promotion. It includes the cases that executives are subject to criminal charges or regulator charges.

Table 3 Two-Stage Heckman Model Estimation of Future Promotion/ Demotion and CEO Pay Type

VARIABLES	First stage (1)	Promotion (2)	PoliticalP (3)	BusinessP (4)	Demotion (5)
IndustryPay	3.016*** (14.85)				
Ppaid		0.648*** (12.46)	0.296*** (4.01)	0.735*** (11.79)	-0.231*** (-5.20)
Age	0.079 (0.71)	-0.534*** (-3.27)	-0.908*** (-3.98)	-0.267 (-1.42)	0.121 (0.79)
Gender	0.114 (1.40)	0.102 (0.73)	0.138 (0.60)	0.075 (0.48)	-0.133 (-1.35)
Dual	-1.367*** (-20.36)	-0.088 (-0.43)	0.250 (0.90)	-0.373 (-1.47)	-0.208 (-1.39)
AROA	-1.269*** (-3.59)	-0.632 (-1.23)	-0.832 (-1.08)	-0.508 (-0.88)	-1.953*** (-4.33)
Sales growth	0.116*** (3.36)	-0.072 (-1.35)	-0.124 (-1.35)	-0.035 (-0.62)	-0.151*** (-2.82)
Size	0.014 (0.82)	0.016 (0.60)	0.150*** (3.74)	-0.042 (-1.43)	-0.059*** (-2.58)
Leverage	-0.019 (-0.21)	0.026 (0.20)	-0.374* (-1.94)	0.179 (1.25)	0.056 (0.49)
Largest	1.047*** (10.55)	-0.028 (-0.15)	-0.078 (-0.29)	-0.010 (-0.05)	-0.048 (-0.30)
CEOshare	-51.188*** (-2.99)	7.305 (0.58)	6.408 (0.33)	3.546 (0.24)	-12.827 (-0.96)
Government	0.214*** (6.66)	0.179*** (3.16)	0.487*** (5.74)	-0.028 (-0.43)	-0.132*** (-2.74)
IMR		-0.233 (-1.46)	-0.368 (-1.64)	-0.117 (-0.62)	-0.055 (-0.44)
Constant	-2.621*** (-4.90)	0.431 (0.49)	-0.895 (-0.74)	0.012 (0.01)	-0.145 (-0.18)
Observations	8,601	8,594	8,594	8,594	8,594
Pseudo R ²	0.124	0.090	0.092	0.104	0.037

This table presents results of two-stage regression on future promotion. In the first stage, the dependent variable is Ppaid, with the instrumental variable IndustryPay, the percentage of unpaid executives in the SOEs from same industry. In the second stage, is a dummy variable that equals 1 if the chairman leaves for a job in the government in year t+1, a higher position in the parent group, or an executive position of a larger firm and otherwise zero. PoliticalP is a dummy variable that equals 1 if chairman leaves for a job in government in year t+1 and otherwise zero. BusinessP is a dummy variable that equals 1 if chairman leaves for a higher position in the parent group or an executive position of a larger firm in year t+1 and otherwise zero. Demotion is defined as turnovers due to reasons other than retirement, control right transfer, or promotion. AROA is the average ROA during a CEO's tenure in a given year. Control variables are defined in table 2a. We control fixed effects of industry and year. Z statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 4 Association Between Switching from Parent-Paid to Firm-Paid and Future Promotion/Demotion

VARIABLES	Promotion (1)	PoliticalP (2)	BusinessP (3)	Demotion (4)
Ppaid to Fpaid	-0.335*** (-3.23)	0.062 (0.46)	-0.498*** (-3.89)	0.152* (1.67)
Age	-0.397* (-1.76)	-1.238*** (-3.78)	-0.002 (-0.01)	0.642** (2.18)
Gender	0.069 (0.35)	0.094 (0.31)	0.072 (0.33)	-0.423** (-2.44)
Dual	-0.101 (-0.54)	0.181 (0.75)	-0.335 (-1.47)	-0.094 (-0.50)
AROA	-0.557 (-0.95)	-0.864 (-0.87)	-0.425 (-0.68)	-2.153*** (-3.31)
Sales growth	-0.008 (-0.13)	-0.021 (-0.21)	0.005 (0.09)	-0.100 (-1.57)
Size	-0.007 (-0.19)	0.144*** (2.78)	-0.060 (-1.62)	-0.024 (-0.72)
Leverage	0.141 (0.89)	-0.340 (-1.41)	0.270 (1.58)	-0.151 (-0.83)
Largest	0.082 (0.40)	0.109 (0.35)	0.017 (0.07)	-0.345 (-1.46)
CEOshare	-600.305 (-1.21)	-41.002 (-0.40)	-816.904 (-1.26)	20.245 (1.06)
Government	0.110* (1.69)	0.607*** (5.81)	-0.137* (-1.88)	-0.190*** (-2.62)
Constant	0.440 (0.41)	-3.367** (-2.32)	-0.055 (-0.05)	-2.509** (-1.98)
Observations	3,524	3,524	3,524	3,524
Pseudo R ²	0.036	0.093	0.047	0.042

