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Politically connected CEOs, firm performance, and CEO pay

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ABSTRACT

This study examines the role of executive political connections in shaping executive compensation strategies in private Chinese firms, given the importance of political connections in securing political legitimacy and government-controlled resources in China. Our results show that the political connections of CEOs have a positive impact on both firm performance and CEO pay, and that this impact is stronger in less-developed regions. Further analyses indicate that, for CEOs with local political connections, the positive impact is not affected by regional economic development. Our findings reveal the importance of CEOs' political connections and demonstrate that such connections play a role in determining executive compensation.

1. Introduction

The determination of management compensation has been the subject of extensive research in the strategic management literature, with a focus on the association between company performance and senior management pay (e.g., Buck, Bruce, Main, & Udueni, 2003; Conyon & Leech, 1994; Jensen & Murphy, 1990). However, much of the evidence from empirical research on the determinants of executive pay has failed to document a robust pay–performance link (Barkema & Gomez-Mejia, 1998; Conyon, Gregg, & Machin, 1995). Thus, research efforts have been increasingly directed toward seeking alternative social and political explanations for executive pay (Chhaochharia & Grinstein, 2009; Conyon & Peck, 1998; Finkelstein & Boyd, 1998; Finkelstein & Hambrick, 1989; Firth, Fung, & Rui, 2006; Henderson & Fredrickson, 1996; O'Reilly III, Main, & Crystal, 1988; Sanders & Carpenter, 1998). For example, O'Reilly III et al. (1988) document strong associations between CEO compensation and the compensation level of outside members of the board of directors, especially those who serve on the compensation committee, suggesting that social comparison has an importance influence on CEO compensation levels. Finkelstein and Hambrick (1989) find that CEO pay is linked to several factors such as firm size, operation complexity, financial performance, CEO power, board vigilance, and the CEO's human capital, indicating that CEO compensation is influenced by a complex web of market and political factors. These studies suggest that it is important to comprehend executive compensation from multiple perspectives, including economic, social, and political perspectives (Finkelstein & Hambrick, 1988).

Executives throughout the world have political connections (Boubakri, Cosset, & Saffar, 2008) and have a considerable impact on the operations and performance of firms (Faccio, 2006; Fisman, 2001; Hillman, 2005; Johnson & Mitton, 2003). As such, executive political connections may be an important determinant of executive compensation. However, the relationship between political connections and executive pay has received scant attention. We fill this void in the literature by examining the role of political connections possessed by chief executive officers (CEOs) in influencing firm performance and CEO pay.

This study draws on resource-dependence theory, which suggests that CEOs with political connections help a firm to secure resources and better manage a challenging environment (Pfeffer & Salancik, 2003). This perspective enables us to focus on the value of political connections in creating competitive advantages for firms in light of management and economic literature on the implications of political connections. We argue that CEO political connections are strategically important for firms to gain political legitimacy and acquire access to government-controlled resources and should therefore be an important determinant of CEO pay.

Using private Chinese firms listed on either the Shenzhen or the Shanghai stock exchange between 2005 and 2012, we find that the political connections of CEOs have a positive impact on both firm performance and CEO pay, and that this effect is stronger in less-developed regions. Further analyses indicate that, for CEOs with local political connections, the positive impact is not affected by regional economic development. These findings reveal the importance of the political connections of CEOs and show that such connections play a

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role in determining executive compensation.

Our study extends earlier research on executive pay but also differs from it in several important respects. First, our study provides an understanding of the effects of executives' political connections on executive pay. Prior studies have examined the influence of various characteristics of executive directors, such as social capital (Belliveau, O'Reilly, & Wade, 1996), executive power (indicated by tenure and shareholding), and human capital (Finkelstein & Hambrick, 1989). Little is known about the relationship between executives' political capital and executive compensation despite the fact that the effect of political ties on firm value has been widely documented in the literature. Second, this is the first study to examine executive pay in private Chinese firms. China provides an ideal research setting because of the prevalence and importance of political connections in its business sector (Fan, Wong, & Zhang, 2007; Li, Meng, Wang, & Zhou, 2008). This study adds to the limited but growing literature on executive compensation in transitional economies. Much of the research on executive pay has focused on Western settings (Chizema, Liu, Lu, & Gao, 2015). Our study extends the existing research to a different institutional setting with a particular focus on private firms, an increasingly important business sector in China but one often neglected in the literature.

The remainder of the study is organized as follows. In Section 2, we discuss the theoretical setting for the study, private businesses in China, and the development of multiple hypotheses. Section 3 describes data collection and our methodology. In Section 4, we present the results. Finally, Section 5 concludes the piece and outlines avenues for future research.

2. Background and hypothesis development

2.1. Theoretical setting

This study is informed by resource-dependence theory. This theory emphasizes the importance of firms establishing links with external contingencies to manage uncertainty and interdependence. The government is a key source of external uncertainty for businesses, and one way to manage this uncertainty is to appoint politicians to the board of directors (Hillman, 2005). There is a growing body of management and economic literature on the various roles of political connections in creating value for businesses. Prior studies have provided evidence that political connections can bring about a range of benefits, including preferential treatment by government-controlled banks (Dinç, 2005), favorable regulatory conditions (De Soto, 1989), government subsidies (Johnson & Mitton, 2003), and tax discounts (De Soto, 1989), ultimately resulting in increases in a firm's value (Faccio, 2006; Fisman, 2001; Hillman, 2005).

Political connections are particularly important for private Chinese businesses. Because such firms operate in a hostile environment, which is further discussed in the next section, they seek out political connections to secure political legitimacy and government-controlled resources. Indeed, empirical evidence shows that Party membership helps private entrepreneurs to obtain loans from banks, and affords them more confidence in the legal system (Li et al., 2008).

2.2. Private businesses in China

The evolution of private businesses in China was essentially shaped by political ideology; private businesses were initially completely prohibited, were then revived, and have since grown rapidly. China was formed as a socialist country, with sole leadership assumed by the Communist Party of China in 1949. Because public ownership, including state and collective ownership, was considered superior to private ownership, all private companies were transferred to public ownership by 1955, with state-owned enterprises dominating the national economy (Doupnik & Perera, 2011).

Private businesses reemerged following the Third Plenum of the Communist Party's Eleventh Central Committee held in 1978, which initiated reform policies to transform China's economy. After more than three decades of rapid growth, private businesses now account for more than two thirds of output, contribute to almost all job growth, and are the leading driver of export growth (Lardy, 2014).

Despite the increasingly important role private businesses play in the Chinese economy, they remain constrained by various institutional difficulties. First, unlike their state-owned counterparts, private firms are continually subjected to ideological discrimination, both constitutionally and practically. The existing 1982 Constitution (amended) emphasized public ownership as the foundation of China's fundamental economic system, although other forms of business ownership, including private businesses, were being developed jointly (Article 6). Furthermore, the state-owned economy is viewed as the dominant force in the national economic system, and its growth is secured by the country (Article 7). Private ownership was considered to be an inferior form of ownership from an ideological point of view. The legitimacy of private firms has frequently been challenged by social movements that have demanded a crackdown on the private sector on the basis of countering bourgeois liberalization, attacking speculation, or rectifying the market (Li, Meng, & Zhang, 2006).

