

## POLITICALLY CONNECTED BOARDS AND TOP EXECUTIVE PAY IN CHINESE LISTED FIRMS

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*Drawing on social comparison theory, this study examines the relationship between politically connected boards and top executive pay. Moreover, given the socialist orientation of China, tests are also carried out to establish the relationship between politically connected directors and pay dispersion across the firm. We find a negative association between politically connected boards and top executive pay. We also find that politically connected boards are negatively associated with pay dispersion, i.e., the higher the number of political directors on the board the smaller the gap between top executive pay and average employee pay. Finally, our study shows that politically connected directors weaken the pay-performance link. These findings have important theoretical, policy, and managerial implications.* Copyright © 2014 John Wiley & Sons, Ltd.

### INTRODUCTION

The question of whether the composition of the board of directors has much impact on organizational outcomes is centrally important to a wide array of research agendas in strategic management, including studies on executive compensation (Carpenter and Sanders, 2002; Conyon, Peck, and Sadler, 2001). Executive compensation continues to attract the attention of academics, practitioners, and policy makers, and the salience of understanding its determinants and consequences resides in its nature as both a governance mechanism and a cost to the firm. Accordingly, a body of research has been devoted to the question of whether and under what circumstances board structure, its composition, and

other governance factors matter in affecting executive compensation (e.g., Dalton *et al.*, 1998). However, the relation between top executive compensation and board composition has been examined in many prior empirical studies with mixed findings (Gomez-Mejia, 1994). For example, Lambert, Larcker, and Weigelt (1993) document a positive relation between CEO compensation and the percentage of the board composed of outside directors, whereas Finkelstein and Hambrick (1989) find that compensation is unrelated to the percentage of outside directors on the board.

Drawing on agency theory, some of these studies have explored the relationship between executive compensation and the monitoring role of outside directors (Daily, Dalton, and Cannella, 2003; Kumar and Sivaramakrishnan, 2008). In this respect, Boyd (1994) finds that CEO salaries were greater in firms with lower levels of control.

These prior studies point to the role played by outside directors, in general, in determining executive pay. However, little is known about the impact

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of politically connected outside directors on executive compensation despite their being more sophisticated and successful in gaining board seats (Stern and Westphal, 2010), holding values and beliefs consistent with their political ideology<sup>1</sup> (Chin, Hambrick, and Trevino, 2013), and being present in many countries (Agrawal and Knoeber, 2001; Faccio, 2006). To remedy this omission, we draw on social comparison theory to examine the impact of politically connected boards on executive pay in Chinese listed firms. Specifically, we investigate whether politically connected boards are associated with lower or higher levels of top executive compensation.

We also test for the effects of political connections on pay compression or dispersion, contributing to the literature on pay dispersion that has generally tended to focus on the consequences rather than antecedents of pay disparity (Carpenter and Sanders, 2002; Graffin *et al.*, 2008). Finally, we take a step further and investigate the moderating role of politically connected boards on the performance-pay relationship.

A politically connected board has at least one director who was a former politician, including a member of parliament, a minister, or any other top appointed government bureaucrat or officer in a state-owned enterprise (Faccio, 2006). As such, politically connected directors may help reduce uncertainty for the firm by connecting the firm to the government and to influential politicians, bringing information, skills, and legitimacy to the firm (Hillman, 2005).

In this study, the institutional context is set in China, in relation to the politically connected board's strategic and governance attitude towards executive pay. Chinese boards are characterized by the presence of politically connected directors (Buck, Liu, and Skovoroda, 2008; Firth, Fung, and Rui, 2006). In fact, until recently, all executive appointments within Chinese firms were made by the state, and executive pay was calculated according to seniority and civil service formulae that implied equality or near-equality between workers and managers (Firth *et al.*, 2006). However, following changes to company law in 1994, boards of listed firms are arguably free to appoint executives

and set their own executive pay that, in many firms, is limited to basic salary and bonuses (Buck *et al.*, 2008).

While recent studies have investigated executive pay in China (Buck *et al.*, 2008; Firth, Fung, and Rui, 2007; Kato and Long, 2006), none of them have explicitly examined the effect of politically connected directors on top executive remuneration. Yet, in the case of China, where the economy has achieved spectacular growth despite minimum political reform, a deeper understanding of the role played by political connections in business is necessary.

In contrast to previous studies, we develop our arguments drawing on social comparison theory and the political ideology of outside directors, underscoring the salience of the institutional environment in executive pay determination. Here, we heed the call by scholars (e.g., Chizema, 2008; Filatotchev and Allcock, 2010) who have suggested that executive pay should be understood within the context of both the organization and its surrounding environment.

Extending prior research on executive pay, our study makes several contributions. First, a focus on China is theoretically and empirically important, because it allows us to investigate the determinants of executive pay in an underexplored context. Given the fact that much of the research in executive remuneration is Western based, our study helps extend existing research to a rich and complex context beyond that of developed economies, contributing to the literature on executive remuneration in general, and to pay studies in emerging markets in particular. Specifically, findings from this study will provide new insights into how special features of the institutional environment, such as political connections, affect executive pay, an aspect that has largely been overlooked in the governance literature.

Second, our study provides an understanding of the effects of directors' ideological background on firm decision making in general, and on executive compensation in particular. While several studies in corporate governance have explored specific characteristics of directors and their strategic choices (Carpenter, Geletkanycz, and Sanders, 2004; Fich and Shivdasani, 2006; Guner, Malmendier, and Tate, 2008; Hillman, Cannella, and Harris, 2002), little is known about corporate decision making as a function of directors' political orientation and socialization. Thus, our paper responds to the recent call by Chin *et al.* (2013) who suggest that

<sup>1</sup> Political ideology is normally defined as an interrelated set of attitudes, behaviors, and values about the goals of society and how they should be achieved. It helps to explain why people do what they do through their values and beliefs (Jost, 2006).

executives' political ideologies might be manifested in an array of organizational attributes and decisions beyond corporate social responsibility practices (the subject of their focus).