This table uses a subsample of CEOs who change from parent-paid contracts to firm-paid contracts during their tenures and CEOs who have parent-paid contracts during their tenures. Ppaid to Fpaid, a dummy variable, is 1 if a CEO receives any salary from their firms and zero otherwise. AROA is the average ROA during a CEO's tenure in a given year. Control variables are defined in table 2a. We control fixed effects of industry and year. Z statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5 Association Between Switching from Being Firm-Paid to Parent-Paid and Future Promotion/Demotion

VARIABLES	Promotion (1)	PoliticalP (2)	BusinessP (3)	Demotion (4)
Fpaid to Ppaid	0.689*** (6.46)	0.482*** (3.40)	0.738*** (5.84)	-0.468*** (-3.71)
Age	-0.721*** (-2.96)	-0.783** (-2.47)	-0.620** (-2.09)	-0.081 (-0.44)
Gender	0.103 (0.48)	0.234 (0.62)	-0.016 (-0.07)	-0.024 (-0.19)
Dual	-0.420*** (-3.11)	-0.227 (-1.45)	-0.587*** (-2.84)	-0.304*** (-4.20)
AROA	-0.952 (-1.01)	-1.673 (-1.30)	-0.516 (-0.44)	-1.926*** (-3.15)
Sales growth	-0.268*** (-2.74)	-0.319** (-2.32)	-0.206* (-1.80)	-0.194** (-2.39)
Size	0.088** (2.12)	0.216*** (3.68)	0.011 (0.24)	-0.085*** (-2.73)
Leverage	-0.251 (-1.07)	-0.532 (-1.62)	-0.033 (-0.12)	0.180 (1.16)
Largest	0.316 (1.23)	0.265 (0.72)	0.365 (1.25)	0.130 (0.75)
CEOshare	-0.041 (-0.01)	-5.503 (-0.45)	1.041 (0.23)	-15.290 (-1.09)
Government	0.354*** (3.80)	0.465*** (3.64)	0.212* (1.93)	-0.105* (-1.78)
Constant	-0.719 (-0.61)	-3.441** (-2.32)	0.038 (0.03)	0.787 (0.83)
Observations	5,077	5,077	5,077	5,077
Pseudo R ²	0.102	0.132	0.127	0.049

This table uses a subsample of CEOs who change from firm-paid to parent-paid contracts during their tenures and CEOs who remain firm-paid during their tenures. Fpaid to Ppaid, a dummy variable, is 1 if a CEO receives no salary and zero otherwise. AROA is the average ROA during a CEO's tenure in a given year. Control variables are defined in table 2a. We control fixed effects of industry and year. Z statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6 Second-Stage Regression Results on the Association Between CEO Contract Type and Performance

VARIABLES	ROA (1)	RET (2)	Asset turnover (3)	Sales growth (4)	Δ Assets (5)	Δ Employees (6)
Ppaid	0.005** (2.48)	0.012 (0.75)	0.012 (1.33)	-0.012 (-0.62)	0.029*** (2.64)	-0.029 (-0.99)
Age	0.019*** (2.85)	-0.049 (-0.96)	-0.031 (-1.01)	-0.211*** (-3.35)	-0.048 (-1.25)	-0.136 (-1.33)
Dual	-0.010** (-2.11)	0.215*** (5.27)	0.086*** (3.89)	0.534*** (10.95)	0.088*** (3.06)	0.278*** (3.54)
Size	0.013*** (5.61)	-0.023* (-1.67)	-0.008 (-0.87)	0.086*** (4.81)	0.161*** (14.52)	0.160*** (6.26)
Leverage	-0.175*** (-21.52)	-0.084* (-1.85)	-0.112*** (-4.27)	-0.000 (-0.00)	-0.149*** (-4.20)	-0.070 (-0.85)
Largest	0.066*** (6.57)	-0.077 (-0.91)	0.071 (1.48)	-0.023 (-0.19)	0.180*** (2.73)	0.161 (1.24)
CEO share	0.683 (1.33)	5.277 (0.91)	3.109 (1.04)	30.815*** (7.43)	12.684*** (2.61)	9.697 (1.57)
Government	0.004* (1.69)	-0.034* (-1.88)	-0.028** (-2.32)	-0.031 (-1.32)	0.005 (0.37)	0.038 (1.13)
Idirector	0.010 (1.04)	-0.068 (-0.92)	-0.009 (-0.19)	-0.147 (-1.64)	0.006 (0.10)	-0.205 (-1.40)
IMR	0.012*** (3.11)	-0.169*** (-5.14)	-0.063*** (-3.47)	-0.528*** (-12.55)	-0.062*** (-2.69)	-0.183*** (-2.89)
Observations	8,594	8,594	8,594	8,594	8,593	7,625
Adjusted R ²	0.470	0.0004	0.775	0.110	0.202	0.093
Number of firms	1027	1027	1027	1027	1027	1001

