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CEO POLITICAL IDEOLOGIES AND PAY EGALITARIANISM WITHIN TOP MANAGEMENT TEAMS

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Research summary: *We examine the influence of CEO and compensation committee liberalism on top management teams (TMT) pay arrangements. Given that politically liberal individuals tend to value egalitarianism, we test whether firms with liberal CEOs tend to (1) reduce pay dispersion among non-CEO executives; and (2) reduce pay gaps between CEO and non-CEO executives, and whether compensation committee liberalism moderates these relationships. We find some evidence of a direct effect of CEO liberalism on TMT pay arrangements as well as some interaction between CEO and compensation committee liberalism on the pay arrangements. This study provides a better understanding of the antecedents of TMT pay arrangements and empirical evidence showing the influence of values at the top of organization.*

Managerial summary: *Do the values of the CEO and compensation committee influence the pay of other top managers? Our study provides evidence that political ideology affects top manager pay. We examine whether CEO liberalism produces more egalitarian pay arrangements among top managers, and whether the liberalism of the compensation committee affects that relationship. We find that CEO liberalism reduces differences in the total pay among top managers, but does not influence the difference between CEO total pay and the total pay of top managers. We also find that compensation committee liberalism strengthens the negative influence of CEO liberalism on differences in total pay among top managers. Finally, we find that CEO liberalism reduces the difference between CEO bonus pay and the bonus pay of other top managers.*

INTRODUCTION

The question of how top executives[1] are paid has drawn the attention of scholars in multiple fields, including economics, finance, sociology, and management (Devers *et al.*, 2007). Given that top management team (TMT) members play critical roles in implementing company strategy (Carpenter, Geletkanycz, and Sanders, 2004; Hambrick and Mason, 1984) and that compensation is a substantial motivator influencing top executives' attention and behavior (Cho and Hambrick, 2006; Lawler, 1990), it is both theoretically and practically important to understand the determinants of the pay arrangements of these executives, including CEOs and other TMT members. However, there are some limitations in the previous literature on top executives'

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[1] In this study, *top executives* and *TMT members* are used interchangeably, and they include both CEO and non-CEO executives. *CEO* is only referred to as "CEO," whereas *non-CEO executives* are referred to as "other top executives" and "other TMT members."

pay. For example, it tends to be focused primarily on CEO compensation (Devers *et al.*, 2007; Finkelstein, Hambrick, and Cannella, 2009), and as a result, despite the progress of the past decade, there are still important unanswered questions regarding the way TMT members share financial rewards as a whole (Geletkanycz and Sanders, 2012).

Another important issue is that there are disagreements between the economic (Conyon, Peck, and Sadler, 2001; Lazear and Rosen, 1981; Main, O'Reilly, and Wade, 1993) and socio-psychological (Fredrickson, Davis-Blake, and Sanders, 2010; Graffin *et al.*, 2008; Wade *et al.*, 2006) perspectives used to explain the determinants of TMT pay disparity. Namely, two distinct explanations are given for the same phenomena, generating confusion about the antecedents of TMT pay structure. We argue that this discrepancy can be addressed by examining whether the decision to adopt one management approach over another is influenced by the values of decision makers at the top of a company.

Organizational scholars have acknowledged the importance of CEOs' values since Hambrick and Mason (1984) emphasized CEOs' values as one of the key factors affecting their decision-making processes. Recently, some scholars have empirically demonstrated that CEOs' values do influence certain organizational outcome, such as corporate social responsibility profile (Chin, Hambrick, and Trevino, 2013) and firm's tax policies (Christensen *et al.*, 2015). This stream of research regarding the influence of CEOs' values on other organizational practices suggests that variance in TMT pay arrangements across firms may also result from CEO's different personal values. Indeed, we argue that greater attention should be paid to the role of values in the context of TMT pay arrangements given the lack of consensus on the consequences of TMT pay disparity (Devers *et al.*, 2007; Geletkanycz and Sanders, 2012). This is because executives are more likely to rely on what they value most or the most ideal structure that they believe will accomplish goals as their job demands increase (Hambrick, Finkelstein, and Mooney, 2005) or as they are confronted with "weak situations" (Mischel, 1997).

In our study, we focus on the role of CEOs in TMT pay arrangements. While the compensation committee has the final authority and responsibility to approve the TMT pay structure, CEOs are the ones who evaluate their non-CEO executives. Based on their assessment, CEOs propose how non-CEO executives should be paid to compensation committee. The CEO's role is enhanced by the fact that compensation committee members do not have the same access to information about non-CEO executives that the CEO does. Previous studies also suggest CEOs are in the position where they can influence the pay arrangements not only for non-CEO executives (Graffin *et al.*, 2008; Wade *et al.*, 2006), but also for themselves (Main, O'Reilly, and Wade, 1995; Pollock, Fischer, and Wade, 2002). Consequently, we argue that the CEO's influence should be included in the examination of the effect of values on pay disparity for the TMT. As a result, our examination begins with CEOs by exploring the influence of their values on TMT pay arrangements. Then, since compensation committee members ultimately approve the CEOs' recommendation for non-CEO executive pay, as well as determine CEO's pay structure, we test the moderating influence of compensation committee members' values the relationship between CEO liberalism and TMT pay arrangements.

In particular, we focus on how CEO political liberalism (or conservatism) influences the way TMT members are paid. We argue that political ideology will shape the way CEOs share financial rewards within the TMT. This is based on findings from political science and psychology literature establishing that liberal and conservative individuals have different value systems. Specifically, more liberal individuals espouse the importance of egalitarianism, whereas more conservatives hold to free-market principles and favor individual actions (Clarkson *et al.*, 2015; Jost, 2006; Rasinski, 1987). Accordingly, we posit those CEOs who lean toward liberalism will tend to generate more egalitarian TMT pay arrangements by (1) reducing pay dispersion among other top executives, and (2) reducing pay gaps between themselves and other top executives as these actions reflect a belief in egalitarianism. Conversely, more conservative CEOs will tend to generate more individualism in TMT pay by (1) allowing for different levels of pay among other top executives, and (2) establishing larger gaps in the pay levels between themselves and other top executives as a means of creating competition. In addition, we argue that the liberalism of the CEO will be positively moderated by the liberalism of the compensation committee.

This study has several implications to the TMT pay literature and upper-echelons theory. To begin, the results of this study demonstrate that economic

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and socio-psychological perspectives on TMT pay arrangements are not necessarily incompatible because they suggest that the decision of whether to adopt one management approach over another is influenced by the values of the CEO and compensation committee members. For instance, more liberal CEOs' decisions not to create intentional pay differentials within TMT are supportive of socio-psychological perspectives, whereas more conservative CEOs' choices of setting up more hierarchy in TMT pay structures is consistent with economic-based views. Additionally, by identifying a critical element (i.e., CEO and compensation committee values) in the context of TMT pay setting, this study provides insight into the variance in TMT pay arrangements across different firms and enhances our overall understanding of the determinants of TMT pay arrangements.

This study also contributes to upper-echelons theory in that it focuses on executive values. Although values at the top of the firm are suggested to be one of the critical components that shape executives' perception and choices, more empirical inquiries are needed to better understand the influence of executives' values in organizations. This study offers important empirical evidence of the role of values. In addition, this study contributes to upper-echelons theory by broadening its scope to include compensation committee members, and by showing board members' values can also influence organizational outcomes as suggested (but not tested) by some upper-echelons scholars (Geletkanycz and Sanders, 2012).