This represents an important direction, given that political connections are rooted in the institutional context of China and have profound implications for firm strategies and performance. Examining the relationship between politically connected boards and executive pay helps advance our understanding of the governance and monitoring role of outside directors in executive pay. Moreover, this study provides further evidence to the growing literature on the implications of political connections in the business world, particularly on the impact of political connections on top executive pay.

Third, our study adds to the sparse literature on the determinants of pay dispersion or compression within firms. Most prior theorizing and research on executive compensation has emphasized the effects of pay differences across firms (e.g., Milkovich, Gerhart, and Hannon, 1991), thus neglecting the antecedents of pay dispersion between top executives and the general employees. Thus, our study provides new insights into the antecedents of pay dispersion in the context of China, a country with deep-seated socialist traditions, where notions of pay equality or near-equality have traditionally been emphasized (Firth *et al.*, 2006).

The remainder of this paper is organized as follows. In the next section, we present theory, review the literature, and specify hypotheses of the study. We then present our data and analytical methods, after which we present our results. Finally, we discuss implications of our findings and limitations of the study, suggesting areas for further research in the process.

## THEORY AND HYPOTHESES

### Social comparison theory

A number of studies examining the determination of top executive compensation have used a variety of theoretical lenses. Most of this research has been predicated on economic theories, including neoclassical notions of marginal product (Baker, Jensen, and Murphy, 1988), human capital theory (Hogan and McPheters, 1980), transaction cost economics (Ofek and Yermack, 2000), agency theory (Gibbons and Murphy, 1992; Tosi, Katz, and Gomez-Mejia,

1997), tournament theory (Conyon *et al.*, 2001; Main, O'Reilly, and Wade, 1993), and managerial power theory (Bebchuk and Fried, 2004).

Studies based on economic theory are typical attempts to show that CEO compensation conforms to some theoretical perspectives, such as agency or tournament theory. On the other hand, social-psychological approaches begin with the premise that the compensation-setting process relies on the deliberations of a small group of people who may be affected by a number of psychological and political processes that shape individual and group decisions everywhere (Ezzamel and Watson, 1998). A study by O'Reilly, Main, and Crystal (1988) found that the pay of members of the compensation committee, mostly outside directors, was a better predictor of top executive pay than were economic factors such as firm performance and human capital measures. The conclusion from this study was that top executive pay could be explained in terms of a social comparison process.

The theory of social comparisons, proposed by Festinger (1954), underlies much of the research in equity and organizational justice (Walster, Berscheid, and Walster, 1973). Research has shown that social comparisons in organizations may lead to feelings of inequity (Wade, O'Reilly, and Pollock, 2006), which have in turn been linked to lower productivity at both the organizational and individual levels, loss of group cohesion, theft, lower quality, and increased turnover (Bloom, 1999; Pfeffer and Langton, 1993).

According to the theory of social comparison processes, social actors and decision makers of all kinds have to routinely rely upon a whole range of social comparisons to secure equity in the setting up of their expected rewards. Indeed, Festinger (1954) noted that individuals have a need to evaluate their opinions and abilities. Such an evaluation can be made by comparing oneself against others who are perceived to have abilities similar to one's own (Fredrickson, Davies-Blake, and Sanders, 2010). In line with Festinger's formulation of social comparison theory, O'Reilly and colleagues indicated that "when making comparisons, individuals are likely to select as comparisons others who are seen as slightly better or more expert" (1988: 262).

Interpreting these arguments, Ezzamel and Watson (1998) suggest that nonexecutive directors are chosen because of their similarity to those who are involved in the selection process. They further

propose that, in setting executive cash compensation, members of a compensation committee gather information from their own experiences, either as serving executives or as non-executive directors of other firms, and the analyses provided by external pay consultants concerning similar executives in the most successful comparator firms or in those that provide better-than-average pay. This has particular implications for both the level of top executive remuneration and pay dispersion across the firm.

### **Politically connected directors and top executive compensation**

Previous studies have shown the relationship between various forms of outside directors and executive compensation (e.g., Core, Holthausen, and Larcker, 1999; Dalton *et al.*, 1998; Deutsch, 2005). These studies, mainly from the Anglo-American context, are part of the broad literature that examines the monitoring role of outside directors. A common assumption in these studies is that firms manage their affairs with minimum political intervention (Faccio, 2010). While this may be true in institutional environments characterized by free markets, we argue that this may not be the case where the outside director is politically connected and particularly if he/she had a former political appointment, a situation common in China (Buck *et al.*, 2008).

We argue further that in China, a country with a socialist tradition, the role played by politically connected directors in corporate decision making is likely to be influenced by their political ideology, reflecting state policies or objectives. Here, the politically connected director may play a useful role to the organization, helping the firm to gain preferential treatment by state-owned enterprises such as banks (Cull and Xu, 2005; Faccio, 2006; Johnson and Mitton, 2003), enabling lighter taxation (De Soto, 1989), preferential treatment in competition for government contracts (Dinç, 2004; Goldman, Rocholl, and So, 2009), relaxed regulatory oversight of the company in question (Faccio, 2010), and government aid in times of financial trouble (Faccio, Masulis, and McConnell, 2006). On the other hand, the politically connected director may ensure that the state's political expectations are met by the firm (Boycko, Shleifer, and Vishny, 1996; Cull and Xu, 2005).

In the context of executive pay, we argue, therefore, that the presence of politically connected

directors in Chinese firms may determine the level of executive pay in a manner that reflects the political priorities and norms of the state (Mengistae and Xu, 2004). Such norms are rooted in the political ideology that emphasizes equality of income. Thus, paying high executive compensation may be viewed as stretching the boundary (Markoczy *et al.*, 2013) and socially unacceptable for two reasons.

First, drawing on social comparison theory, politically connected directors may potentially make comparisons between pay in the civil service with that of the companies they serve as outside directors. This comparison may be shaped by their socialization as well as their experiences as current or former civil servants.<sup>2</sup> This suggests that politically connected directors are likely to recommend pay levels similar to those in the civil service, directly reflecting their current or previous earnings.