In the first stage, we use IndustryPay as instrument variable for Ppaid. Control variables are defined in table 2a. We control fixed effects of firm, year and industry. T statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 7 Second-Stage Regression Results on the Association Between CEO Contract Type and Tunneling

VARIABLES	Transfer (1)	OtherAR (2)
Ppaid	-0.006** (-2.53)	-0.002 (-0.97)
Age	0.011 (1.30)	0.003 (0.38)
Dual	-0.007 (-1.18)	0.001 (0.13)
Size	0.005** (2.16)	-0.001 (-0.35)
Leverage	-0.004 (-0.38)	0.082*** (8.74)
Largest	-0.029** (-2.27)	-0.033*** (-3.06)
CEO share	0.027 (0.07)	-0.312 (-0.81)
Government	-0.000 (-0.00)	-0.001 (-0.46)
Idirector	-0.006 (-0.51)	0.000 (0.02)
IMR	0.004 (0.86)	0.002 (0.37)
Observations	8,594	8,594
R ²	0.412	0.580
Number of firms	1027	1027

Transfer is funds transferred from the listed firm to its parent company and/or other firms in the same group. OtherAR is the balance of other receivables over total assets. Control variables are defined in table 2a. We control fixed effects of firm, year, and industry. T statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 8 Impact of Split-Share Reform in 2005 on Future Promotion/Demotion

Panel A: Future promotion/demotion within 1 year				
VARIABLES	Promotion (1)	PoliticalP (2)	BusinessP (3)	Demotion (4)
Ppaid	0.703*** (10.24)	0.245*** (2.60)	0.835*** (9.82)	-0.318*** (-5.23)
Reform	-0.907 (-0.57)	-3.952* (-1.83)	-0.404 (-0.22)	-2.104 (-1.42)
Ppaid x Reform	-0.093 (-0.91)	0.098 (0.66)	-0.214* (-1.75)	0.196** (2.21)
Test: Ppaid + Ppaid x Reform = 0				
χ^2	62.29***	8.60***	48.34***	3.46*
Observations	8,601	8,601	8,601	8,601
Pseudo R ²	0.095	0.100	0.113	0.043
Panel B: Future promotion/demotion within 2 years				
VARIABLES	Promotion (1)	PoliticalP (2)	BusinessP (3)	Demotion (4)
Ppaid	0.786*** (13.68)	0.265*** (3.31)	0.900*** (13.11)	-0.356*** (-6.75)
Reform	-0.946 (-0.71)	-3.006 (-1.57)	0.515 (0.34)	-1.671 (-1.32)
Ppaid x Reform	-0.190** (-2.27)	0.006 (0.05)	-0.265*** (-2.71)	0.187** (2.41)
Test: Ppaid + Ppaid x Reform = 0				
χ^2	94.37***	9.30***	80.22***	8.71***
Observations	8,601	8,601	8,601	8,601
Pseudo R ²	0.106	0.109	0.121	0.038

Promotion, a dummy variable, is 1 if chairman leaves for a job in government in year t+1, a higher position in the parent group, or an executive position of a larger firm and otherwise zero. PoliticalP, a dummy variable, is 1 if the chairman leaves for a job in government in year t+1 and otherwise zero. BusinessP, a dummy variable, is 1 if the chairman leaves for a higher position in the parent group or an executive position of a larger firm in year t+1 and otherwise zero. Demotion is defined as turnovers due to reasons other than retirement, control right transfer, or promotion. Ppaid, a dummy variable, is 1 if the CEO is paid by the parent SOE and otherwise zero. Reform, a dummy variable, is 1 if the stock owned by the government is tradable and zero otherwise. Interaction between Reform and control variables are also included. For parsimony, control variables are not included in the table, but are available from the authors. We include fixed effects for year and industry. Z statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 9 Association between CEO Pay Type and Future Promotion/ Demotion, Controlling for Local Government Turnover (Two-stage results)