Second, private enterprises have endured an unfavorable economic environment. The government still controls most resources, despite dramatic economic reforms. State-owned firms enjoy preferences in obtaining bank loans, tax benefits, and other key resources (Brandt & Li, 2003; Che, 2002; Lee, Walker, & Zeng, 2014; Li, Yue, & Zhao, 2009). On the other hand, private firms have to endure arbitrary harassment by bureaucratic officials (Pearson, 1997). Self-interested bureaucrats use their discretionary power to impose excessive regulatory burdens on private firms, including unnecessary official routines, complex rules, and extended procedures (Li et al., 2006). Private firms often pay taxes, licensing fees, administrative fees, and penalties at punitive levels (Peng, 2001). Today, the Chinese government continues to struggle to create a market environment in which private firms can compete fairly with their state-owned peers (Li et al., 2008).

Third, China's legal system offers little protection for private firms. Compared to legal institutions in advanced economies, China's legal system is much younger and less developed (Allen, Qian, & Qian, 2005). China's economic transition has unfolded in an environment in which the rule of law has been nonexistent or ineffective at preventing bureaucrats from encroaching on private firms. Laws and government policies concerning private firms are subject to the broad and varied interpretation of the officials who enact and enforce them (Ahlstrom & Bruton, 2001). Despite the widespread abuse, it is rare for private firms to seek legal redress (Wank, 1996). Although continuous efforts have been made to improve the legal system in the past three decades, the market-oriented legal system is still relatively untested, and unexpected government policy changes continuously add to its uncertainty and complexity (Schlevogt, 2000).

2.3. Effect of political connections on firm performance

Resource-dependence theory suggests that firms can use political connections to address uncertainty created by the government and obtain government-controlled resources. As summarized above, private firms in China operate in a hostile environment. Obtaining political legitimacy and government-controlled resources is critical for their survival and success in this challenging environment. In advanced economies, the rights of private firms to operate freely are secured by the institutional infrastructure. In a transitional economy such as China's, such rights are not enforced automatically because of the absence of supporting institutions (Ahlstrom & Bruton, 2001). Private firms have pursued strategic action to establish their legitimacy in society to mitigate the negative effects of the adverse political, economic, and legal environment. Establishing political connections is one important and effective legitimacy-building strategy.

A growing body of economic literature has documented various benefits associated with firms' political connections, including favorable regulatory conditions, access to credit markets and bank loans, preferential treatment in competition for government contracts, and lighter taxation (Agrawal & Knoeber, 2001; Faccio, 2006), all of which ultimately improve financial returns and firm value (Fisman, 2001; Johnson & Mitton, 2003). In the context of China's transitional economy, political connections have become strategically important resources that help firms achieve competitive advantages. Political allies are critical to Chinese executives in the negotiation and enforcement of contracts in the absence of a mature legal system and market-supporting institutions (Nee, 1992). Furthermore, Chinese executives can use political access to help their firms deal with political uncertainty. China's political reforms have undergone several revisions, and its political system has persistently created political uncertainty for Chinese firms (Peng & Heath, 1996). Through their executives, firms often mobilize political alliances within the government to gain government support and favorable treatment that may effectively mitigate this political uncertainty (Wang & Qian, 2011). Political connections give private firms more confidence in the legal system (Li et al., 2008) and help them obtain tax benefits (Wu, Wu, Zhou, & Wu, 2012), government subsidies (Wu, Wu, & Rui, 2012), and loans from banks or other state institutions (Li et al., 2008). Following this thread in the literature, we contend that the political connections of CEOs are strategically crucial to the success of private Chinese firms and therefore have positive impacts on firm performance. The foregoing leads to the following hypothesis:

Hypothesis 1. CEOs' political connections have a positive impact on firm performance.

2.4. Effect of political connections on CEO pay

Resource-dependence theory argues that CEOs' political connections are a valid determinant of their pay if such connections can be used as a company resource and if they add value to the firm. This may occur in two ways. First, political connections may add value to the firm, which would effectively make political connections a criterion in determining CEO pay. In China, CEO political connections are a valuable and inimitable resource and benefit the firms they serve in various ways. Given the hostile environment and the heightened competition facing private Chinese firms, a CEO with political connections is able to add additional value to the firm by shielding the firm from the adverse influences of the environment and bringing critical resources to the firm.

Second, social comparison regarding political connections could increase compensation for CEOs with such connections. When making CEO compensation decisions, boards of directors compare social statuses of their CEOs to those of other CEOs to assess the extent and prestige of the social resources possessed by their ones (Belliveau et al., 1996). CEOs also pay close attention to their personal status as reflected in their compensation relative to other CEOs (Crystal, 1992). Indeed, empirical evidence shows that a CEO's pay is influenced by his or her social capital indicated by career history, board memberships, club affiliations, trusteeships, and education (Belliveau et al., 1996). The political connections of CEOs are an indicator of their social status as well as the prestige of the social and political resources they can bring to the firm. In this sense, boards of directors may use political connections as a factor when establishing CEO pay. At the same time, politically connected CEOs are also likely to leverage their political connections when negotiating compensation with their boards. Based on this discussion, we present another hypothesis as follows:

Hypothesis 2. CEOs' political connections have a positive impact on CEO compensation.

2.5. Contingent effects of institutional environment

A contingent view suggests that effects of social and political ties on firm operation are shaped by institutional contexts. Social and political ties play a critical governance role in emerging economies at their early transition phases because market-supporting institutions are often absent or weak; this role declines when marketing-supporting institutions are better developed along with the marketization progress of those economies (North, 2005; Peng, 2003). The importance of CEO political connections in China is largely determined by the deficient market mechanism in allocating resources given China's relatively weak market-supporting institutions. Taking advantage of China's varying levels of marketization across regions, we attempt to understand whether the impact of CEO political connections is moderated by the level of regional economic development. Following the contingency perspective, we argue that the effect of CEOs' political connections on firm performance and CEO pay depends on the level of economic development in the regions in which firms operate. Specifically, we predict that political connections are more strategically important for firms that operate in less-developed regions than for their counterparts in developed regions.

Although China has made impressive progress in developing its market economy over the past three decades, levels of economic growth are far from equivalent across regions: Growth rates in coastal areas are much higher than in the rest of the country (Bao, Chang, Sachs, & Woo, 2002; Wang & Qian, 2011). Less-developed regions often have weaker market institutions and weaker legal protections (Li et al., 2008), which poses greater political uncertainty and consequently creates a greater need for political support for private Chinese firms operating in those regions. The prior literature indicates that private Chinese firms are more likely to establish political connections as alternative safeguards in regions in which the government has more discretion in allocating economic resources or in which the local economy is less market oriented (Chen, Li, Su, & Sun, 2011). Following this logic, we predict that politically connected firms in less-developed regions are likely to benefit more from political connections than their counterparts in developed regions. Indeed, empirical evidence shows that political connections are more important for private Chinese firms in gaining access to bank finance in regions with weaker market-supporting institutions (Firth, Lin, Liu, & Wong, 2009). Our discussion leads to the following hypothesis:

Hypothesis 3. The positive impact of CEOs' political connections on firm performance is stronger in less-developed regions than in developed regions.

Previous discussion suggests that CEOs' political connections are more important and add more value to firms in less-developed regions than in developed regions. Thus, we predict that politically connected CEOs in less-developed regions are likely to receive more compensation than their counterparts in developed regions. Put differently, the positive impact of CEOs' political connections on CEO compensation is more pronounced in less-developed regions than in developed regions.

Hypothesis 4. The positive impact of CEOs' political connections on CEO compensation is stronger in less-developed regions than in developed regions.