Social comparison theory argues that individuals routinely compare themselves with referent others whom they see as being similar on attributes such as demographic characteristics, ability, or position (Festinger, 1954). Indeed, like top executives, politically connected directors are likely to be highly motivated, achievement oriented, power seeking, and status driven (Finkelstein and Hambrick, 1996). In short, top executives as well as politically connected directors have succeeded in getting to their respective levels, in part, because they are highly competitive, which makes them particularly prone to make social comparisons of pay (Lazear, 1989).

However, when compared with the private sector, civil service pay in China, despite going through several reforms, is lower (Chan and Ma, 2011) and even lower for directors of state-owned enterprises (SOEs), from where politically connected directors with business expertise are likely to be drawn. This is because, before the 1980s, the Chinese SOE was the lowest link in the chain of command of the central planning machinery (Mengistae and Xu, 2004). This was a setting that made the enterprise director less of a business executive than a civil servant responsible for the implementation of a set of planned targets routinely passed down by a national or regional planning hierarchy. The

<sup>2</sup> Civil servants in China include personnel in Party organizations, the People's Congresses, the People's Political Consultative Conferences, the judicial and procuratorial organizations (Chan and Li, 2007). This effectively makes all politically connected directors former or current civil servants.

director was thus evaluated and compensated accordingly and came under the overseeing authority of the enterprise Communist Party Committee, the secretary of which had a greater voice than the director. By virtue of being former or current civil servants, politically connected directors share this history and socialization, and this experience could potentially influence board decision-making processes. Layman (1997) shows that individuals' values are reflected in their political behaviors and decision-making processes. Thus, while executive compensation in China is generally low by international standards (Buck *et al.*, 2008; Conyon and He, 2011; Kato and Long, 2006), by local standards it is likely to be lower in firms with higher proportions of politically connected directors.

Second, high levels of top executive compensation generally are unpopular with the public, even in Western economies (Bebchuk and Fried, 2004), as they attract attention from the media. In the context of our study, the government may consider awarding high levels of compensation to executives as unfair income distribution (Markoczy *et al.*, 2013) and thus a red button that potentially triggers public outrage costs (Adithipyangkul, Alon, and Zhang, 2011; Firth *et al.*, 2006). Consequently, this potential outcry may trigger the intervention of government officials at the national level and politically connected directors at firm level.

Having established the motive by politically connected directors in China to keep executive compensation at low levels, an important issue to address is their capability to influence the pay-setting process. We argue that politically connected directors have the power and legitimacy to influence executive compensation because they are connected to the state, which is dominant and still plays a significant part in business (Markoczy *et al.*, 2013). Indeed, the state still controls access to critical resources such as raw materials and capital (Keister, 2004). In deciding the level of executive compensation, Chinese firms are therefore influenced by the views of the state and those of its ideologically affiliated actors, such as politically connected directors. Given the motive and capability by politically connected directors to influence decisions in their favor, we suggest:

*Hypothesis 1: There is a negative association between politically connected boards and top executive compensation.*

## Political connections and pay dispersion/compression

An area of academic research closely related to the issue discussed above is that of pay dispersion/compression in firms. Pay dispersion refers to the amount of difference (inequality) in pay created by a firm's pay structure (Milkovich and Newman, 1999). Pay compression is the extent to which this difference is reduced.

Research has yielded mixed results about what amount of pay dispersion is optimal and about its effects in firms. Some researchers draw on tournament theory and argue that pay dispersion has positive effects because it promotes competition, encouraging top talent to rise to the top (Lazear and Rosen, 1981). Others adopt perspectives rooted in social-psychological arguments, such as social comparison theory, and suggest that pay dispersion is associated with increased executive turnover and decreased firm performance (Bloom and Michel, 2002; Siegel and Hambrick, 2005).

While most of these studies have considered the consequences of pay dispersion, however, not much is known about its antecedents. Like studies on consequences, the limited research on the antecedents of pay dispersion draws on social comparison theory, examining teams such as top executives and comparing the pay of directors on the same board (e.g., Fredrickson *et al.*, 2010).

This paper deviates from previous studies in that, rather than examine pay differentials among top executives, we consider the set of all company employees including top executives as one big team. We consider that, beyond the comparison that politically connected directors are likely to make between civil service and private sector pay, the issue of pay differentials within the firm is another area of interest and importance, given the unique institutional context of China.

Indeed, politically, China is a socialist country that arguably places importance on equality (or near-equality) of pay between managers and workers (Adithipyangkul *et al.*, 2011), a view echoed culturally by a high level of collectivism (Hofstede, 2003) and reduced managerial discretion (Crossland and Hambrick, 2011). In fact, the 1956 civil service pay reform and several others that followed up until 1986 compressed occupational differentials in pay (Shi and Wu, 1993).

We argue that politically connected directors are more likely to push for lower pay dispersion

in firms. However, the amount of pressure for pay compression depends partly on opportunities that politically connected directors have to make social comparisons of pay. For example, Leventhal (1976) found that people in groups that had a high level of interaction preferred equal rewards. Similarly, Pfeffer and Langton (1988) reported that in public colleges and universities, where compensation is a matter of public record, pay was more compressed among both faculty and high-level administrators than in private institutions, where such pay information is not in the public domain. Politically connected directors in China have both the motive and opportunity to make comparisons of different levels of pay. First, they have knowledge of civil service pay, which is highly compressed due to China's political ideology of equality. Such knowledge comes from their previous experience of civil service or their close association with the state. Second, by virtue of having a seat on the board, they have knowledge of employees' and top executives' pay in the firm and the opportunity to determine the latter. Thus, making direct comparisons with the situation in the civil service, indeed from where they draw their experience, opinions, and behavior for comparison purposes (Festinger, 1954), politically connected directors are likely to influence low executive pay such that the gap between top executives' and company employees' pay is reduced. We therefore suggest:

*Hypothesis 2: Politically connected boards will be associated with lower pay dispersion (higher pay compression).*

### The moderating role of political connections between performance and pay

A positive relationship between firm performance and top executive compensation is consistent with agency theory, the dominant paradigm in this stream of research (Jensen and Murphy, 2010; Rost and Osterloh, 2009). Within this framework, managers are self-serving, and compensation arguably serves as a motivator that aligns the interests of managers with those of shareholders (Jensen and Murphy, 2010). In this context, the extent to which shareholders' agency problems are resolved has traditionally been assessed by associating executive pay with the performance of the firm (Fama and Jensen, 1983).