BACKGROUND ON DETERMINANTS OF TMT PAY ARRANGEMENTS

Although CEO compensation has been a major focus in the literature on the determinants of top executives' pay arrangements (Devers *et al.*, 2007; Gomez-Mejia and Wiseman, 1997), more recently, some scholars have expanded their interest to other top executives, broadening our understanding of why TMT members are paid the way they are. Some of these scholars find that the CEO has an influence on other top executives' compensation level, while others focus on more external factors such as shareholder wealth and industry regulation change. Specifically, the pay level of all TMT members tends to increase if the CEO is overpaid (Wade *et al.*, 2006) or if the CEO's pay increases (Carpenter and Sanders, 2002). Other top executives also received more pay if they shared a common background with their company CEO (Carpenter and Wade, 2002). In addition, scholars have found TMT total pay level to be influenced by dollar returns to shareholders (Aggarwal and Samwick, 1999), shareholder wealth and institutional ownership (Hartzell and Starks, 2003), and industry condition changes such as deregulation (Cho and Shen, 2007). In summary, while CEO pay has dominated much of the strategy compensation research, increasingly, researchers are broadening to investigate determinates of TMT pay.

Another topic that is widely discussed in the TMT pay literature is pay disparity, defined as pay differentials in total compensation either between the CEO and other executives (vertical) or among non-CEO TMT members (horizontal) (Devers *et al.*, 2007). Multiple theoretical perspectives exist to explain why vertical pay disparity exists within organizations, including tournament theory. Although tournament theory mainly focuses on the consequences of vertical pay disparity, it also provides strong and widely accepted logic explaining why compensation hierarchies exist within organizations. Tournament theory is deliberately designed to reduce monitoring costs by motivating individuals to work hard to win prizes, such as pay increases and promotions to the next round (Lazear and Rosen, 1981; Rosen, 1986). Some studies have supported the theory by showing that the pay gap between the CEO and other executives becomes larger as the number of vice presidents increases (Conyon *et al.*, 2001; Lambert, Larcker, and Weigelt, 1993), while other studies found the opposite—a negative relationship between the number of vice presidents and the pay gap with the CEO (Henderson and Fredrickson, 2001; O'Reilly, Main, and Crystal, 1988).

Although tournament theory has tended to have overall support for its main prediction regarding the consequences of pay disparity, some scholars question its basic assumptions on the motivation for implementing pay disparity especially in the context of TMT pay arrangements. They argue that tournament theory, which emphasizes the need for externally driven incentive structure, neglects the fact that most top executives are highly self-motivated by various internal factors, including the desire for reputation and the intrinsic value of the job (summarized in Finkelstein *et al.*, 2009). Moreover, given that CEOs typically select their coworkers (Lorsch and MacIver, 1989) and are involved in the wage-setting process of other executives (Crystal, 1991; Main *et al.*, 1995), Finkelstein *et al.* (2009) argued that it is not clear what incentives a CEO would have to set up his or her own position as a prize. As such, some scholars suggest alternative explanations for the source of pay disparity within TMT, arguing that pay disparity may not occur solely as a result of the existence of tournament competition within a firm. Socio-psychological researchers have undertaken studies to provide answers and have suggested other factors as the antecedents of TMT pay disparity. For instance, Michel and Hambrick (1992) showed that firms not requiring a high degree of coordination for their business (e.g., unrelated diversified firms) tend to have wider pay gaps. The status of the CEO also can be considered a possible cause for pay disparity because a CEO with higher status tends to be paid more compared with other TMT members (Graffin *et al.*, 2008).

In addition to vertical pay disparity, scholars have also paid attention to the antecedents of horizontal pay disparity, examining what causes pay differentials among non-CEO executives. Although fewer scholars have studied horizontal pay disparity than have studied vertical pay disparity, they have made valuable contributions to the TMT pay literature by finding several important determinants. For example, Bloom and Michel (2002) found that factors in a firm's environment, such as investment opportunities, have a significant influence on pay disparity within TMT. They argued that firms under high uncertainty tend to prefer wider pay dispersion among TMT members because these firms need more discretionary decisions of each manager.

In contrast, Fredrickson and colleagues explored socio-psychological factors based on social comparison theory (2010). They proposed that if TMT members appear to share similar characteristics, such as common board membership and length of tenure, there tends to be less pay disparity among them.

In sum, the previous literature on the determinants of TMT pay contributes to the overall understanding of TMT pay arrangement by examining multiple dimensions of TMT pay with economic and socio-political factors. However, as previously mentioned, there are discrepancies between the two main theoretical perspectives that guide pay disparity studies, and this has produced inconsistent explanations for the same phenomena. We argue these inconsistent findings may be explained by considering the values of those involved in the TMT pay-setting process, namely, CEOs and compensation committee members in the board.

The role of the CEO and compensation committee in TMT pay-setting process

As mentioned previously, we consider the CEO and compensation committee as major decision makers for TMT pay arrangements. Although the compensation committee has final authority and responsibility to approve TMT pay structure, we argue that CEOs also play an important role during the TMT pay-setting process based on the previous studies suggesting CEOs are in the position where they can influence the pay arrangements not only for non-CEO executives (Graffin *et al.*, 2008; Wade *et al.*, 2006), but also for themselves (Main *et al.*, 1995; Pollock *et al.*, 2002). In addition to these academic studies, proxy statements of our sample companies, as shown below, clearly demonstrate that CEOs are heavily engaged in TMT pay-setting processes by providing the compensation committee with recommendations for other executives' pay based on the evaluation conducted by CEOs.

> ***Company A***: The CEO provides the Compensation Committee with compensation recommendations with respect to his direct reports . . . . This includes a review of individual performance and other criteria used to support specific recommendations for each element of compensation.
> ***Company B***: The Company's Chief Executive Officer provides recommendations regarding compensation actions for all of the other named executive officers . . . . In making these recommendations, the Chief Executive Officer evaluates the performance of the executives . . . . Some of the performance goals relate to the Company's financial performance ... other performance goals are non-quantitative . . . .
> ***Company C***: The President and Chief Executive Officer communicates to the Executive Compensation Committee decisions regarding compensation for executive officers other than himself and ... the Executive Compensation Committee delegates to senior management the authority to administer certain aspects of the compensation program for nonexecutive officers.
> ***Company D***: For the named executive officers, Mr. X (CEO) sets the annual performance-based

objectives and evaluates the performance against such objectives. Mr. X makes a recommendation to the Committee for final awards of annual performance-based bonuses. Mr. X also makes recommendations for base salary adjustments and awards under our equity-based compensation plans. Mr. X's recommendations to the Committee regarding the compensation for these named executive officers were based on his review of each officer's individual role and performance.

Company E: Each Named Officer provided the CEO with an assessment of his achievement with respect to his common goals and individual performance goals. The CEO reviewed each self-assessment and used his or her judgment to evaluate the achievement level of each Named Officer's common and individual performance goals, the relative importance of each performance goal to the Company's success and the effort required to achieve such goal. The CEO then discussed his or her assessment of the performance of the other Named Officers with, and presented his recommendation to, the Compensation Committee.

In addition, we consider compensation committee members to be the principal decision makers for compensation, rather than the entire board, because the compensation committee has specific responsibility for evaluating and approving compensation plans while the board as a whole deals with a variety other strategic issues. One company in our sample states the role of its compensation committee as follows:

> The Compensation Committee is responsible for (i) establishing the Company' general compensation philosophy, and overseeing the development and implementation of compensation programs, (ii) … reviewing and approving corporate goals and objectives relevant to the compensation of the CEO and other management … and setting the CEO' and other management' compensation levels based on this evaluation, (iii) administering and interpreting all salary and incentive compensation plans for officers, management and other key employees … (viii) overseeing regulatory compliance with respect to compensation matters … (x) reviewing reports on executive compensation … .

We acknowledge the roles and responsibilities of the CEO and compensation committee vary across companies; however, we assert that it is most relevant and important to consider both the CEO and compensation committee in the context of this study (TMT pay arrangements) given the evidence from both academic studies and proxy statements.