3. Method

3.1. Data

Our sample comprised all private Chinese firms listed on either the Shenzhen or the Shanghai stock exchange between 2005 and 2012. We chose 2005 as the initial study year because many Chinese listed firms started to disclose executive compensation information in that year. Our main data sources were the China Stock Market and Accounting

Research (CSMAR) database and the CEIC Data's China Premium Database. CSMAR has been widely used as the primary source of information on Chinese listed firms in previous studies of executive compensation (Conyon & He, 2011; Firth, Fung, & Rui, 2007; Kato & Long, 2006; Wang & Xiao, 2011). CEIC Data's China Premium Database provides information on the performance of various sectors, industries, and regions in China.

We manually collected biographical information on board members through corporate governance data and company annual reports from the CSMAR database; these data were further verified with information that was publicly available on company websites. Data related to other corporate characteristics were obtained from financial reports in the CSMAR database. Data on gross domestic product were derived from the CEIC Data's China Premium Database.

We initially obtained 13,918 observations. We deleted observations from state-owned firms (7017), from firms whose ownership structure changed in the year (changed from state-owned to private-owned or from private-owned to state-owned, 898), and from firms with missing data about CEO biographical information and/or firm financial data (68). The final study sample therefore consisted of 5935 observations. When we performed tests using compensation data, the sample included 5036 observations because of missing compensation data (899). We winsorized all continuous variables at the top and bottom 1% of the data set to control for effects of outliers.

3.2. Measures

3.2.1. Main variables

Our dependent variables were firm performance and CEO pay, the independent variable was political connections, and the moderating variable was regional economic development.

Following previous studies (Conyon & He, 2012; Firth et al., 2007; Wang & Xiao, 2011), we used an accounting-based measure of performance, namely, return on assets (ROA). Both accounting-based and market-based measures have been widely used in the literature. We chose the former for several reasons. First, compared to stock returns, ROA is under greater control by managers and thus is more likely to reflect a CEO's efforts to maximize profits (Firth et al., 2007). Second, China's stock market is one of the world's most volatile (Guo & Huang, 2010; Lee, Chen, & Rui, 2001), which makes market returns an inaccurate indicator of firm performance. Indeed, prior research shows that CEO pay is linked more robustly to accounting performance than to stock market performance (Conyon & He, 2012). Finally, the use of an accounting-based measure is in line with the informativeness principle, which suggests that factors that provide information about CEO efforts should be used as a basis for compensation contracts (Hölmstrom, 1979). Compared to market-based measures, accounting-based measures are more likely to be used in compensation policies by Chinese firms, given the fact that only a handful of firms have adopted share-based compensation and given the extreme volatility of the Chinese stock market. Prior studies have also provided evidence that Chinese listed firms rely heavily on accounting data related to profitability to determine executive pay (Firth et al., 2007; Mengistae & Xu, 2004).

CEO compensation was defined as the sum of salary, bonus, and stipends. This measure has been widely used in previous research in China (Chen, Liu, & Li, 2010; Firth et al., 2007; Kato & Long, 2006; Wang & Xiao, 2011).

The existing literature has used various ways to define political connectedness—for example, a director's participation in an election in Pakistan (Khwaja & Mian, 2005), close relationships between major shareholders or executive officers and important government officials in Malaysia (Johnson & Mitton, 2003), and a firm's affiliation with the president's children and his longtime allies in Indonesia (Fisman, 2001). In an international study of corporate political connections, a company was defined as politically connected if one of its top officers or large shareholders was a minister or head of state, a member of parliament, or closely related to a top official (Faccio, 2006).

In the Chinese context, politically connected CEOs have been defined as CEOs who were officials in the central government or a local government or in the military (Wang & Qian, 2011) and CEOs who were currently or formerly officials of either the central government, a local government, the National People's Congress, a local people's congress, the Chinese People's Political Consultative Conference, a local political consultative conference, or the military (Li & Zhang, 2010). In this study, in an attempt to capture a broader meaning of political connectedness, we considered a CEO to be politically connected if he or she previously held a position in the Communist Party Committee, the government, the People's Congress, the People's Political Consultative Conference, the People's Court, the People's Procuratorate, the People's Bank, or the military or if he or she currently or previously held membership in the People's Congress or the People's Political Consultative Conference.

Regional economic development is defined as the level of economic development in the region where a firm operates, which is proxied by GDP per capita (in 10,000 RMB) of the region (Bao et al., 2002).

3.2.2. Control variables

We included two categories of control variables documented in prior studies, namely, firm characteristics and corporate governance structure. We controlled for firm characteristics such as CEO age, CEO gender, firm size, and debt ratio. A CEO's age may indicate the experience and knowledge required for the job. Conyon and He (2012) found that CEO pay is positively correlated with CEO age. Gender differences in executive compensation have been documented in the United States (Gayle, Golan, & Miller, 2012) and in China (Lam, McGuinness, & Vieito, 2013). CEO gender took the value 1 for a female CEO and 0 for a male CEO. Higher CEO pay in larger firms is considered appropriate for many reasons, including firms' ability to pay, the complexity of the job, and the skills and expertise required. Firm size is perhaps the most commonly documented factor that is positively and significantly associated with executive compensation (Conyon, 1997; Jensen & Murphy, 1990). Studies in China have also consistently found that firm size is an important driver of executive pay (Firth et al., 2006; Wang & Xiao, 2011). Firm size was calculated using the logarithm of the firm's total assets. External debt holders have an incentive to monitor a firm's operations to protect their interests, and these may conflict with the interests of managers. Managerial compensation in a leveraged firm can serve as a precommitment device to minimize the agency costs of debt (John & John, 1993). Thus, following the lead of an earlier study in China (Wang & Xiao, 2011), we controlled for debt ratio, defined as the ratio of total liabilities to total assets.

The category of corporate governance structure comprised ownership concentration, CEO duality, and the proportion of independent directors on the board. One of the most prominent features of Chinese listed firms is their highly concentrated shareholding structure and the existence of one dominant controlling shareholder (Chen, Firth, & Xu, 2009; Conyon & He, 2012). Prior studies in China have shown that ownership concentration affects executive compensation strategy (Conyon & He, 2011; Firth et al., 2006; Kato & Long, 2006; Wang & Xiao, 2011). We defined ownership concentration as the proportion of equity shares owned by the largest shareholder (Conyon & He, 2011; Wang & Xiao, 2011). CEO duality, which refers to the situation in which a CEO also serves as the chair of the board, places CEOs in the position of evaluating their own performance (Jensen, 1993). Businesses in China operate in underdeveloped financial markets and within an ill-defined legal system (Chen et al., 2010). Chinese corporate governance is characterized by insider control, excessive power of CEOs, minimal protection for minority shareholders, and inadequate disclosure and transparency (Liu, 2006; Zou, Wong, Shum, Xiong, & Yan, 2008). Thus, we argue that CEO duality exacerbates any agency problems associated with executive compensation in China's weak institutional context. Previous studies have shown that CEO duality contributes to high

Table 1
Descriptive statistics and correlations.