Among many measures of performance, previous studies have used return on assets (ROA), return on sales (ROS), and total shareholder return, and the responsiveness of pay to performance has been measured by pay-performance sensitivity or elasticity (e.g., Buck *et al.*, 2008; Kato and Long, 2006). Table 1 shows pay-performance sensitivities and elasticities found in previous studies, for U.S., U.K., Korea, and Chinese firms, including the current study. The simple interpretation is that the higher the responsiveness, the lower the level of rent extraction by the agent, thus the better the link between performance and pay (see a footnote to Table 1 for further explanation).

While some scholars have documented a strong and positive link between firm performance and executive pay (Murphy, 1999; Rost and Osterloh, 2009), other studies have not established this relationship (Bebchuk and Fried, 2004; Tosi *et al.*, 2000). In the context of China, many studies on top executive pay have shown a positive association between performance and executive compensation (Buck *et al.*, 2008; Chen, Liu, and Li, 2010; Conyon and He, 2011; Firth *et al.*, 2007; Kato and Long, 2006; Mengistae and Xu, 2004).

However, this relationship has not been examined in the context of political connections. Earlier, we argued that politically connected boards, consistent with social comparison theory, are more likely to keep top executive compensation at lower levels, at least in line with civil service remuneration. This suggests that any advice or suggestions given by politically connected directors may be a function of social processes, failing to embrace the economic or agency theoretic assumption that links performance to executive pay. This implies that, apart from the direct impact of politically connected directors on top executive pay, their presence may also indirectly affect the link between performance and top executive pay. As we discussed above, politically connected directors are more likely to compare top executive pay with that of civil servants based on their own experience and socialization. As discussed earlier, too, civil service pay is arguably low and highly compressed, with no regard for different levels of individual performance. By applying the same formula to executive pay, politically connected directors depart from market-based recommendations, potentially obscuring the often-assumed positive link between firm performance and top executive pay. Put differently, the

Table 1. Estimates of median executive pay sensitivities<sup>a</sup> and elasticities<sup>b</sup> compared (salary and bonus only)

Researcher(s) (date)	Country (years studied)	Performance → pay sensitivity	Performance → pay elasticity	Pay → performance elasticity
Hall and Liebman (1998)	U.S.A. (1980–1994)		0.22	
Benito and Conyon (1999)	UK (1990–1996)		0.26	
Kato, Kim, and Lee (2005)	S. Korea		0.194	
Firth, Fung, and Rui (2006)	China (1998–2000)	0.021		
Kato and Long (2006)	China (1998–2002)	0.053	0.369	
Buck, Liu, and Skovoroda (2008)	China (2000–2003)	0.027** (3.44)	0.250* (2.71)	0.015* (2.49)
<b>Current study (2013)</b>	<b>China (2002–2008)</b>		<b>0.271*** (3.61)</b>	<b>0.036* (2.27)</b>

<sup>a</sup> Performance-pay sensitivity shows the absolute increment to pay associated with a 1,000 unit (e.g., \$) increase in shareholder value: so, a sensitivity of 0.053 (for China; Kato and Long, 2006) indicates that an additional \$1,000 of shareholder value is associated with 5.3 cents of additional executive pay. It is calculated by regressing changes in executive pay on changes in shareholder value.

<sup>b</sup> Performance-pay elasticity shows the percentage responsiveness of pay to a percentage change in performance. For example, an elasticity of 0.10 denotes that a CEO associated with a 20 percent rate of return would be paid 1 percent more than a CEO associated with 10 percent (Hall and Liebman, 1998: 654). It is calculated by regressing the change in the log of executive pay on change in the log of shareholder value.

\*, \*\*, and \*\*\* represent significance at the 0.05, 0.01, and 0.001 levels, respectively.

involvement of politically connected directors promotes the norms and values of the state for equality of pay, suggesting the possibility of low executive compensation even in the face of improved firm performance. We, therefore, suggest that:

*Hypothesis 3: Politically connected boards weaken the link between top executive pay and firm performance.*

## METHOD

### Data and sample

To test our hypotheses, we draw our sample from Chinese firms that are listed on the Shanghai and Shenzhen stock exchanges. We collected information on top executive pay and characteristics of the boards of directors from firms' annual reports for the years 2002–2008. We chose 2002 as the starting year for two reasons. First, the Chinese government put great emphasis on corporate governance, following China's access to the World Trade Organization at the end of 2001. Second, annual reports for years earlier than 2002 provide less detailed information on the characteristics of the boards of directors. We focused on firms whose annual

reports can be obtained from Shanghai and Shenzhen stock exchanges, the website of the China Security Regulation Committee, and the websites of listed firms for the six years from 2002 to 2008. Our sample consists of 964 listed firms, and the majority of them were in the manufacturing sector. We excluded firms in the financial sector because they have different financial structures, disclosure regimes, and ways of measuring their performance. Moreover, the financial sector is heavily regulated by the Chinese government, making it difficult to examine the role of political connections in such an environment.

### Dependent variables

We use two dependent variables: top executive cash pay (*TE cash pay*) and *pay compression*. Top executive pay was measured by salaries and bonuses and was calculated as the logarithm of average cash pay for the three highest-paid executives at year 2000 prices. To capture pay compression in a firm, we followed Bloom (1999) by using the ratio of the average employee's pay to the average of top three executive pays. Thus, a larger ratio indicates greater pay compression and, therefore, less pay dispersion between average employees and top executives.

## Independent variables

### Political connections

In order to evaluate the impact of politically connected boards, we focus on outside directors with a political background. We define an outside director with political connections as one who was formerly a government officer or member of the Chinese People's Congress or the Chinese People's Political Consultative Conference at county and above levels. We identify whether an outside director was a government official before joining the listed firm from the "Profile of Directors and Senior Managers" section of the company's annual reports. The political connections were measured as a ratio of outside directors who were formerly government officials to the total number of board directors.

### Firm performance

*ROS* is used to measure firm performance. This variable is included in our estimation equations in order to test the moderating effect of political connections on the relationship between executive pay and firm performance.