EFFECTS OF POLITICAL IDEOLOGIES AT THE TOP ON PAY ARRANGEMENTS

CEOs' values and political ideologies

According to upper-echelons theory, executives' values contribute to the individualized lens, which in turn, influences executives' attentions and choices (Hambrick and Mason, 1984). Indeed, values affect individuals' choices and actions both consciously and subconsciously. On the one hand, values can have a direct effect on individuals' choices by what England (1967) referred to as a "behavior channeling" process, through which individuals consciously compare available alternatives and choose the one that best fits their values. On the other hand, values appear to have an indirect effect on individuals' choices through "perceptual filtering" (Starbuck and Milliken, 1988) by which individuals subconsciously search for information that matches their values and are influenced by that information in their perceptions and choices. These processes can occur simultaneously, guiding individuals' final decisions.

In keeping with this argument, some scholars have empirically tested for the possibility that top executives' values influence various organizational outcomes. Based on the findings of Bateman, O'Neill, and Kenworthy-U'Ren's (2002) study on executives' beliefs, Finkelstein *et al.* (2009) proposed that executives' values are likely to influence corporate goal-setting processes. Simsek *et al.* (2005) showed that CEOs with high collectivism tend to have well-integrated TMTs, whereas those with low collectivism tend to have more fragmented TMTs. More recently, Chin *et al.* (2013) found that CEOs' political ideology is significantly associated with their firms' CSR profiles.

Political science and psychology literature contain considerable evidence showing that individuals' political ideologies reflect their overall values (Barnea and Schwartz, 1998; Goren, Federico, and

Kittilson, 2009; Layman, 1997). Specifically, Feldman (2003: 477) noted the "substantial amount of evidence [suggesting] that values are a major source of structure for political attitudes." Tedin (1987: 65) also noted that "the term 'political ideology' is normally defined as an interrelated set of attitudes and values about the proper goals of society." More recently, Jost (2006: 653) argued that "ideology helps to explain why people do what they do; it organizes their values and beliefs." For example, Clarkson and colleagues stated "focusing conservatives on the importance of internal factors and liberal individuals on the importance of contextual or social factors should increase their ability to achieve their goals" (2015: 3). Correspondingly, if the CEO feels that focusing on contextual or societal factors will help individuals achieve their goals (the liberal view), this will lead them to structure compensation in a more egalitarian fashion; on the other hand, if they feel that internal factors are most important (conservative view), they will link compensation to individual efforts. In sum, political ideologies are considered to be a reflection of personal values.

Another important feature of political ideology is that it is relatively stable and enduring. According to Burris (2001), once an individual's political ideology is formed early in life, it tends to remain fairly constant over time. Jost (2006) reached a similar conclusion, verifying that political ideology stems from fundamental cognitive and motivational predispositions. Consequently, political ideologies seem to be solid and enduring personal inclinations.

CEO liberalism and pay arrangements

According to Jost (2006: 654), the liberal-conservative distinction "has been the single most useful and parsimonious way to classify political attitudes for more than 200 years." Consistent with this argument, political science and psychology literature provide ample evidence that the liberal-conservative spectrum is useful and important for understanding individuals' central beliefs and values (Graham, Haidt, and Nosek, 2009; Poole and Rosenthal, 1984; Skitka and Tetlock, 1993; Weber and Federico, 2013). Although business executives are generally considered to be conservative-leaning, the range of their ideologies is broad, varying from extremely liberal to extremely conservative (e.g., Burris, 2001; Chin *et al.*, 2013; Francia *et al.*, 2005). As such, the impact of executive and compensation committee political liberalism should be consequential, although it has rarely been tested in organization studies.

Several scholars have examined the major differences between liberals and conservatives, and reached the consistent conclusion that these groups are rooted in different worldviews, motives, and moral foundations (Graham *et al.*, 2009; Skitka and Tetlock, 1993; Weber and Federico, 2013). Specifically, liberals value economic equality, social justice, planned social change, and market controls (Jost, 2006), while conservatives place more emphasis on individualism, free markets, property rights, business cases, order, and respect for authority (Detomasi, 2008; Jost *et al.*, 2003; Murtha and Lenway, 1994). Clarkson and colleagues also noted key differences about the role of free will between conservatives and liberals, stating "conservatives not only claim to believe more strongly in freewill than liberals, but this claim manifested in differences in actual exertion of self-control" (2015: 3).

The focus of our study is the diverging worldviews between liberals and conservatives in terms of their differing stances on what motivates action, with liberals favoring egalitarianism and conservatives favoring proportionality. Liberals tend to have higher levels of egalitarianism, suggesting that liberals place greater emphasis on equality (Hirsh *et al.*, 2010). According to Rasinski (1987), people who identify themselves as liberal are more likely to support redistributive economic policies. In other words, liberals are more supportive of the idea of equality of outcomes, whereas conservatives are more comfortable with the idea of unequal distribution of outcomes (Graham *et al.*, 2009; Verba and Orren, 1985), generally based on individual contributions to the outcome. Further, since liberals accept that equality trumps rank and status, they should be reluctant to design mechanisms that will increase the inequality in a group (Thompson, Ellis, and Wildavsky, 1990). In contrast, conservatives, who place more value on free-market competition, will be more accepting of setting individual incentives differently.

Within this context, we argue that CEOs' differing preferences toward the distribution of rewards, stemming from distinct dispositions in favor of, or opposed to, egalitarianism, will be reflected in their pay arrangement decisions for other top executives. As such, more liberal CEOs are likely to strive to reduce pay dispersion among non-CEO executives,

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as a way of enhancing equality in pay within TMT, whereas more conservative CEOs will prefer proportional rewards within TMT as a way of setting proper incentives. Thus, we hypothesize:

Hypothesis 1: The greater the political liberalism of a company's CEO, the greater will be the horizontal pay equality within the TMT.

We argue that the CEO's political ideology is also likely to be reflected in pay arrangements for themselves as well. For example, more liberal CEOs may think a large pay gap between themselves and other top executives does not fit with their values, and thereby, is not appropriate. In contrast, more conservative CEOs may consider the gap as part of the prize for their winning the CEO tournament, and therefore, will be more comfortable with pay gap. These distinct beliefs emerge from differing beliefs regarding free will and the ability of individuals to successfully obtain desired outcomes (Clarkson *et al.*, 2015). As such, to enhance pay equality within TMT, more liberal CEOs are likely to attempt to reduce the pay differential between themselves and other top executives, whereas more conservative CEOs are likely to be more accepting of a pay gap between themselves and other top executives. Thus, we hypothesize:

Hypothesis 2: The greater the political liberalism of a company's CEO, the greater will be the vertical pay equality within the TMT.

The moderating effects of compensation committee liberalism

To this point, we have argued that CEO liberalism will have a direct effect on horizontal pay equality and vertical pay equality. However, as we explained previously, the CEO does not unilaterally set the compensation level of the other top managers. The committee determines the compensation level of the CEO and other top officers, although it relies on the CEO to propose compensation levels for the other top managers of the firm. As such, we now propose an important moderator to the main effects. We propose that the political liberalism of the compensation committee will positively interact with the political liberalism of the CEO. In other words, the positive effect of CEO liberalism on horizontal pay equality and vertical pay equality will be accentuated by the political liberalism of the compensation committee. Not only will politically more liberal CEOs have the desire to propose greater horizontal pay equality and vertical pay equality, they will feel enabled to do so because the committee to which their proposal is made holds similar values, making the proposal more acceptable to the compensation committee. Formally stated, we propose:

Hypothesis 3: The political liberalism of a company's compensation committee will positively moderate the effects of CEO liberalism on pay egalitarianism within the TMT. Specifically, under greater compensation committee liberalism, CEO liberalism will have a stronger effect on (a) horizontal pay equality and (b) vertical pay equality.

METHODS

Sample

Our sample consists of Standard & Poor's 500 firms' CEOs who were appointed between 2007 and 2010, and directors who served as compensation committee members on those firms during our sample period. Newly appointed CEOs were sampled so as to observe their firms' TMT pay arrangements from the outset of their tenures. We sought at least two years of observations for each CEO by including only those CEOs who served for at least two years. These criteria yielded a sample of 176 CEOs and 685 compensation committee members. Since we constructed a pooled sample, observing the dependent variables for each year a CEO was in office, designed as $t + \mathrm{n}$, up to 2013, we had 472 firm-year observations. We excluded the year of appointment because TMT pay arrangements in that year cannot be meaningfully attributed to the new CEO. Thus, if a CEO was hired in 2007 and remained in office through 2013, we would have six years of observations for that firm (2008–2013).