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1 CEO pay	12.66	0.962	9.21	14.9	1										
2 Existence of political connections	0.412	0.492	0	1	0.102***	1									
3 Regional economic development	5.667	2.932	0.417	17.51	0.312***	−0.003	1								
4 Age	49.72	7.801	26	85	0.145***	0.144***	0.091***	1							
5 Gender	0.054	0.226	0	1	−0.005	0.002	0.036***	−0.018**	1						
6 Firm size	21.08	1.031	18.63	25.3	0.351***	0.179***	0.140***	0.217***	−0.035***	1					
7 Leverage	0.456	0.349	0.046	2.19	−0.139***	−0.008	−0.120***	−0.068***	0.008	0.048***	1				
8 ROA	0.043	0.08	−0.38	0.231	0.249***	0.058***	0.124***	0.085***	0.024***	0.138***	−0.441***	1			
9 Ownership concentration	33.59	14.48	8.99	75.9	−0.011	0.043***	0.005	0.064***	0.003	0.261***	−0.075***	0.124***	1		
10 CEO duality	0.305	0.461	0	1	0.105***	−0.031***	0.119***	−0.108***	0.018**	−0.157***	−0.095***	0.033***	−0.063***	1	
11 Independent directors ratio	0.368	0.051	0.25	0.556	0.062***	−0.01	0.112***	−0.016*	0.001	0.033***	0.001	0.017**	0.017**	0.081***	1

* Indicates statistical significance at the 10% level.
** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

executive compensation in Chinese listed firms (Chen et al., 2010). We set this variable at 1 if the two posts were assumed by the same person and at 0 otherwise. Board independence has been identified as a key internal control mechanism for setting CEO compensation and functions to prevent excessive CEO pay (Boyd, 1994). The pay of top managers and firm performance are more closely aligned in firms with boards dominated by outsiders (Conyon & Peck, 1998). Since the implementation of CSRC regulations in 2002, Chinese listed firms have been required to have independent directors. We used the proportion of independent directors on the board to control for the influence of varying levels of board oversight.

Finally, we also controlled for industry and time effects. We used industry dummy variables to control for variation across industries (Firth et al., 2006; Wang & Xiao, 2011). Twelve industry dummies were included to represent different industry categories identified by the CSRC.[1] In accordance with the prior literature, we used a year dummy variable to control for the impact of variation across years (Li, Song, & Wu, 2015).

3.3. Estimations

3.3.1. Estimating the effects of political connections on CEO compensation and on firm performance

In line with the prior literature (Conyon & Peck, 1998; Wang & Xiao, 2011), we estimated pooled cross-sectional regressions using level-based specifications to determine how political connectedness affects CEO pay and firm performance. CEO compensation and firm performance were regressed on political connections. We used the natural logarithm of CEO pay as the dependent variable to mitigate for the effect of outliers on the regression results.

We constructed two measures to reflect CEO political connectedness. Existence of political connections equaled 1 if a CEO was politically connected and 0 otherwise. In addition to examining the effects of political connections, we went a step further to examine whether such connections at the local government level make a difference. Thus, we constructed another measure, local political connections, that equaled 1 if the political connections were at the local government level (provincial level or below) and 0 otherwise. We argue that such connections are particularly valuable. Firm operations are mainly influenced by the local government. CEOs with local political connections have specialized knowledge of local government units that supervise local firms. This may better enable locally connected CEOs to bring resources and legitimacy to the firm. The X vector represented a set of control variables expected to influence firm performance and CEO pay, including CEO age, CEO gender, firm size, debt ratio, ownership concentration, CEO duality, and proportion of independent directors.

$$ROA = \alpha + \beta_1 Political\ connections + \beta_2 X + \beta_3 Industry + \beta_4 Year + \varepsilon \quad (1)$$

$$CEO\ Pay = \alpha + \beta_1 Political\ connections + \beta_2 X + \beta_3 Industry + \beta_4 Year + \varepsilon \quad (2)$$

3.3.2. Estimating the effects of regional economic development

To investigate whether the relationship between political connectedness, CEO pay, and firm performance varies across regions with different levels of economic development, we included the interactions of regional economic development and political connections in the following models. The X vector included CEO age, CEO gender, firm size, debt ratio, ownership concentration, CEO duality, and proportion of independent directors.

$$ROA = \alpha + \beta_1 Political\ connections + \beta_2 Regional\ economic\ development + \beta_3 Regional\ economic\ development \times Political\ connections + \beta_4 X + \beta_5 Industry + \beta_6 Year + \varepsilon \quad (3)$$

$$CEO\ Pay = \alpha + \beta_1 Political\ connections + \beta_2 Regional\ economic\ development + \beta_3 Regional\ economic\ development \times Political\ connections + \beta_4 X + \beta_5 Industry + \beta_6 Year + \varepsilon \quad (4)$$

[1] The CSRC classifies all listed firms into 13 industries: agriculture, forestry, livestock rearing, and fishing (A); mining (B); manufacturing (C); electric power, gas, and water production and supply (D); construction (E); transport and storage (F); information technology (G); wholesale and retail trade (H); finance and insurance (I); real estate (J); social services (K); communication and cultural industries (L); and a comprehensive residual category (M). The finance and insurance industry was not included in this study.

4. Results

4.1. Main results

Table 1 reports descriptive statistics and correlations between the key variables in this study. The natural logarithm of CEO pay is about 12.66. The high standard deviation (0.962) suggests significant variation in CEO compensation across the sample firms. Of the sample firms, 41.2% have appointed a politically connected CEO, which indicates the pervasiveness of political connections in private businesses. With regard to the control variables, the average shareholding of the largest shareholder is 33.59% during the study years, which suggests a dominant position of the controlling shareholder, in agreement with previous studies (Su, Xu, & Phan, 2008). The posts of the CEO and board chair are assumed by the same person in 30.5% of sample firms. On average, 36.8% of board members are independent directors, meeting the CSRC requirement that at least one third of the directors on the board be independent. The correlation matrix shows that the correlation coefficients for major variables are relatively low (absolute value lower than 0.6), which suggests that multicollinearity is not a concern in this study.

Hypothesis 1 suggests that political connections enhance firm performance. Table 2 presents the results of a regression analysis of the relationship between political connections and firm performance. The coefficient for the existence of political connections is positively significant ($p < 0.01$), which is consistent with our expectation that political connectedness has a positive impact on firm performance. Our results are also consistent with prior literature showing that the party membership of private entrepreneurs has a positive effect on the performance of their firms (Li et al., 2008).

We further performed tests to ascertain whether firm performance is affected by local political connections. The results show that such connections are also positively related to firm performance ($p < 0.10$), suggesting that CEOs' local political connections have a positive impact on firm performance.

Hypothesis 2 states that CEOs' political connectedness has a positive impact on their compensation. Table 3 presents the results of multiple regression analyses of the relationship between political connections and CEO pay. As shown in the table, the existence of CEO political connections is positively associated with CEO compensation ($p < 0.01$), which provides support for Hypothesis 2.

We performed further tests to understand the impact of local political connections. The results show that such connections are also positively correlated with CEO compensation ($p < 0.01$), which suggests that CEOs with local political connections receive more compensation.

In addition, the results suggest that CEO pay is positively affected by CEO age, firm size, firm profitability, and CEO duality and negatively affected by firm leverage and ownership concentration. However, we also find that independent directors have little effect on variation in CEO compensation. These results are qualitatively consistent with prior studies of Chinese executive compensation (Chen et al., 2010; Conyon & He, 2012; Firth et al., 2007).

Hypothesis 3 predicts a stronger relationship between political connections and firm performance in less-developed regions. As noted in Table 4, the existence of political connections is positively related to firm performance ($p < 0.01$). The coefficient for the interaction term between a CEO's political connections and regional economic development is significant and negative ($p < 0.05$), which suggests that the positive impact of political connections on firm performance is stronger for firms in less developed areas than those in developed regions. Thus, our prediction is supported. Our results are consistent with Li et al. (2008), who showed that political connections are more important to firm performance in regions with weaker legal protection and weaker market institutions.