### Control variables

We follow the methodology by Delios, Wu, and Zhou (2006) to categorize ownership in Chinese-listed firms according to the ultimate identity of shareholders. Given that state-owned enterprises enjoy preferential status in obtaining loans and other key inputs (Brandt and Li, 2003; Che, 2002), we control for state ownership. *State shareholding* is calculated as the percentage of shares owned by the central government, local governments, and government-related agencies. We also include *foreign shareholding* to control for the influence of foreign investors and control for top executive equity ownership (*TE equity ownership*). *Board size*, measured as the total number of board directors, is used to control for the impact of the entire board of directors on executive pay. *Firm size* and *firm age* are used as control variables because larger and older firms may pay more for top executives. Firm size and firm age are measured by the logarithm of firm total assets and the number of years since establishment, respectively. *Debt-equity ratio* is employed to control for slack resources and *cross listing* controls for the influence that may result from internationalization and foreign regulatory expectations

(Chizema and Shinozawa, 2012). Based on information on whether firms have listed outside mainland China, from the company's annual reports, we created a dummy variable that takes the value of 1 if firms have been cross listed in international exchanges, and 0 otherwise. We also control for the *average age of top executives* and *CEO change*. Finally, we use industry *dummies* to control for industry effects and year dummies to control for time-varying effects.

### Method of analysis

Before testing our hypotheses, we first consider sample selection bias by testing which types of firms are likely to have politically connected directors. In order to test for sample selection bias, we created a dummy variable, which takes the value of 1 if a firm has a politically connected outside director and 0 otherwise. We estimated a binary logit model to check what types of firms are likely to have politically connected directors. For the explanatory variables, we included firm size, age, state shareholdings, foreign shareholdings, cross listing, industry dummies, and a year dummy when the government required that one third of board directors should be outside directors.

To test whether politically connected directors directly influence top executive pay (Hypothesis 1) and indirectly affect the link between executive pay and performance (Hypothesis 3), we take account of the possibility of a two-way causality between performance and top executive compensation. On one hand, firm performance may affect the level of executive remuneration, an observation that has been made in the literature (Kato and Long, 2006). On the other hand, executive pay may create motivational incentives, which help to enhance firm performance (Buck *et al.*, 2008). If reverse causation exists, the impact of firm performance on executive pay would be overstated when using ordinary least squares (OLS) with the fixed effects model. In such a situation, the generalized method of moments (GMM) should be applied to take the interconnectivity of top executive pay and firm performance into account. GMM is widely used to deal with the endogeneity problem in panel data analysis as this method is sufficiently flexible to control for unobserved heterogeneity and endogeneity. In particular, Blundell and Bond (1998) suggest that GMM estimation is an appropriate approach to short panel data as it allows for a large set of instruments of both

lagged levels and first differences and, therefore, exploits fully all of the available moment conditions. This yields better predictions for the endogenous explanatory variables in the finite sample. We adopt this approach to test our hypotheses.

To test Hypothesis 2, which predicts that pay dispersion will decrease or that pay compression will increase as political connections increase, we follow Papke and Wooldridge (1996) by first performing a logit transformation on pay compression in order to map the ratio to the whole scale. This is explained by the equation:  $PC = \ln[(Pay\ Compression)/(1 - Pay\ Compression)]$ , where  $PC$  is the ratio variable with a value between 0 and 1. We thus use the transformed  $PC$  variable as the dependent variable in the pay compression model.

## RESULTS

Table 2 reports descriptive statistics and the correlation matrix for the study variables. The correlations among independent variables are very low. According to our data, the average board size is nine. State share holdings account for 32 percent of the ownership of the sample firms, whereas 6 percent of the sample firms are cross listed.

The results of sample selection bias test presented in Table 3 show that the variables relating to firm characteristics are insignificant. These results show that the variable for political connections is weakly exogenous to firm characteristics. Hence, sample section bias is not a concern in our study.

The endogeneity test reveals two-way causality between executive pay and firm performance (Hausman test = 80.318,  $p < 0.001$ ), suggesting that executive pay and performance mutually affect each other (Buck *et al.*, 2008; Kato and Long, 2006). The significant reverse causation indicates that there is also feedback from pay to performance and should be taken into account in modeling the link between executive pay and performance. Based on the results from causality tests, we estimate the direct and indirect impact of political connections on top executive pay by applying GMM to take two-way causality into account. We used lagged variables as instruments, a practice that is commonly used to address the endogeneity problem in GMM estimation (Baum, Schaffer, and Stillman, 2003). The consistency of the GMM estimator depends on the validity of the instrumental variables used in the regression. We conducted the Sargan test to verify

Table 2. Descriptive statistics and correlation matrix

	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 TE cash pay	12.04	0.84	9.16	15.36															
2 Pay dispersion	-1.62	1.41	-6.33	5.32	-0.386														
3 Performance	0.03	0.44	-7.09	12.76	0.124	-0.028													
4 Political connection	0.04	0.08	0.00	0.43	0.026	0.023	0.001												
5 Board size	9.07	1.97	4.00	20.00	0.183	-0.055	0.049	-0.004											
6 Average age of TE	46.61	3.25	36.00	59.00	0.187	-0.019	0.053	0.136	0.171										
7 CEO change	0.31	0.46	0.00	1.00	-0.106	0.048	-0.076	0.005	0.009	-0.113									
8 State shareholding	0.32	0.24	0.00	0.97	-0.087	0.091	0.029	0.038	0.185	0.218	0.009								
9 Foreign share holding	0.01	0.05	0.00	0.64	0.097	-0.082	-0.014	0.003	0.005	0.042	0.029	-0.106							
10 Cross listing	0.06	0.24	0.00	1.00	0.137	-0.083	-0.008	-0.004	0.049	0.039	0.007	-0.093	0.783						
11 TE equity ownership	0.003	0.03	0.00	0.75	0.053	-0.013	0.011	-0.016	-0.055	-0.043	-0.042	-0.119	-0.013	-0.001					
12 Debt-equity ratio	0.56	0.76	0.01	43.08	-0.027	-0.010	-0.064	0.028	-0.032	-0.016	0.041	-0.047	0.004	0.007	-0.024				
13 Firm size	9.27	0.45	6.76	11.88	0.395	-0.113	0.139	0.062	0.272	0.304	-0.089	0.148	0.042	0.057	-0.050	-0.120			
14 Firm age	10.75	4.41	2.00	50.00	0.191	-0.090	-0.018	0.011	-0.066	0.046	0.041	-0.333	0.023	-0.002	-0.062	0.088	-0.026		
15 Average pay	10.09	1.04	7.32	13.67	0.408	0.654	0.073	0.040	0.094	0.126	-0.032	0.023	-0.006	0.026	0.031	-0.034	0.201	0.046	