VARIABLES	Promotion (1)	PoliticalP (2)	BusinessP (3)	Demotion (4)	Promotion (5)	PoliticalP (6)	BusinessP (7)	Demotion (8)
Ppaid	0.649*** (12.50)	0.299*** (4.05)	0.735*** (11.80)	-0.233*** (-5.23)	0.638*** (11.11)	0.293*** (3.48)	0.721*** (10.57)	-0.202*** (-4.15)
Local Turnover	0.067 (1.15)	0.152* (1.92)	-0.008 (-0.12)	-0.141*** (-2.73)	0.101 (1.62)	0.202** (2.32)	0.011 (0.15)	-0.128** (-2.32)
Titles					-0.041** (-2.40)	-0.065* (-1.94)	-0.023 (-1.32)	-0.060*** (-3.54)
Constant	0.401 (0.46)	-0.943 (-0.78)	0.015 (0.01)	-0.088 (-0.11)	0.316 (0.34)	-1.710 (-1.28)	0.353 (0.33)	-0.607 (-0.69)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,594	8,594	8,594	8,594	7,316	7,316	7,316	7,316
Pseudo R ²	0.091	0.094	0.104	0.039	0.090	0.104	0.102	0.039

Promotion, PoliticalP, and BusinessP are dummy variables for promotion. Idirector is the percentage of independent directors on the board. Admin expense, a proxy for perks, is administrative expenses minus total executive compensation and annual provision for asset impairments, deflated by total assets. Local Turnover, a dummy variable, is 1 if there is governor turnover in the province that ultimately controls a firm. Titles is the number of job titles a CEO has in other firms. For parsimony, control variables are not included in the table, but are available from the authors. We include fixed effects for year and industry. Z statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 10 Executive Perquisites, Firm Performance and Tunneling

VARIABLES	ROA (1)	RET (2)	Asset turnover (3)	Sales growth (4)	ΔAssets (5)	ΔEmployees (6)	Transfer (7)	OtherAR (8)
Ppaid	0.004** (2.09)	0.013 (0.81)	0.017* (1.77)	0.044** (2.26)	0.034*** (3.28)	-0.027 (-1.40)	-0.007*** (-2.71)	-0.003 (-1.36)
Mperk	-0.132*** (-4.66)	0.081 (1.36)	0.211*** (3.15)	0.216** (2.15)	-0.152*** (-2.98)	-0.051 (-0.56)	0.018 (0.94)	-0.015 (-0.87)
Age	0.013** (1.98)	-0.042 (-0.79)	-0.010 (-0.32)	-0.195*** (-3.09)	-0.047 (-1.42)	-0.005 (-0.10)	0.014* (1.65)	0.003 (0.42)
Dual	0.002 (0.47)	0.174*** (3.96)	0.020 (0.87)	-0.105** (-2.25)	0.010 (0.41)	0.053 (1.20)	-0.005 (-0.74)	0.000 (0.05)
Size	0.013*** (6.44)	-0.030** (-2.13)	-0.009 (-1.05)	0.103*** (5.27)	0.178*** (16.28)	0.140*** (6.91)	0.006** (2.17)	-0.000 (-0.12)
Leverage	-0.169*** (-21.72)	-0.069 (-1.47)	-0.110*** (-3.97)	0.013 (0.19)	-0.071** (-2.01)	-0.040 (-0.64)	-0.011 (-0.88)	0.075*** (8.05)
Largest	0.059*** (6.01)	-0.049 (-0.56)	0.117** (2.39)	0.365*** (2.92)	0.242*** (3.69)	0.201* (1.80)	-0.024* (-1.86)	-0.032*** (-2.91)
CEO share	0.912* (1.78)	5.213 (0.85)	-1.159 (-0.40)	7.575* (1.72)	6.454* (1.73)	0.231 (0.05)	0.122 (0.27)	-0.422 (-1.02)
Government	0.001 (0.60)	-0.023 (-1.21)	-0.017 (-1.38)	0.050** (2.08)	0.015 (1.22)	0.015 (0.62)	0.000 (0.11)	-0.002 (-0.82)
Idirector	0.008 (0.74)	-0.046 (-0.59)	-0.039 (-0.77)	-0.151 (-1.53)	-0.091* (-1.72)	0.041 (0.45)	-0.007 (-0.59)	0.002 (0.14)
IMR	-0.001 (-0.20)	-0.126*** (-3.55)	0.001 (0.07)	0.075** (2.02)	0.010 (0.47)	-0.026 (-0.73)	0.004 (0.64)	0.002 (0.44)
Observations	8,105	8,105	8,105	8,105	8,105	7,548	8,105	8,105
Adjusted R ²	0.499	0.012	0.781	0.093	0.213	0.086	0.427	0.587
Number of firms	1,011	1,011	1,011	1,011	1,011	995	1,011	1,011

This table presents the results on firm performance and tunneling after controlling the impact of executive perks. Mperk is the abnormal level of administrative expenses estimated by equation (5). Control variables are defined in table 2a. T statistics based on robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.