A further test shows that local political connections are positively associated with firm performance ($p < 0.05$) and that the interaction term between local political connections and regional economic development is nonsignificant. These results suggest that the value-enhancing effect of local political connections does not diminish along with economic development and that such connections are still important in adding value to firms in developed regions.

Table 2
Political connections and firm performance.

Independent variable	Model (1)	Model (2)
	ROA	ROA
Existence of political connections	0.008***	
	(3.96)	
Local political connections		0.004*
		(1.90)
Age	−0.000	0.000
	(−0.05)	(0.34)
Gender	0.012***	0.012***
	(3.04)	(3.13)
Firm size	0.005***	0.006***
	(5.71)	(6.38)
Leverage	−0.093***	−0.093***
	(−33.60)	(−33.56)
Ownership concentration	0.001***	0.001***
	(8.48)	(8.46)
CEO duality	−0.001	−0.001
	(−0.68)	(−0.64)
Independent director ratio	−0.008	−0.008
	(−0.43)	(−0.46)
_cons	−0.102***	−0.113***
	(−4.57)	(−5.09)
Year	Yes	Yes
Industry	Yes	Yes
F	56.973	56.513
R	0.253	0.251
Observations	5935	5935

* Indicates statistical significance at the 10% level.
*** Indicates statistical significance at the 1% level.

Table 3
Political connections and CEO pay.

Independent variable	Model (1)	Model (2)
	CEO pay	CEO pay
Existence of political connections	0.076***	
	(3.01)	
Local political connections		0.106***
		(4.13)
Age	0.008***	0.008***
	(4.88)	(5.10)
Gender	−0.039	−0.041
	(−0.76)	(−0.79)
Firm size	0.328***	0.332***
	(24.82)	(25.54)
Leverage	−0.126***	−0.125***
	(−2.96)	(−2.93)
ROA	2.024***	2.033***
	(11.07)	(11.14)
Ownership concentration	−0.003***	−0.003***
	(−3.77)	(−3.78)
CEO duality	0.225***	0.225***
	(8.62)	(8.63)
Independent director ratio	0.302	0.314
	(1.28)	(1.34)
_cons	4.810***	4.698***
	(15.72)	(15.47)
Year	Yes	Yes
Industry	Yes	Yes
F	46.663	46.960
R	0.252	0.253
Observations	5036	5036

*** Indicates statistical significance at the 1% level.

Table 4
Political connections and firm performance: the moderating effect of regional economic development.

Independent variable	Model (1)	Model (2)	Model (3)	Model (4)
	ROA	ROA	ROA	ROA
Existence of political connections	0.008***	0.015***		
	(4.00)	(3.81)		
Existence of political connections × regional economic development		−0.001**		
		(−2.16)		
Local political connections			0.004**	0.010**
			(2.10)	(2.29)
Local political connections × regional economic development				−0.001
				(−1.49)
Regional economic development	0.001*	0.001***	0.001	0.001**
	(1.72)	(2.66)	(1.40)	(1.97)
Age	0.000	−0.000	0.000	0.000
	(0.06)	(−0.00)	(0.44)	(0.41)
Gender	0.012***	0.012***	0.012***	0.012***
	(2.89)	(2.87)	(2.97)	(2.92)
Firm size	0.005***	0.005***	0.006***	0.006***
	(5.42)	(5.41)	(6.07)	(6.10)
Leverage	−0.092***	−0.092***	−0.092***	−0.092***
	(−33.24)	(−33.00)	(−33.20)	(−33.06)
Ownership concentration	0.001***	0.001***	0.001***	0.001***
	(8.33)	(8.32)	(8.35)	(8.34)
CEO duality	−0.002	−0.002	−0.002	−0.002
	(−0.79)	(−0.91)	(−0.72)	(−0.81)
Independent director ratio	−0.009	−0.011	−0.009	−0.010
	(−0.48)	(−0.60)	(−0.50)	(−0.55)
_cons	−0.070***	−0.073***	−0.081***	−0.083***
	(−3.07)	(−3.19)	(−3.57)	(−3.66)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
F	53.899	52.602	53.470	52.096
R	0.252	0.252	0.250	0.251
Observations	5804	5804	5804	5804

* Indicates statistical significance at the 10% level.
** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

Hypothesis 4 predicts a stronger relationship between political connections and CEO pay in less-developed regions. Table 5 shows that the existence of political connections is positively and significantly related to CEO pay ($p < 0.01$). The coefficient for the interaction between the existence of CEO political connections and regional economic development is significant and negative ($p < 0.10$), which suggests that the positive impact of political connectedness on CEO pay is weakened in developed regions. This lends support to Hypothesis 4.

Further analysis shows a positive relationship between local political connections and CEO pay ($p < 0.01$) and a nonsignificant coefficient for the interaction between local political connections and regional economic development. These results indicate that the impact of local political connections on CEO compensation is not affected by regional economic development. Taken together, our results reveal the importance of CEOs' political connections and their local political connections in particular.

To visually interpret the results related to the moderating effect of regional economic development, we followed Aiken and West's (1991) approach for plotting significant interaction effects. Figs. 1 and 2 show a more positive slope for less-developed regions than for developed regions, suggesting that CEO political connections have a more positive impact on firm performance and CEO pay in less-developed regions.

4.2. Additional analysis

4.2.1. Political connections and pay–performance sensitivity

We performed tests to ascertain whether political connections influence the pay–performance link. For this purpose, we estimated the following cross-sectional regression using a changes specification similar to that of Jensen and Murphy (1990). The changes specification controlled for differences in CEO-specific factors across firms (Jackson, Lopez, & Reitenga, 2008). Change in CEO pay was regressed on change

Table 5
Political connections and CEO pay: the moderating effect of regional economic development.

Independent variable	Model (1)	Model (2)	Model (3)	Model (4)
	CEO pay	CEO pay	CEO pay	CEO pay
Existence of political connections	0.101***	0.185***		
	(3.97)	(3.48)		
Existence of political connections × regional economic development		−0.015*		
		(−1.81)		
Local political connections			0.117***	0.140**
			(4.57)	(2.54)
Local political connections × regional economic development				−0.004
				(−0.48)
Regional economic development	0.048***	0.054***	0.047***	0.048***
	(9.64)	(8.80)	(9.48)	(8.29)
Age	0.007***	0.007***	0.008***	0.008***
	(4.74)	(4.67)	(5.04)	(5.03)
Gender	−0.056	−0.056	−0.057	−0.057
	(−1.09)	(−1.08)	(−1.10)	(−1.11)
Firm size	0.316***	0.316***	0.322***	0.322***
	(23.61)	(23.63)	(24.43)	(24.43)
Leverage	−0.108**	−0.104**	−0.106**	−0.105**
	(−2.54)	(−2.44)	(−2.51)	(−2.49)
ROA	1.998***	1.989***	2.012***	2.010***
	(10.97)	(10.92)	(11.06)	(11.05)
Ownership concentration	−0.004***	−0.004***	−0.004***	−0.004***
	(−4.26)	(−4.27)	(−4.25)	(−4.25)
CEO duality	0.213***	0.211***	0.214***	0.213***
	(8.15)	(8.07)	(8.19)	(8.15)
Independent director ratio	0.211	0.189	0.223	0.220
	(0.90)	(0.80)	(0.95)	(0.93)
_cons	4.973***	4.934***	4.833***	4.821***
	(16.11)	(15.95)	(15.77)	(15.67)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
F	47.020	45.890	47.206	45.962
R	0.262	0.262	0.263	0.263
Observations	4939	4939	4939	4939