All correlation coefficients more than 0.033 or less than -0.033 are significant at the 5 percent level or higher.  
TE = top executive

Table 3. Determinants of politically connected outside directors

Dependent variable: political connections (binary logit model)	Coefficient	SE
Cross listing	-0.573	0.545
State shareholding	0.246	0.344
Foreign shareholding	1.577	2.303
Debt-equity ratio	6.522	4.713
Firm size	1.728	1.157
Firm age	-0.072	0.054
Year dummy	0.394	0.455
Industry dummies	Included	Included
Observations	5,111	

whether the instrumental variables are uncorrelated to residuals and whether they are acceptable instruments. The insignificant results from the Sargan test in Table 4 indicate that the instrumental variables are appropriate.

The results obtained from GMM estimations are shown in Table 4. In Model 1, the main effects of the independent variables were estimated with top executive pay as the dependent variable and the proportion of politically connected directors and firm performance as independent variables in the pay equation. The interaction term between political connections and firm performance was included in Model 2.

Hypothesis 1 posits that there is a negative association between politically connected boards and top executive compensation. Results in Models 1 and 2 in Table 4 indicate that the variable of political connections is significant and negatively associated with executive remuneration at  $\beta = -0.361$ ,  $p < 0.01$ , in Model 1 and at  $\beta = -0.257$ ,  $p < 0.1$ , in Model 2. Hypothesis 1 is, therefore, supported.

Hypothesis 2 predicts that politically connected boards will be positively associated with lower pay dispersion (higher pay compression). The results presented in Table 5 show that the coefficient for political connections is statistically significant and positively associated with pay compression ( $\beta = 0.528$ ,  $p < 0.05$ ), suggesting that politically connected directors favor a smaller pay gap between workers and executives. Thus, we found empirical evidence that supports Hypothesis 2.

From the control variables, state shareholding and CEO change have similar effect as the political connection variable. Firm performance, foreign shareholding, cross listing, board size, debt-equity

ratio, firm age, and firm size are negatively associated with the pay dispersion, indicating that these factors contribute to a larger pay gap.

Hypothesis 3 predicts that politically connected boards weaken the impact of firm performance on executive pay. To test this hypothesis, we add interactive variables *political connections* and *firm performance* in Model 2 of Table 4. The individual coefficients of political connections and firm performance now represent conditional rather than additive effects, and hence their respective coefficients diverge from those in previous models (Friedrich, 1982). In Model 2, the inclusion of the interaction term improves the model  $R^2$  from 0.242 to 0.266. Model 2 shows support for the conditional impact of firm performance on executive pay. In the

Table 4. Results from testing top executive pay

Dependent variable: TE pay	Model 1 GMM	Model 2 GMM
Political connections (PC)	-0.361** (0.129)	-0.257† (0.135)
Performance(-1)	0.528*** (0.050)	0.453** (0.169)
PC × performance(-1)		-2.938* (1.442)
Cross listing	0.358*** (0.063)	0.352*** (0.062)
State shareholding	-0.188*** (0.047)	-0.203*** (0.046)
Foreign shareholding	-0.075 (0.293)	-0.113 (0.289)
Board size	0.043*** (0.005)	0.044*** (0.005)
Average age of TE	0.009** (0.003)	0.010** (0.003)
CEO change	-0.119*** (0.021)	-0.121*** (0.021)
Debt-equity ratio	0.027* (0.012)	0.019 (0.013)
Firm size	0.526*** (0.025)	0.550*** (0.027)
Firm age	0.016*** (0.003)	0.016*** (0.003)
TE equity ownership	1.570*** (0.311)	1.587*** (0.308)
Industry dummies	Included	Included
Year dummies	Included	Included
$R^2$	0.242	0.266
Observations	5,111	5,111
Sargan statistic	1.095	5.192
<i>P</i> -value = 0.579 <i>P</i> -value = 0.158		

Standard errors are in parentheses.

†, \*, \*\*, and \*\*\* represent significance at the 0.1, 0.05, 0.01, and 0.001 levels, respectively.

absence of political connections (*i.e.*, when political connections equal 0), the effect of performance on executive pay is positive and significant ( $\beta = 0.453$ ,  $p < 0.01$ ). However, in the aftermath of introducing politically connected directors, the effect of performance on pay is reduced, as shown by a negative and significant coefficient ( $\beta = -2.938$ ,  $p < 0.05$ ). When the proportion of politically connected directors equals 0.039 (the average), the conditional impact of firm performance on executive pay is  $[0.453 - 2.938 \times (0.039)] = 0.338$ ,  $s.e. = 0.115$ ,  $p < 0.05$ . This suggests that, when the proportion of political connections increases to 0.039, top executive pay is reduced by 40.2 percent [ $100(\exp(0.338) - 1)$ ]. Based on these results, Hypothesis 3 is supported.