The independent variable, *CEO political liberalism*, was measured by examining the executives' political donations for the 10 years before they became CEOs (from year $t - 10$ to $t - 1$, where t is the first year of each CEO's tenure). For example, the time frame for examining donation records of CEOs appointed in 2007 was from 1997 to 2006. Each CEO's political liberalism score

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was invariant during his or her tenure, reflecting the assumption that political ideology is relatively stable (Burris, 2001; Jost, 2006). With this lagged design, political ideology temporally preceded the measurement of TMT pay egalitarianism, thereby eliminating any recursive relationship between the ideology measure and the dependent variables.

We used the Execucomp, Businessweek, LinkedIn, and Notable Names Databases to collect the information about CEOs. Compustat, Execucomp, and Thomson Reuters were used to compile company financial and executives' compensation data. We operationalized each top management team as consisting of the five highest paid executives listed in the Execucomp database, given that this method has been accepted as a relevant and meaningful way of identifying TMT members (Bloom and Michel, 2002; Carpenter and Sanders, 2002; Fredrickson *et al.*, 2010).

Dependent variables

Two variables were used as dependent variables to test the hypotheses: *Horizontal pay equality* and *Vertical pay equality.* Horizontal pay equality measures pay dispersion among non-CEO executives, whereas vertical pay equality measures pay differentials between CEO and non-CEO executives. Horizontal pay equality was measured by the inverse of the coefficient of variation in the total pay of other TMT members, which is a measure of horizontal pay disparity used in previous studies (e.g., Fredrickson *et al.*, 2010). The coefficient of variation was calculated by dividing the standard deviation of other TMT members' total pay by the mean TMT's total pay. Vertical pay equality was calculated by log difference between the average pay of all other TMT members and the pay of the CEO, which is a transformed measure of vertical pay disparity used in previous studies (e.g., Siegel and Hambrick, 2005).

As stated earlier, the pay data of the five highest paid executives were used for these variables. We used total pay, titled as "Total Compensation—As Reported in SEC Filings" in Execucomp. It is a sum of salary, bonus, the value of stock awards, the value of option awards, nonequity incentive, change in pension value and nonqualified deferred compensation earnings, and all other compensation. The valuation is based on the value of shares and options that vested during the year.

Independent variables

Following Chin's *et al.* (2013) measures for the *CEO liberalism* variable, we measured each CEO's political liberalism by using individual political contributions data to examine the degree to which they financially supported the Democratic Party. The data originated from the U.S. Federal Election Commission (FEC), which publicly provides information about individual contributions of more than $200, including the contributor's name, state, city, street address, zip code, occupation, employer, amount of gift, date of gift, and name of recipient. These data are accessible directly from the FEC website as well as from non-partisan research institutes (e.g., www.transparencydata.com).

We coded executives' contribution records for the 10 years before they became CEOs. We verified the contributions of each CEO—checking middle names, shortened names, address information, and occupation and employer information—in an effort to exclude individuals whose names were similar to those of the CEOs in the sample. We used Execucomp, LinkedIn, and media sources to confirm each donor's identity.

Using the information on CEOs' contributions, we calculated four ratio-based indicators: (1) the number of donations to Democrats divided by the number of donations to recipients of both parties (to handle zero values, we added 0.1 to all numerators and 0.2 to all denominators), (2) the dollar amount of donations to Democrats divided by the amount of donations to both parties, (3) the number of years in which the executive made donations to Democrats divided by the number of years donations were made to either party, and (4) the number of distinct Democratic recipients to whom the executive donated divided by the total number of distinct recipients of both parties. These four indicators, respectively, indicate the following four variables: behavioral commitment, financial commitment, persistence of commitment, and scope of commitment to a political orientation. Then, following Chin *et al.* (2013), we summed and then averaged these four ratio-based indicators, and used it as our CEO liberalism index scores. Cronbach's alpha of this measure is 0.95, which shows the internal validity of our index. The scores range from 0 to 1; scores close to 0 indicate intensely conservative CEOs and scores close to 1 indicate intensely liberal CEOs.

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Other variables

For *Compensation committee liberalism,* we first collected 10 years of donation records for each compensation committee members and calculated their individual liberalism index. We then took the mean of the individual members' indices and used it as a measure for compensation committee liberalism. Since we constructed a pooled sample over multiple years, we checked whether there was any committee member who newly joined or stepped down in a given year and reflected the change if any. As such, compensation committee liberalism could vary over time as committee membership changed during our sample period.

In our study, we controlled several factors. First, we controlled for various top executives' characteristics important in prior studies on the TMT pay structure. We added a control for *Outside CEO*, coded 1 if the CEO had been in the firm two years or less prior to becoming CEO (Fredrickson *et al.*, 2010; Graffin *et al.*, 2008) because the pay level of CEOs who were hired from outside tend to higher than that of insider CEOs. Since CEOs who have received awards tend to be paid more and to have more influence on TMT pay arrangements (Graffin *et al.*, 2008), we controlled for *CEO award* with a dummy variable, coded 1 if the CEO had ever received an award from a third party.[2] Given that executives who share board membership tend to be paid similarly (Fredrickson *et al.*, 2010), we added a control for *Board membership*, measured by counting the number of TMT members who also serve as a director. The previous studies suggest that the pay level of CEO and other TMT members influence pay arrangements within TMT (Carpenter and Sanders, 2002; Fredrickson *et al.*, 2010; Graffin *et al.*, 2008). As such, we controlled for *CEO pay level,* measured as total pay reported in the SEC filings, for the vertical pay equality analyses, and *Non-CEO executive pay level,* measured by the average of all of non-CEO executives' total pay, for the horizontal pay equality analyses.

Next, we controlled for *CEO power relative to the board*. Considering the premise that CEO power accrues from multiple sources (Adams, Almeida, and Ferreira, 2005; Finkelstein, 1992), and following the prior studies that considered the relationship between CEO and the board (Briscoe, Chin, and Hambrick, 2014; Chin *et al.*, 2013; McDonald, Westphal, and Graebner, 2008), we used a formative index for *CEO power*. It consists of four variables that have been widely used in prior studies on CEO power (Finkelstein, 1992; Haynes and Hillman, 2010; Pollock *et al.*, 2002): CEO duality, CEO tenure, CEO relative ownership, and the portion of independent directors. CEO duality was coded 1 if the CEO was also the chair of the board; CEO tenure was measured as the number of years since becoming the CEO; CEO relative ownership was measured as the ratio of CEO stock ownership to directors' ownership; and the portion of outside directors was the number of outside directors divided by the number of the entire directors. These variables were standardized and then averaged to create the formative index (Diamantopoulos and Winklhofer, 2001).

Third, we controlled for several company factors that have been widely used in prior TMT pay studies, all measured in the year prior to each focal year. Given the previous studies showing that TMT pay can be influenced by firm size (Bloom and Michel, 2002), we controlled for *Firm size*, measured as log of total sales. Since TMT pay arrangements are likely to be influenced by firm's financial conditions (Fredrickson *et al.*, 2010), we controlled for *Prior performance*, measured by return on asset, and *Long-term debt to total assets ratio*, calculated by dividing a firm's long-term debt by its total assets. Considering the potential influence of external stakeholders, we controlled for *Institutional blockholders*, measured by the number of institutional blockholders who owns more than five percent of focal firm's stock, and *Analyst ratings*, measured as the percentage of sell recommendations that the focal firm received from research analysts (Wiersema and Zhang, 2011). Following Fredrickson and his colleagues, who suggest the need for cooperation is likely to influence TMT pay arrangements, we controlled for this using an entropy measure, formally:

$$Entropy = \Sigma P_{ia} \ln \left(\frac{1}{P_{ia}} \right),$$

where P_{ia} is the proportion of a firm a's sales in business segment i, to capture the degree to which a firm is diversified, and *R&D expenditure*, gauged as log of R&D expenditures plus a constant (Fredrickson *et al.*, 2010). We also controlled for each company's pay egalitarianism on the arrival

[2] A detailed list of the awards is available from authors.

of each CEO to minimize the potential influence of firm-embedded factors on TMT pay arrangements; we calculated the variables of *Pre-CEO vertical pay equality* and *Pre-CEO horizontal pay equality* in the year prior to the year the CEO was hired (*t*-1), and included them as a control in the vertical and horizontal pay equality analyses respectively.