* Indicates statistical significance at the 10% level.
** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

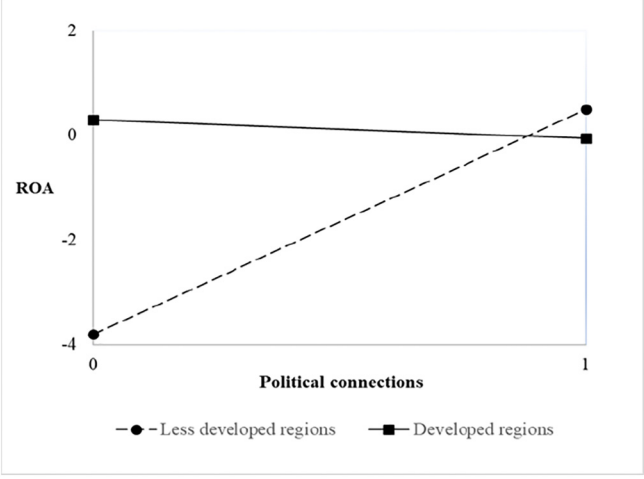

Fig. 1. The moderating effect of regional economic development on the relationship between political connections and firm performance.

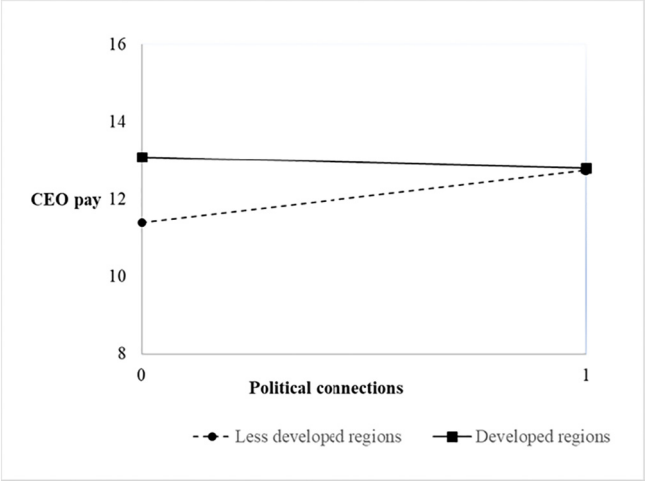

Fig. 2. The moderating effect of regional economic development on the relationship between political connections and CEO pay.

in firm performance. The X vector included CEO age, firm size, debt ratio, ownership concentration, CEO duality, and independent director ratio.

$$\Delta\ CEO\ Pay = \alpha + \beta_1 \Delta\ ROA + \beta_2 X + \beta_3 Industry + \beta_4 Year + \varepsilon \quad (5)$$

We first tested our full sample to examine the pay–performance link. As shown in Table 6, the regression analysis for the full sample shows a positive and significant relationship between change in CEO compensation and change in ROA ($p < 0.01$), which suggests that CEO pay measured by cash payment is sensitive to firm performance. Our results are consistent with previous Chinese studies that found that executive pay is responsive to firm performance (Conyon & He, 2011; Wang & Xiao, 2011).

Then we examined whether the existence of political connections affects pay–performance sensitivity. We divided our sample into firms with political connections and those without political connections. The results show that the pay–performance relationship remains positive and significant for both sub-samples and there is no significant variation between the two coefficients ($p < 0.01$, $t = 3.65$ for the former, $p < 0.01$, $t = 3.96$ for the latter). Next, we divided our sample into firms with local political connections and those without them to evaluate whether such connections moderate the pay–performance link. Similarly, we find a positive and significant pay–performance relationship for both sub-samples and no significant variation between the two coefficients ($p < 0.01$, $t = 4.04$ for the former and $p < 0.01$, $t = 4.03$ for the latter). Collectively, these results indicate that CEO pay is responsive to firm performance, and the pay–performance link is not affected by CEOs' political connections. Our previous results provide evidence that CEO political connections play a role in determining CEO pay. Together, these findings suggest that CEOs' political connections supplement firm performance in influencing CEO compensation strategies.

4.2.2. Impact of strength of political connections on firm performance and CEO pay

We constructed a measure for the strength of political connections. CEOs' political connections can be at a local level (provincial level or below) or state level. The strength of political connections equaled 2 if a CEO possessed political connections at both levels (e.g., a CEO can be a member of the National People's Congress as well as a member of a provincial People's Congress), 1 if a CEO had political connections at

Table 6
Political connections and pay–performance sensitivity.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
	Full sample	Existence of political connections		Local political connections	
		With political connections	Without political connections	With local political connections	Without local political connections
	ΔCEO pay	ΔCEO pay	ΔCEO pay	ΔCEO pay	ΔCEO pay
Independent variable					
ΔROA	0.695***	0.694***	0.640***	0.773***	0.625***
	(5.70)	(3.65)	(3.96)	(4.04)	(4.03)
ΔAge	0.012***	0.008**	0.014***	0.006	0.013***
	(4.46)	(1.96)	(3.90)	(1.36)	(3.91)
ΔFirm size	0.207***	0.154***	0.241***	0.134***	0.244***
	(7.17)	(3.80)	(5.90)	(3.28)	(6.32)
ΔLeverage	0.153**	0.161	0.192**	0.151	0.211**
	(2.32)	(1.59)	(2.14)	(1.51)	(2.45)
ΔOwnership concentrations	0.001	−0.006***	0.007**	−0.007***	0.006**
	(0.30)	(−2.61)	(2.38)	(−3.05)	(2.23)
ΔCEO duality	0.168***	0.153***	0.173***	0.116**	0.183***
	(5.59)	(3.38)	(4.29)	(2.52)	(4.76)
ΔIndependent director ratio	0.340	0.595*	0.151	0.478	0.282
	(1.36)	(1.79)	(0.42)	(1.36)	(0.86)
_cons	0.582***	0.028	0.255*	0.004	0.647***
	(3.53)	(0.41)	(1.93)	(0.05)	(3.37)
Year	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes
F	5.574	3.019	3.820	3.231	3.967
R	0.049	0.060	0.059	0.075	0.052
Observations	3749	1655	2094	1269	2480
Coefficients comparison					
Model (2) vs. Model (3)	Chi squared = 0.02 (p-value = 0.8859)				
Model (4) vs. Model (5)	Chi squared = 0.15 (p-value = 0.6993)				

* Indicates statistical significance at the 10% level.
** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

Table 7
Impact of strength of political connections on firm performance and CEO pay.