For the purpose of determining the range of political connections over which the effect of performance on executive pay is significantly reduced,

Table 5. Results from testing pay compression

	Dependent variable: pay compression OLS	Dependent variable: average pay OLS
Political connections	0.528*	0.004 (0.240) (0.176)
Performance(-1)	-0.094† (0.050) (0.036)	0.099** (0.036)
Cross listing	-0.218† (0.118) (0.086)	0.177* (0.064)
State shareholding	0.393*** (0.087) (0.064)	0.106† (0.064)
Foreign shareholding	-1.085* (0.545) (0.400)	-0.920** (0.400)
Board size	-0.028** (0.010) (0.007)	0.023*** (0.007)
Average age of TE	0.004 (0.006) (0.005)	0.013** (0.005)
CEO change	0.182*** (0.040) (0.029)	0.013 (0.029)
Debt-equity ratio	-0.038† (0.023) (0.017)	-0.020 (0.017)
Firm size	-0.341*** (0.046) (0.034)	0.297*** (0.034)
Firm age	-0.025*** (0.005) (0.004)	-0.008* (0.004)
TE equity ownership	-0.205 (0.579) (0.425)	1.469*** (0.425)
Industry dummies	Included	Included
Year dummies	Included	Included
R <sup>2</sup>	0.048	0.091
Observations	5,111	5,111

Standard errors are in parentheses.

†, \*, \*\*, and \*\*\* represent significance at the 0.1, 0.05, 0.01, and 0.001 levels, respectively.

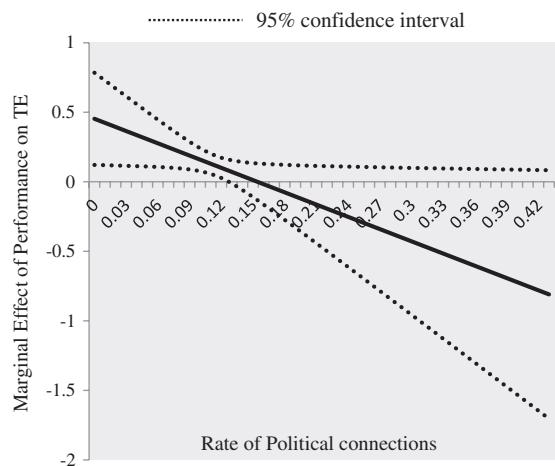


Figure 1. The moderating effect of political connections on the link between top executive pay and firm performance

we follow the guidelines by Brambor, Clark, and Golder (2006) and thus plot the marginal effect of performance on executive pay on the condition of political connections (Figure 1). When both upper and lower 95 percent confidence interval lines (broken lines) are above or below the zero line, firm performance has a statistically significant effect on executive pay. The lower 95 percent confidence interval line crosses the zero line when the rate of politically connected directors equals 0.127, under which the conditional impact of firm performance on executive pay is  $[0.453 - 2.938 \times (0.127)] = 0.080$ ,  $s.e. = 0.040$ ,  $p < 0.05$ . Therefore, when political connections are between 0 and 0.127, performance has a statistically significant effect on executive pay. When the proportion of political connected directors is above 0.127, the marginal effect of performance on pay becomes insignificant. The graphic display in Figure 2 shows the main effect of political connections and performance on top executive pay and the interaction term between the two. It clearly shows that political connections weaken the positive link between firm performance and executive pay. Executive pay is reduced when political connections increase, given the same level of firm performance.

## Robustness tests

In Hypothesis 2, we proposed that politically connected boards reduce pay dispersion, leading to greater pay compression. We found support for this hypothesis. However, when this result is considered

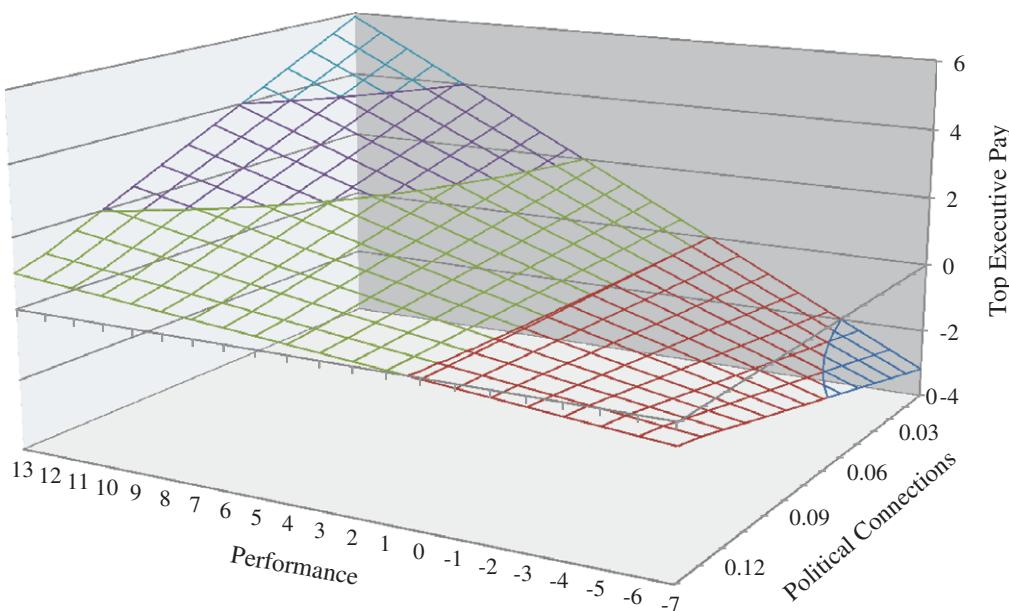


Figure 2. Effect of political connections and firm performance on top executive pay

alongside the finding in Hypothesis 1, that political connections reduce executive pay, it may be possible that pay compression increases primarily because of the lowering of executive pay. It is also possible that increased pay compression could be due to political directors influencing an increase in employees' pay. To be certain about the effect of political connections on pay compression, we carried out further tests. We ran regression tests with average pay as a dependent variable. The results in Table 5 show that political connections do not have a significant effect on average employee pay ( $\beta = 0.004$ , n.s.). This suggests that the reduction in the pay gap is mainly due to the negative association between political connections and executive pay.

For all the hypotheses, we reran our regression tests using an alternative measure of performance ROA. Overall, the results are substantively similar to our primary results, pointing to their robustness.<sup>3</sup>

## DISCUSSION

At a broader level, this study relates to two main strands of the literature: the first studies the relationship between politics and business and the second studies how board attributes and director characteristics affect the firm in important decisions

such as executive compensation. At a specific level, this paper examines the behavior of politically connected directors, as influenced by their political ideology, on decisions related to top executive compensation, pay disparity within the firm, and the performance-pay link.