Fourth, we speculated that since our CEOs are new to their jobs, the percentage of the TMT that is new may influence our results. To control this, we calculated the *Percentage of new TMT members* in a given year, measured by examining the executives in Execucomp and determining which executives were new to the firm and then dividing that number by the total executives, and added it as a control variable.

Finally, we included a control for the *Location of the company's headquarters* by coding as 1 if the headquarter of a firm was located in the Republican-oriented, 2 if it was located in the neutral states, and 3 if it was located in the Democratic-oriented states, based on the Gallup research that rated political orientation of each state (Gallup, 2009) because there may exist state-level factors affecting TMT pay arrangements. We included *Industry dummies* for the manufacturing, retailers, and services to capture different norms that may exist across industries; the results were unchanged in supplemental analyses when we used industry dummies for two-digit in the SIC code. We included *Calendar year dummies* to control for time-related factors that might potentially influence our results (Certo and Semadeni, 2006).

Estimation methods

We used generalized estimating equations (GEE) to deal with multiple observations for the dependent variables. GEE, which derives maximum likelihood estimates and accommodates non-independent observations, is suitable when using cross-sectional time series data (Liang and Zeger, 1986). We did not use a fixed-effects model because it is not appropriate to do so when models include time-invariant variables (such as political liberalism). It is important to note that GEE models are subject to the same constraints as the more common random-effects models, and therefore, must be evaluated for consistency, but given our inability to estimate a fixed-effects model, we used the hybrid method recommended by Allison (2009). The results indicated no consistency problems, making the GEE model appropriate for our testing. Specifically, we used the xtgee command in Stata 13.0, which fits general linear models and allows us to specify the within-group correlation structure for the panels (StataCorp, 2009). We specified a Gaussian distribution with an identity link function for all models. We specified an exchangeable correlation structure and used robust variance estimators (White, 1980).

RESULTS

Table 1 reports means, standard deviations, and correlations among the variables.

Table 2 presents GEE results for tests of the hypotheses on horizontal pay equality. Model 1 includes only control variables. Model 2 tests the main effect of CEO liberalism on horizontal pay equality. The results indicate that CEO liberalism was positive and significantly associated with the horizontal pay equality, thus providing support for Hypothesis 1 ($b = 2.327$, $p = 0.033$). Model 3 tests Hypothesis 3a, which predicted that the effect of CEOs' political liberalism on horizontal pay quality is greater when compensation committee is more liberal. The results show a significant positive interaction of CEO political liberalism and compensation committee liberalism, providing support for Hypothesis 3a ($b = 16.173$, $p = 0.048$). When this interaction effect is graphed, as in Figure 1, the resulting picture provides vivid support: under conditions of more liberal compensation committee, the more liberal the CEO the greater the horizontal pay equality. Given that the slope of the line interacting CEO political liberalism with lower compensation committee liberalism appears relatively flat, we conducted a supplemental analysis that tested the relationship above and below average compensation committee liberalism. We found that the relationship was only significant for above average compensation committee liberalism. We consider this interesting finding further in the discussion section.

In practical terms, our measure of horizontal pay equality increases 29 percent if the CEO liberalism score changes from 0.36 (the sample mean) to 0.99 (very liberal) and decreases 16 percent if the CEO liberalism score changes from 0.36 to 0.01 (very conservative). In terms of the practical magnitude, when the mean of non-CEO executives' pay is $3.75 million, the

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Table 1. Correlations and descriptive statistics

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Horizontal Pay Equality	5.19	5.31															
2 Vertical Pay Equality	0.44	0.45	−0.07														
3 Pre-CEO Horizontal Pay Equality	3.57	2.87	0.20	−0.05													
4 Pre-CEO Vertical Pay Equality	0.24	0.39	−0.03	−0.01	−0.06												
5 Firm Sales (ln)	8.95	1.11	0.13	0.07	0.05	−0.01											
6 ROA	0.06	0.08	0.05	−0.04	0.03	0.01	−0.05										
7 Long-term Debt to Total Assets	0.19	0.13	−0.05	−0.11	0.03	−0.16	0.03	−0.13									
8 Institutional Blockholders	1.75	1.17	−0.09	−0.07	−0.11	0.03	−0.38	−0.04	0.20								
9 Analyst Ratings	6.18	7.71	−0.01	−0.01	0.03	0.00	−0.07	−0.11	0.01	0.21							
10 R&D Expenditure (ln)	0.03	0.06	0.08	0.02	0.02	0.13	−0.16	−0.01	−0.17	0.15	0.05						
11 Diversification Entropy	0.62	0.56	0.03	−0.03	0.01	−0.07	0.31	0.02	0.11	−0.17	−0.17	−0.07					
12 Portion of new TMT members (%)	0.13	0.15	−0.04	0.06	−0.08	0.03	0.08	−0.07	−0.10	0.02	0.08	0.11	−0.01				
13 Board Membership	0.38	0.70	−0.05	0.03	−0.13	−0.03	−0.12	0.09	−0.06	−0.01	0.00	−0.06	0.03	−0.13			
14 Outside CEO	0.25	0.43	−0.01	0.00	−0.02	0.11	−0.16	−0.01	−0.07	0.24	0.02	0.11	−0.14	0.09	−0.04		
15 CEO Award	0.13	0.34	−0.06	−0.03	−0.14	−0.02	0.06	−0.11	0.16	−0.03	−0.11	−0.06	0.04	0.07	0.01	−0.03	
16 CEO Total Pay	10.01	5.26	0.13	−0.23	−0.02	0.05	0.64	0.09	0.00	−0.26	−0.15	−0.01	0.27	0.02	0.00	−0.11	0.08
17 Non-CEO Executives' Total Pay	3.75	1.98	0.03	0.23	−0.09	0.05	0.62	−0.01	−0.12	−0.28	−0.12	0.05	0.20	0.01	0.11	−0.05	0.01
18 CEO Power	0.02	0.57	0.03	0.02	−0.08	0.08	−0.30	0.02	−0.14	0.10	0.05	0.11	−0.12	0.03	0.44	0.12	0.01
19 Headquarter Location	2.34	0.72	0.07	−0.04	−0.06	0.06	0.00	0.02	−0.06	−0.10	−0.10	0.27	0.09	0.04	0.16	−0.04	0.05
20 CEO Liberalism	0.36	0.27	0.02	0.00	−0.05	0.02	−0.02	−0.07	−0.03	0.02	−0.07	0.05	0.06	0.04	0.08	−0.08	0.16
21 Compensation Committee Liberalism	0.39	0.13	0.06	0.01	−0.02	0.00	−0.04	0.07	−0.03	0.08	−0.14	0.14	0.01	−0.01	0.00	0.10	0.05

Variables	16	17	18	19	20
16 CEO Total Pay					
17 Non-CEO Executives' Total Pay	0.71				
18 CEO Power	−0.25	−0.13			
19 Headquarter Location	0.12	0.13	−0.02		
20 CEO Liberalism	−0.01	−0.03	0.08	0.30	
21 Compensation Committee Liberalism	0.02	0.08	0.07	0.18	0.05

Correlations greater than or equal to 0.08 are significant at the 0.05 level.