Independent variable	Model (1)	Model (2)	Model (3)	Model (4)
	ROA	CEO pay	ROA	CEO pay
Strength of political connections	0.003	0.078***	0.002	0.174***
	(1.50)	(2.95)	(0.54)	(4.13)
Strength of political connections × regional economic development			0.003	−0.111**
			(0.75)	(−2.10)
Regional economic development			0.004	0.293***
			(1.56)	(7.41)
Age	−0.000	0.006***	−0.000	0.006***
	(−0.45)	(3.18)	(−0.42)	(3.10)
Gender	0.013***	−0.047	0.013***	−0.055
	(3.17)	(−0.82)	(3.11)	(−0.96)
Firm size	0.005***	0.350***	0.005***	0.348***
	(4.97)	(23.19)	(4.89)	(23.31)
Leverage	−0.077***	−0.132***	−0.077***	−0.111**
	(−24.76)	(−2.67)	(−24.66)	(−2.26)
ROA		2.268***		2.202***
		(10.05)		(9.83)
Ownership concentration	0.001***	−0.003***	0.001***	−0.004***
	(7.78)	(−3.48)	(7.55)	(−4.14)
CEO duality	−0.002	0.229***	−0.002	0.214***
	(−0.76)	(7.92)	(−0.84)	(7.42)
Independent director ratio	−0.013	0.081	−0.012	0.088
	(−0.69)	(0.30)	(−0.61)	(0.33)
_cons	−0.036	4.844***	−0.036	4.743***
	(−1.45)	(13.75)	(−1.48)	(13.57)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
F	30.706	30.932	29.167	31.652
R	0.188	0.217	0.189	0.231
Observations	4287	3714	4287	3714

** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

either level, and 0 if a CEO was not politically connected. Our results in Table 7 show that the strength of political connections is not associated with firm performance. The relationship between the strength of political connections and CEO pay is positive and significant ($p < 0.01$) and the positive relationship is weakened by regional economic development ($p < 0.05$). These results provide further evidence of the importance of political connections in determining CEO pay and the moderating effect of regional economic development.

4.3. Robustness test

We used the industry-adjusted ROA, based on the industry median, to proxy for firm performance. Table 8 shows that the existence of political connections is positively associated with firm performance ($p < 0.01$). Meanwhile, the impact of political connections is weakened by regional economic development ($p < 0.05$ for the interaction term). We also constructed a stock market performance indicator, abnormal returns, using the formula $\Pi\ (1 + R_{it}) - \Pi\ (1 + R_{mt})$. R_{mt} indicates the monthly return of the profile in month t, which is proxied by the average monthly return of the stock market. The results show that political connections have a positive impact on firm performance ($p < 0.10$) and this effect is weakened by regional economic development ($p < 0.10$). These results indicate that our inferences remain unchanged.

We adopted a two-stage least squares estimation to address reverse causality between political connections and firm performance using CEO age as an instrumental variable. Our previous results show that CEO age is not associated with firm performance. However, it likely affects political connections. Older COEs have more social capital and thus are more likely to gain political connections. The instrumental variable, age ratio, is measured as the ratio of CEO age to the average age of other board members. We included board size, which is

Table 8
Robustness test based on industry-adjusted ROA and abnormal returns.

Independent variable	Model (1)	Model (2)	Model (3)	Model (4)
	Industry-adjusted ROA	Industry-adjusted ROA	Abnormal returns	Abnormal returns
Existence of political connections	0.008***	0.015***	0.028*	0.075**
	(4.04)	(3.69)	(1.80)	(2.26)
Existence of political connections × regional economic development		−0.001**		−0.009*
		(−1.98)		(−1.72)
Regional economic development		0.001**		−0.001
		(2.57)		(−0.15)
Age	−0.000	0.000	−0.002*	−0.002*
	(−0.01)	(0.10)	(−1.77)	(−1.94)
Gender	0.012***	0.011***	0.020	0.025
	(2.94)	(2.80)	(0.62)	(0.73)
Firm size	0.006***	0.005***	0.025***	0.027***
	(5.92)	(5.57)	(3.11)	(3.26)
Leverage	−0.092***	−0.091***	0.023	0.028
	(−33.42)	(−32.85)	(0.89)	(1.03)
Ownership concentration	0.001***	0.001***	−0.000	−0.000
	(8.60)	(8.45)	(−0.21)	(−0.17)
CEO duality	−0.002	−0.002	−0.012	−0.014
	(−0.74)	(−0.96)	(−0.68)	(−0.78)
Independent director ratio	−0.007	−0.010	0.091	0.099
	(−0.38)	(−0.56)	(0.61)	(0.66)
_cons	−0.092***	−0.093***	−0.701***	−0.748***
	(−4.14)	(−4.08)	(−3.76)	(−3.92)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
F	47.063	43.742	7.999	7.810
R	0.218	0.219	0.060	0.063
Observations	5935	5804	4436	4331

* Indicates statistical significance at the 10% level.
** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

measured as the number of board members, as a control variable. As noted in Table 9, the stage 1 results show that age ratio is positively associated with the existence of CEO political connections ($p < 0.01$). The stage 2 results indicate that after controlling for endogeneity issues, the impact of CEO political connections on firm performance remains positive ($p < 0.10$). Then we divided our sample into developed and less-developed regions. We find that the impact of political connections on firm performance is positive and significant for less-developed regions ($p < 0.10$), whereas the impact is nonsignificant for developed regions. These findings provide further support to our main results.

We used random-effects models to further test the robustness of our findings. Table 10 shows that the results are largely consistent with those previously reported. We also used firm fixed-effects models to address endogeneity concerns associated with omitted variable bias. As noted in the table, our inferences remain qualitatively unchanged.

The period (2005–2012) under investigation encompasses the global financial crisis. The crisis affected different countries at different paces. For example, Minichilli, Brogi, and Calabrò (2016) report that 2009 was the worst year in Italy whereas the United States was most affected in 2007. China was considerably affected by the crisis in both 2008 and 2009. The GDP growth rate decreased by 4.5% in 2008 and a further decrease of 0.3% was experienced in 2009; this was followed by an increase of 1.2% in 2010 (National Bureau of Statistics of China). As such, we first deleted 2008 data before performing tests. Considering the lag effect of the crisis, we deleted 2008 and 2009 data before performing further tests. All results remain unchanged. To address multicollinearity, we used the variance inflation factor (VIF) to test our main regression equations reported in Tables 2–6. Our results show that all VIF values are less than 6, suggesting that multicollinearity is not a concern in this study. For the sake of brevity, these results are not

Table 9
Robustness test based on two-stage least squares.

Independent variable	Stage 1 (1)	Stage 2 (2)	Stage 2 (3)	Stage 2 (4)
	Existence of political connections		Less-developed regions	Developed regions
		ROA	ROA	ROA
Age ratio	0.248***			
	(4.11)			
Existence of political connections		0.076*	0.216*	0.007
		(1.92)	(1.77)	(0.17)
Age	0.003*	−0.001*	−0.002*	−0.000
	(1.79)	(−1.71)	(−1.65)	(−0.40)
Gender	0.084***	0.007	0.001	0.002
	(3.09)	(1.20)	(0.07)	(0.42)
Firm size	0.084***	−0.001	−0.012	0.002
	(12.82)	(−0.25)	(−1.03)	(0.65)
Leverage	−0.006	−0.092***	−0.087***	−0.080***
	(−0.34)	(−30.21)	(−8.63)	(−20.83)
Ownership concentration	0.000	0.001***	0.001***	0.000***
	(0.04)	(7.71)	(3.56)	(4.67)
CEO duality	0.021	−0.003	−0.019	−0.003
	(1.53)	(−1.12)	(−1.48)	(−1.05)
Independent director ratio	−0.057	0.030	−0.029	0.040
	(−0.41)	(1.34)	(−0.49)	(1.61)
Board size	0.015***	0.002*	0.003*	0.002
	(3.23)	(1.89)	(1.88)	(1.57)
_cons	−1.681***	0.020	0.235	−0.073
	(−10.73)	(0.28)	(1.02)	(−1.01)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
F	17.689	45.657	11.255	24.406
Observations	5935	5935	2597	3338

* Indicates statistical significance at the 10% level.
*** Indicates statistical significance at the 1% level.

reported.