After controlling for other characteristics of the sample firms, we find that firms with politically connected outside directors grant a lower level of top executive compensation. In the context of China, this may suggest that firms with politically connected boards would avoid payment of large executive compensation possibly for the purpose of social harmony. Politically connected directors may help adhere to the political goal of achieving a harmonious society set up by the Chinese government as the top priority. This may explain why there is a negative association between politically connected directors and top executive pay. It is plausible, therefore, that aligning the interests of management and those of shareholders is not the priority for politically connected boards. Our findings possibly suggest that politically connected directors who are embedded in the Chinese institutional context are more likely to act as an intermediary by reinforcing government expectations with regard to executive remunerations. Our findings also provide a more complete picture about the impact of the unique characteristic of board directors in China.

<sup>3</sup> These results are available upon request.

We also found evidence that shows there is a positive association between politically connected outside directors and pay compression. Our findings imply that low pay dispersion is rooted both in the institutional context that places great emphasis on the equality of pay between managers and workers and the long-held values of board directors who help to enhance such equality.

We went a step further to examine how the presence of politically connected directors affects the link between top executive pay and firm performance. We found that politically connected directors do not only affect top executive pay directly, but also indirectly impact the link between executive compensation and firm performance. Specifically, we found evidence suggesting that the effect of performance on pay will be weakened when there are more outside directors with political connections, however, to a certain point. These results support our overall line of argument that the corporate decisions made by politically connected directors in China are subject to social comparison processes and reflect Communist values of equality. Given, therefore, the political ideology of politically connected directors, our findings are justifiably explained through the lens of social comparison and move beyond an agency theoretical perspective that rationalizes the positive association between executive pay and performance.

This paper claims a number of contributions to the field of corporate governance. Broadly, our paper contributes to the stream of research on the determinants of top executive compensation. It does this by improving our understanding of an important but understudied type of outside directors, namely, former or current politicians/government officials, in determining top executive compensation and pay dispersion. Specifically, it contributes to the literature on political intervention in corporate governance in general and top executive compensation in particular.

Moreover, our study adds to the literature on corporate governance by suggesting that outside directors who share the norms and values of the state are more likely to promote the interests and ideology of the latter.

In addition, our paper contributes to better understanding and further application of social comparison theory in two important ways. First, we apply social comparison theory to understand pay dispersion across the firm beyond top management teams, thus going beyond previous studies in this area.

Such an extension enriches our understanding of how the political ideology of board directors affects pay dispersion in the context with socialist traditions, indeed where “the setting of executive compensation has several unique attributes that support a social explanation” (Finkelstein and Hambrick, 1996: 275).

Second, in contrast to previous studies that have demonstrated the potential increase of remuneration following social comparison processes (Fredrickson *et al.*, 2010), our study shows that the same processes could be used, however, resulting in lower levels of top executive remuneration.

Our findings have important theoretical implications for the role of outside directors in different institutional contexts with different levels of government intervention. Moreover, our findings carry some policy and managerial implications. The results from the study suggest that politically connected outside directors play dual roles in helping firms gain key resources and reinforce government expectations with regard to top executive pay and pay disparity in the firm. In the specific case of China, appointing former government officials as outside directors may help firms gain legitimacy and promote social harmony by designing acceptable executive compensation.

## Limitations and future research

Like all research, this study is not exempt from limitations. First, our use of secondary data on issues of social comparison carries inherent limitations. Like all empirical studies on executive compensation that assume board involvement but rely on archival data (e.g., O'Reilly *et al.*, 1988), we did not assess the actual process by which the board sets executives' pay. Thus, even though previous research indicates that social-psychological processes that influence pay allocation at lower levels generalize well to board members (Fredrickson *et al.*, 2010; Westphal and Zajac, 1995, 1997), we do not know how the issue of social comparisons is invoked in the process of determining top executive pay, particularly where politics and business are mutually important. Here, the way forward should be to employ more grounded approaches of data collection such as the use of interviews.

Second, while we have based our arguments on the uniqueness of the institutional environment, China's approach to business is fast changing. While arguments on path dependence may suggest

that continuity is likely to win over radical change, the notion of equality within the Chinese society is facing great challenges from the forces of globalization and is likely to fade with time. It would be interesting to see whether after a number of years Chinese firms continue to use politically connected directors or not, or whether such politically connected directors continue to hold and apply current political ideology on executive compensation and other corporate decisions.

Third, our measure of political connections is limited, and the nature of our data does not provide detailed information about who is on the board except for politically connected directors. Future research can develop a more fine-grained analysis of the characteristics of the board of directors.

Fourth, only aggregate salary and bonuses for the three highest paid executives are disclosed by Chinese listed firms, and using average top-three executive pay in our estimation may lack variation relative to individual pay. Moreover, our data on top executive compensation does not include long-term forms of pay such as stock options. However, as a practical matter, stock options have not been a common component of top executive pay in China. Relatedly, the use of the committee system, similar to other Asian countries (Chizema and Shinozawa, 2012), is still in its infancy in China. It is, therefore, difficult to find out who actually is involved with the duties of a compensation committee in many firms. With changes taking place in the governance of firms in China, accompanied by greater corporate disclosure and possible widespread use of board committees, future studies could examine the effect of outside directors on the various components of individual top executive compensation.

Finally, while China is an emerging economy, we do not expect similar results in a lot of other emerging economies. This is mainly because of the diversity of norms, values, and political backgrounds across countries. Thus, while limiting our sample to the Chinese context provides an opportunity to understand unique and undiluted influence of national political ideology in executive pay setting, the single-country context inevitably limits the generalizability of our findings.

## CONCLUSIONS

Using a unique dataset of Chinese listed firms, we provide new conceptual and empirical insights into

the determinants of top executive pay. Drawing on social comparison theory, our study examines the impact of political connections on top executive compensation and firm pay compression in the context of a large emerging economy. We found that top executive pay is negatively associated with politically connected outside directors, while the association between the latter and pay compression is positive. We also found that politically connected outside directors weaken the relationship between performance and pay in an institutional context that has high regard for socialist traditions, such as China.

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