Table 2. Results of GEE analyses predicting horizontal pay equality

Predictor variables	Model 1	Model 2	Model 3
Intercept	−10.715	−10.491	−11.302
	(0.000)	(0.000)	(0.000)
Pre-CEO Horizontal Pay Equality	0.327	0.335	0.362
	(0.005)	(0.005)	(0.002)
Firm Sales (ln)	1.451	1.503	1.575
	(0.000)	(0.000)	(0.000)
ROA	1.259	1.054	1.547
	(0.636)	(0.682)	(0.533)
Long-term Debt to Total Assets	0.378	0.684	0.344
	(0.829)	(0.689)	(0.844)
Institutional Blockholders	−0.151	−0.212	−0.224
	(0.552)	(0.384)	(0.351)
Analyst Ratings	−0.008	−0.006	0.001
	(0.828)	(0.860)	(0.980)
R&D Expenditure (ln)	10.754	10.973	11.586
	(0.236)	(0.238)	(0.200)
Diversification Entropy	−0.602	−0.757	−0.803
	(0.329)	(0.211)	(0.175)
Portion of new TMT members (%)	−2.203	−2.294	−2.407
	(0.101)	(0.089)	(0.075)
Board Membership	−0.371	−0.338	−0.323
	(0.267)	(0.303)	(0.334)
Non-CEO Executives' Total Pay	−0.000	−0.000	−0.000
	(0.104)	(0.097)	(0.063)
Outside CEO	−0.583	−0.504	−0.555
	(0.407)	(0.463)	(0.424)
CEO Award	−1.238	−1.507	−1.647
	(0.120)	(0.066)	(0.050)
CEO Power	1.801	1.776	1.787
	(0.009)	(0.010)	(0.009)
Headquarter Location	0.761	0.463	0.522
	(0.065)	(0.272)	(0.213)
Compensation Committee Liberalism	1.310	1.411	1.372
	(0.501)	(0.460)	(0.446)
CEO Liberalism		2.327	2.467
		(0.033)	(0.021)
CEO Liberal-ism × compensation Committee Liberalism			16.173
			(0.048)
Wald Chi2	65.581	70.059	74.197
	(0.000)	(0.000)	(0.000)

n = 472; *P* values are in parentheses; year dummies and industry dummies were included but not shown.

compensation of non-CEO executives ranges from \$1.27 to \$6.22 million when CEO liberalism score is 0.01 (\$4.94 million difference), while it ranges from \$2.06 to \$5.43 million when CEO liberalism score is 0.99 (\$3.37 million difference). These differences increase or decrease by the compensation committee liberalism. When compensation committee liberalism is one standard deviation higher than the mean and CEO liberalism is 0.99, non-CEO executives' pay ranges from \$2.42 to \$4.98 million (\$2.56 million difference), but when compensation committee liberalism is one standard deviation lower than the mean and CEO liberalism is 0.01, the pay range is from \$1.07 to \$6.43 million (\$5.36 million difference).

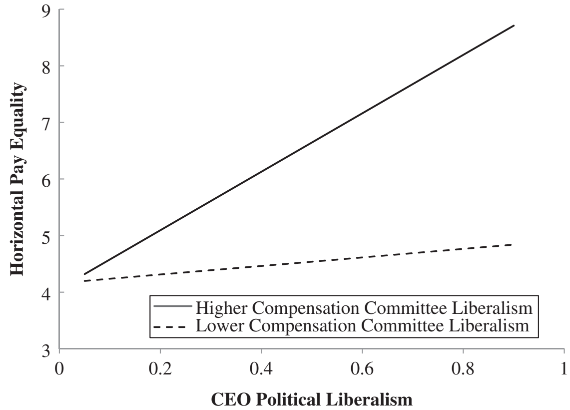

Figure 1. The interaction of CEO liberalism and compensation committee liberalism on horizontal pay equality

Table 3 presents GEE results for tests of the hypotheses on vertical pay equality. Model 1 includes only control variables. Model 2 tests the main effect of CEO liberalism on vertical pay equality. The results indicate that CEO liberalism was not significantly associated with the vertical pay equality, thus failing to provide support for Hypothesis 2. Model 3 tests Hypothesis 3b, which predicted that the effect of CEOs' political liberalism on vertical pay quality is greater when compensation committee is more liberal. The results show that CEO political liberalism does not significantly interact with compensation committee liberalism, thus failing to provide support for Hypothesis 3b.

Additional analyses

Thus far, we have examined the role of political ideology on *total* TMT pay. Yet, it is possible that CEOs have more influence in deciding *bonus* pay levels rather than total pay levels, given they are making a proposal to the board instead of unilaterally setting pay levels. Consequently, we conducted post-hoc analyses for our two measures

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Table 3. Results of GEE analyses predicting vertical pay equality

Predictor variables	Model 1	Model 2	Model 3
Intercept	−0.719	−0.718	−0.731
	(0.116)	(0.115)	(0.110)
Pre-CEO Horizontal Pay Equality	0.282	0.282	0.281
	(0.000)	(0.000)	(0.000)
Firm Sales (ln)	0.155	0.155	0.157
	(0.022)	(0.023)	(0.022)
ROA	−0.284	−0.285	−0.272
	(0.126)	(0.124)	(0.152)
Long-term Debt to Total Assets	−0.118	−0.116	−0.120
	(0.348)	(0.361)	(0.350)
Institutional Blockholders	−0.015	−0.015	−0.016
	(0.336)	(0.347)	(0.329)
Analyst Ratings	−0.004	−0.004	−0.004
	(0.059)	(0.054)	(0.072)
R&D Expenditure (ln)	0.021	0.022	0.031
	(0.940)	(0.938)	(0.913)
Diversification Entropy	−0.052	−0.053	−0.053
	(0.294)	(0.300)	(0.295)
Portion of new TMT members (%)	0.171	0.170	0.169
	(0.378)	(0.376)	(0.383)
Board Membership	0.076	0.076	0.076
	(0.022)	(0.023)	(0.023)
CEO Total Pay	−0.000	−0.000	−0.000
	(0.010)	(0.010)	(0.010)
Outside CEO	0.031	0.032	0.031
	(0.244)	(0.230)	(0.240)
CEO Award	0.025	0.023	0.020
	(0.649)	(0.687)	(0.716)
CEO Power	−0.102	−0.103	−0.102
	(0.118)	(0.118)	(0.120)
Headquarter Location	−0.032	−0.034	−0.033
	(0.477)	(0.450)	(0.459)
Compensation Committee Liberalism	0.086	0.087	0.085
	(0.570)	(0.567)	(0.571)
CEO Liberalism		0.013	0.016
		(0.827)	(0.780)
CEO Liberalism × compensation Committee Liberalism			0.245
			(0.540)
Wald Chi2	129.111	129.453	131.493
	(0.000)	(0.000)	(0.000)

n = 472; *P* values are in parentheses; year dummies and industry dummies were included but not shown.

of pay equality.[3] While use of bonus pay produced no significant results for horizontal pay equality, it did yield some significant and interesting results for vertical pay equality; CEO liberalism was positive and significantly associated with the vertical bonus pay equality. In other words, companies with more liberal CEOs tend to have greater vertical pay equality in bonus pay. We examine this intriguing finding more in the discussion section. Finally, the interaction of CEO liberalism with compensation committee liberalism was not significant for either horizontal or vertical pay equality.

Robustness checks

As with any empirical analysis, it is important to establish the robustness of the empirical results and to accomplish this we conducted several robustness checks. First, we checked the variance inflation factors (VIFs) for our variables to ensure that our findings are not affected by multicollinearity. For all models, the VIFs are between 1 and 2.5, below the thresholds of concern.