5. Conclusions and future research

The main aim of this study was to examine the impact of CEOs' political connections on firm performance and CEO pay using a sample of private Chinese firms. After controlling for factors that are likely to influence executive compensation, as documented in prior studies, we found that the presence of CEO political connections is significantly and positively related to firm performance and CEO pay measured by cash-based payment. Furthermore, we found that political connections exert a stronger influence on firm performance and on CEO pay in less-developed regions.

We took our analysis a step further to examine whether local political connections influence firm performance and executive pay based on the theory that local political ties are particularly helpful to a firm. Our results showed that CEOs' local political connections is positively associated with firm performance and CEO pay, and the positive association does not weaken in developed regions, which highlights the salience of local political connections.

Together our results demonstrate the importance of executives' political connections in affecting firm performance and determining executive pay in the current Chinese context. This study lends support to the notion that political connections are strategically important for private Chinese firms to gain political legitimacy and acquire access to government-controlled resources given the relatively underdeveloped institutions in China.

This study makes a number of contributions to the literature on executive compensation. It enriches understanding of the effects of political connections, an important but underexamined construct,

Table 10
Robustness test based on random- and fixed-effects models.

Independent variable	Random-effects model		Fixed-effects model	
	Model (1)	Model (2)	Model (3)	Model (4)
	ROA	CEO pay	ROA	CEO pay
Existence of political connections	0.008***	0.103***	0.009**	0.136***
	(3.71)	(3.56)	(2.01)	(3.52)
Age	−0.000	0.004**	−0.000*	0.002
	(−0.27)	(2.05)	(−1.88)	(0.77)
Gender	0.012***	−0.184***	0.018**	−0.298***
	(2.85)	(−3.12)	(2.09)	(−3.93)
Firm size	0.004***	0.283***	−0.022***	0.257***
	(3.65)	(17.94)	(−9.03)	(11.72)
Leverage	−0.094***	−0.046	−0.107***	0.087
	(−31.38)	(−1.05)	(−17.94)	(1.56)
ROA		1.046***		0.839***
		(8.00)		(6.10)
Ownership concentration	0.001***	−0.001	0.001***	−0.002
	(8.23)	(−1.03)	(8.04)	(−1.00)
CEO duality	−0.002	0.153***	−0.004	0.124***
	(−0.98)	(6.18)	(−1.04)	(4.31)
Independent director ratio	−0.004	0.277	0.037	0.245
	(−0.20)	(1.24)	(1.22)	(0.96)
_cons	0.000	5.899***	0.488***	6.622***
	(0.00)	(16.21)	(8.32)	(12.82)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
R Within	0.1158	0.2421	0.1456	0.2505
R Between	0.4124	0.2552	0.2256	0.1395
R Overall	0.2521	0.2358	0.1511	0.1508
Observations	5935	5036	5935	5036

* Indicates statistical significance at the 10% level.
** Indicates statistical significance at the 5% level.
*** Indicates statistical significance at the 1% level.

through resource dependence theory. Jensen and Murphy (1990) pointed out that it is important to integrate agency theory with other paradigms and to empirically test their explanatory power in agency-based models. This study incorporates resource dependence theory in the context of China's sociopolitical environment to explain CEO pay. Our results provide evidence that political connections enhance firm performance because of their critical role in securing political legitimacy and obtaining government-controlled resources. Our results also show that political connectedness is an important determinant of executive pay in private Chinese firms. These findings are consistent with the logic of agency theory that CEO political connections add value to the firm and need to be considered when determining CEO pay. This study proves that other paradigms may complement agency theory and that research incorporating different perspectives can enrich understanding of executive compensation, which has heretofore been investigated predominantly from an agency perspective.

We have also further elucidated an important contingent factor, regional economic development, as an indicator of institutional development that influences the relationship between political connectedness and CEO pay. Our finding that regional economic development has significant moderating effects on this relationship suggests that the sociopolitical environment in which firms operate plays an important role in determining a firm's dependence on political resources and thus the value of a CEO's political connections. Researchers have made calls to examine contingency or contextual factors that may affect CEO pay and the criteria utilized to set it (Barkema & Gomez-Mejia, 1998). This study is a response to this call and provides a better understanding of the institutional mechanism through which political connections are related to CEO compensation. We provide evidence of how the interaction between macroorganizational factors and firm characteristics influences compensation strategies. Together our findings show that corporate pay policies are responsive to diverse environmental and

organizational contexts. Without an adequate understanding of a society's sociopolitical context, one may fail to appreciate the underlying institutions that largely determine the formulation of firm pay strategies.

This study has practical implications as well. Our results reveal that political connectedness is an important and effective determinant of executive compensation because of China's underdeveloped institutions; they also highlight the strategic role of political connections in establishing political legitimacy and securing government-controlled resources. These findings support the view of Barkema and Gomez-Mejia (1998) that criteria in addition to firm performance can be used to determine managerial compensation. Executive compensation strategies need to be responsive to the environmental conditions in which a firm operates. Thus, effective executive pay policies are those that incorporate not only direct incentive-based reward elements but also other sociopolitical capital that might help firms to gain a competitive advantage.

Furthermore, this study has implications for policymakers. Our results show that political interference compels private firms to strategically use political connections to obtain a competitive advantage; this prevents firms from competing on a level playing field. To secure economic growth in the long term, the Chinese government needs to further reduce its control of the business sector and create a fairer competitive environment for private firms. The Chinese government also needs to address issues associated with the significant variation in economic growth across regions.

Although this study provides important insights into CEO pay in China, its findings should be interpreted in light of its limitations. First, we mainly focused on the most dominant form of executive compensation—cash-based payment—and its link to firm performance. Future research might profitably examine other dimensions of CEO pay, such as CEO shareholdings and share options, given their increasing popularity in China. Equity-based payment provides an important mechanism for aligning the interests of agents and principals and encouraging executives to implement a long-term vision. As data on executive shareholdings and share options become available, it will be fruitful to determine whether political connections remain an important driving force for equity incentive compensation.

Second, although the key assumption underlying this study was the strategic importance of political connections for private Chinese firms, we did not perform any empirical tests to examine the mechanisms through which political connections are transformed into improved firm performance. Further research might look at a range of benefits associated with political connections, such as access to bank loans and reductions in taxes or fees, to deepen understanding of the transformation process.

Third, the definition of political connectedness used in this study captured only CEOs' current or former positions in the Chinese government or various government agencies. Our analysis excluded other indicators, such as membership in the Communist Party and previous work experience managing state-owned firms, which may be important drivers of executive compensation. A future study that includes such measures might provide deeper insights into the relationship between political connections and executive pay. In addition, it is worth noting that our results indicate a difference between the effects of the existence of political connections and the strength of such connections. Although both constructs influence CEO pay, the strength of political connections does not significantly affect firm performance. Hence, firm performance is unlikely to be a mechanism through which the strength of political connections will translate into higher or lower CEO pay. Further study is required to examine the mechanisms that may link the strength of political connections to CEO pay.

Finally, our results might not be applicable to other economies, even those in which political connections also prevail. It is noteworthy that institutional differences usually exist between different countries. Future researchers may consider examining whether political connections are still a robust driver of executive compensation in other economies, including developing and developed ones. It is expected that this study will provide a platform for future research that seeks a richer set of social and political explanations for executive compensation. Future studies could enrich the literature on executive compensation strategies by examining the effect of other potential factors, especially those related to varying sociopolitical contexts, on the financial performance and pay policies of private firms.

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