Next, it is possible that endogeneity is contaminating our results (Semadeni, Withers, and Trevis, 2014). To address this, we conducted Durbin-Wu-Hausman tests to determine if endogeneity was present. As instruments, we used the location of the firm headquarters, the industry sectors, and corporate social responsibility profiles. We coded 1 if the headquarter is located in more liberal-controlled states (Gallup, 2009) and 0 otherwise. We coded 1 if a firm's industry is categorized as high tech, financial, consumer products, natural resources, utilities, or other services, and 0 otherwise. Finally, we used the Kinder, Lydenberg, Domini (KLD) data for corporate social responsibility profiles based on the finding by Chin and colleagues (Chin *et al.*, 2013) that political ideology is related to corporate social responsibility. For all of our models, we found no evidence of endogeneity.

Finally, we tested different combinations of governance variables for the CEO power index, and none of these changed our results. The results also remained substantively similar when we used a dummy variable by coding as 1 if the headquarters of a firm was located in the Democratic-oriented states, and 0 otherwise. We also used return on equity, firm's market-to-book ratio, and Tobin's q in the year prior to each focal year as alternative measures for firm performance, and the results remained substantively similar. The results also remained similar when we used different types of total pay, which used the grant date fair value for stock and

[3] Models are omitted for the sake of parsimony, but are available from the authors.

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option valuation. These supplement tests increase our confidence in the robustness of our empirical findings.

DISCUSSION

This study is one of the first to introduce and test the idea that TMT pay arrangements are affected by CEO's and compensation committee's political liberalism. We hypothesized that more liberal CEOs are likely to have more egalitarian TMT pay arrangements because of liberals' distinct dispositions for favoring equality. In testing this idea, we focused on two aspects of total pay arrangements: horizontal pay equality and vertical pay equality. The results provide support for our hypotheses on horizontal pay equality, but no support for vertical pay equality. The results showing that CEO liberalism is significantly associated with horizontal pay equality, but not with vertical pay equality, suggest that more liberal CEOs decrease pay differentials for other top executives, but not for themselves. In other words, while more liberal CEOs tend to reflect their beliefs regarding equal treatment on pay design for other top executives, they do not differ from their conservative peers in reducing total pay differentials between themselves and other top executives. This raises the question of whether more liberal CEOs exhibit duplicative tendencies when determining pay.

However, in the additional analysis that used bonus pay instead of total pay, we found that CEO liberalism increases vertical pay equality, which suggests more liberal CEOs tend to reduce pay differentials in bonus pay, instead of total pay. The mixed support for the direct effect of CEO liberalism across different types of pay is likely to result from the fact that CEOs generally have greater influence or discretion in deciding their own bonus pay levels than their own total pay levels. The previous literature on CEO compensation has revealed that factors other than CEOs' characteristics, such as the board of directors and industry conditions, have significant influence in determining CEO total pay level. Therefore, even if more liberal CEOs wished to adjust their total pay to match their personal values, they may be simply unable to do so given these constraints, even if the compensation committee shares their political values.

An alternative explanation for the mixed support is that CEOs may use different standards when comparing their pay with that of other top executives than when comparing pay among other top executives only. In other words, CEOs may simply feel that their total pay, which includes noncash pay (e.g., stock options and restricted stock), is not comparable with that of other top executives. This suggests the possibility that the motivations for assigning noncash pay to CEO and non-CEO executives may be different. Given the streams of research indicating that the main reason to set up noncash pay for CEOs is to resolve agency problems (summarized in Gerhart, Rynes, and Fulmer, 2009), noncash pay given to non-CEO executives may be regarded by more liberal CEOs as representing shared-fate rewards rather than as a monitoring device to reduce agency cost, as suggested in some previous studies (Goodwin, Wofford, and Whittington, 2001).

Our findings also provide some evidence for the moderating effects of compensation committee liberalism; namely, the positive effect of CEO liberalism on horizontal equality in total pay is accentuated when the compensation committee is more liberal. As graphically shown in Figure 1, there is little difference between high and low compensation committee liberalism's effect on horizontal pay equality under low CEO liberalism, but the differences are substantial at high levels of CEO liberalism. As mentioned previously, we tested and found that this interactive effect exists only at above mean values of compensation committee liberalism. In other words, when compensation committee liberalism is low, there is no significant relationship between CEO political liberalism and horizontal pay equality. In effect, the lack of liberalism on the compensation committee inhibits the positive effect of CEO liberalism on horizontal pay equality. Taken together, these results show that CEOs do not unilaterally set the compensation level of the other top managers. We argue this provides an important boundary condition on the effects of CEO beliefs—liberal CEOs' desire for more egalitarian pay arrangements can be significantly encouraged (or discouraged) by the compensation committee members' liberalism.

However, despite the authority and responsibility that the compensation committee formally has, compensation committee liberalism does not have significant main effects on TMT pay arrangements for either total pay or bonus pay. This suggests that although the committee ultimately sets the compensation level of the CEO and other top officers, the committee values do not directly influence pay. This

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supports the notion that the committee relies on the CEO to propose compensation levels for the other top managers of the firm, accepting or amending the proposal of the CEO to set the compensation for other top officers rather than imposing their own values. This is consistent with the notion that the board of directors heavily focuses on the compensation of CEOs, and tends not to be deeply engaged in the decision-making processes to determine the pay of other top executives (Chatterjee and Hambrick, 2007; Wowak, Mannor, and Arrfelt, 2013).

Implications and future research

This study has several important implications for both TMT pay and upper-echelons literature. First, it provides new insights into the literature on TMT pay arrangements. By showing that CEO liberalism affects TMT pay structure, the results of the study broaden our overall understanding of the determinants of TMT pay arrangements. Despite CEOs' influence on various organizational outcomes—as well as on TMT pay design—their characteristics have not been thoroughly examined in the TMT pay literature thus far (Geletkanycz and Sanders, 2012). Thus, this study contributes to the literature by focusing on the important yet hitherto neglected factor of CEO values.

Furthermore, this study suggests a possible explanation for the current literature's conflicting perspectives on the determinants of TMT pay arrangements. The economics-based and socio-psychological perspectives are often seen as incompatible (Devers *et al.*, 2007). However, the results of this study suggest that this is not necessarily the case, as we find that several aspects of TMT pay arrangements are under the influence of CEOs' personal values. At the same time, our framework is also consistent with the suggestions of the economics-based perspective. For instance, we found more conservative CEOs are more likely than more liberal CEOs to have a less egalitarian and more hierarchical pay structure, and thus, the tournament theory or agency theory better explains the TMT pay arrangements of these firms. This is consistent with their view about personal effort and control (Clarkson *et al.*, 2015). At the same time, the beliefs of more liberal CEOs positively impacted several aspects of pay equality, suggesting a more collectivist approach, which is consistent with their beliefs about the importance of systemic or sociocultural forces (Clarkson *et al.*, 2015).

In the market for managerial talent, there are few measures as important as compensation (Carpenter and Sanders, 2002), and we have identified an important factor affecting TMT pay. It is important to note we examined only CEO liberalism and did not assess the beliefs or values of the TMT. While researchers have found individuals attract like-minded others (Ployhart, Weekley, and Baughman, 2006), even in top management teams (Nielsen, 2009), it is an open question how the values of the TMT interact with those of the CEO. If CEOs beliefs affect TMT pay, is this relationship enhanced if the TMT holds similar beliefs? On the other hand, it is difficult to imagine that top managers would accept pay arrangements that conflict with their own values and beliefs, suggesting that CEO beliefs might have either centripetal or centrifugal effects on the relationships between individual TMT members and the CEO.

This study also contributes to the upper-echelons theory. By presenting important empirical evidence that CEOs' values influence organizational outcomes, this study fills an important gap in the upper-echelons literature. As mentioned previously, very little empirical research has been conducted since Hambrick and Mason (1984) initially emphasized the role of executive values, and as a result, the question of whether and how CEO values influence internal corporate structure has remained unanswered. By showing that CEO political liberalism influences TMT pay arrangement, this study reintroduces the importance of executive values in understanding organizational outcomes. In addition, this study contributes to upper-echelons theory by broadening its scope to include compensation committee members and by showing board members' values can also influence organizational outcomes, as suggested, but not tested, by some upper-echelons scholars (Geletkanycz and Sanders, 2012).

Like all empirical studies, the present study has limitations, which provide opportunities for future research. First, the scope of top executives is restricted to only the five highest paid executives. Although it has been accepted as relevant in previous studies to consider the top five executives as representative of all TMT members, broadening the scope to include additional executives would provide a richer context. Furthermore, as some scholars have recently examined (Chizema *et al.*, 2015; Greckhamer, 2016), the question of whether more liberal CEOs display egalitarianism toward employees beyond TMT members also merits further investigation.

The index of CEO political liberalism is only an indirect measure, and thus, must inevitably be considered an imprecise gauge. Although the validity of using political donation records has been empirically tested and theoretically supported (Ansolabehere, Snyder, and de Figueiredo, 2003; Chin *et al.*, 2013), further work might improve on this measure and provide a better understanding of the influence of CEO liberalism on corporate decisions. Additionally, due to the public disclosure of political donations, CEOs may be reluctant to signal to external parties their individually held beliefs, particularly given they are often seen as the public face of the firm. Conversely, some CEOs may seek to signal one belief while privately holding another. Yet, others may attempt to give across the political spectrum, signaling a centrist position. Given these challenges, we are encouraged to have found such a strong effect tied to CEO liberalism, but future research may be able to disentangle the complex nature of political beliefs.

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REFERENCES

Adams RB, Almeida H, Ferreira D. 2005. Powerful CEOs and their impact on corporate performance. *Review of Financial Studies* **18**: 1403–1432.

Aggarwal RK, Samwick AA. 1999. Executive compensation, strategic competition, and relative performance evaluation: theory and evidence. *Journal of Finance* **54**: 1999–2043.

Allison PD. 2009. *Fixed Effects Regression Models*. Sage: Los Angeles, CA.

Ansolabehere S, Snyder J, de Figueiredo J. 2003. Why is there so little money in US elections? *Journal of Economic Perspectives* **17**: 105–130.

Barnea MF, Schwartz SH. 1998. Values and voting. *Political Psychology* **19**: 17–40.

Bateman TS, O'Neill H, Kenworthy-U'Ren A. 2002. A hierarchical taxonomy of top managers' goals. *Journal of Applied Psychology* **87**: 1134–1148.

Bloom M, Michel JG. 2002. The relationships among organizational context, pay dispersion, and managerial turnover. *Academy of Management Journal* **45**: 33–42.

Briscoe F, Chin MK, Hambrick DC. 2014. CEO ideology as an element of the corporate opportunity structure for social activists. *Academy of Management Journal* **57**(6): 1786–1809.

Burris V. 2001. The two faces of capital: corporations and individual capitalists as political actors. *American Sociological Review* **66**: 361–381.

Carpenter MA, Geletkanycz MA, Sanders WG. 2004. Upper echelons research revisited: antecedents, elements, and consequences of top management team composition. *Journal of Management* **30**(6): 749–778.

Carpenter MA, Sanders WG. 2002. Top management team compensation: the missing link between CEO pay and firm performance? *Strategic Management Journal* **23**: 367–375.

Carpenter MA, Wade JB. 2002. Microlevel opportunity structures as determinants of non-CEO executive pay. *Academy of Management Journal* **45**(6): 1085–1103.

Certo ST, Semadeni M. 2006. Strategy research and panel data: evidence and implications. *Journal of Management* **32**(3): 449–471.

Chatterjee A, Hambrick DC. 2007. It's all about me: narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly* **52**(3): 351–386.

Chin MK, Hambrick DC, Trevino LK. 2013. Political ideologies of CEOs: the influence of executives' values on corporate social responsibility. *Administrative Science Quarterly* **58**(2): 197–232.

Chizema A, Liu X, Lu J, Gao L. 2015. Politically connected boards and top executive pay in Chinese listed firms. *Strategic Management Journal* **36**: 890–906.

Cho TS, Hambrick DC. 2006. Attention as the mediator between top management team characteristics and strategic change: the case of airline deregulation. *Organization Science* **17**(4): 453–469.

Cho TS, Shen W. 2007. Changes in executive compensation following an environmental shift: the role of top management team turnover. *Strategic Management Journal* **28**(7): 747–754.

Christensen DM, Dhaliwal DS, Boivie S, Graffin SD. 2015. Top management conservatism and corporate risk strategies: evidence from managers' personal political orientation and corporate tax avoidance. *Strategic Management Journal* **36**: 1918–1938.

Clarkson JJ, Chambers JR, Hirt ER, Otto AS, Kardes FR, Leone C. 2015. The self-control consequences of political ideology. *Proceedings of the National Academy of Sciences of the United States of America* , DOI: 10.1073/pnas.1503530112.

Conyon MJ, Peck SI, Sadler GV. 2001. Corporate tournaments and executive compensation: evidence from the UK. *Strategic Management Journal* **22**(8): 805–815.

Crystal GS. 1991. Why CEO compensation is so high. *California Management Review* **34**(1): 9–29.

Detomasi DA. 2008. The political roots of corporate social responsibility. *Journal of Business Ethics* **82**(4): 807–819.

Devers CE, Cannella AA, Reilly GP, Yoder ME. 2007. Executive compensation: a multidisciplinary review of recent developments. *Journal of Management* **33**: 1016–1072.

Diamantopoulos A, Winklhofer HM. 2001. Index construction with formative indicators: an alternative to scale development. *Journal of Marketing Research* **38**(2): 269–277.

England GW. 1967. Personal value systems of American managers. *Academy of Management Journal* **10**: 53–68.

Feldman S. 2003. Values, ideology, and structure of political attitudes. In *Oxford Handbook of Political Psychology*, Sears DO, Huddy L, Jervis R (eds). Oxford University Press: New York; 477–508.

Finkelstein S. 1992. Power in top management teams: dimensions, measurement, and validation. *Academy of Management Journal* **35**: 505–538.

Finkelstein S, Hambrick DC, Cannella AA. 2009. *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards*. Oxford University Press: New York.

Francia PL, Green JC, Herrnson PS, Powell LW, Wilcox C. 2005. Limousine liberals and corporate conservatives: the financial constituencies of the democratic and republican parties. *Social Science Quarterly* **86**(4): 761–778.

Fredrickson JW, Davis-Blake A, Sanders WMG. 2010. Sharing the wealth: social comparisons and pay dispersion in the CEO's top team. *Strategic Management Journal* **31**(10): 1031–1053.

Gallup. 2009. State of the states: political party affiliation. 28 January. Available at: http://www.gallup.com/poll/114016/state-states-political-party-affiliation.aspx (accessed 28 January 2009).

Geletkanycz MA, Sanders WG. 2012. New directions on compensation and upper echelons. *Corporate Governance-an International Review* **20**(6): 519–525.

Gerhart B, Rynes SL, Fulmer IS. 2009. Pay and performance: individuals, groups, and executives. *Academy of Management Annals* **3**(1): 251–315.

Gomez-Mejia LR, Wiseman RM. 1997. Reframing executive compensations: an assessment and outlook. *Journal of Management* **23**(3): 291–374.

Goodwin VL, Wofford JC, Whittington JL. 2001. A theoretical and empirical extension to the transformational leadership construct. *Journal of Organizational Behavior* **22**: 759–774.

Goren P, Federico CM, Kittilson MC. 2009. Source cues, partisan identities, and political value expression. *American Journal of Political Science* **53**(4): 805–820.

Graffin SD, Wade JB, Porac JF, McNamee RC. 2008. The impact of CEO status diffusion on the economic outcomes of other senior managers. *Organization Science* **19**(3): 457–474.

Graham J, Haidt J, Nosek BA. 2009. Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology* **96**(5): 1029–1046.

Greckhamer T. 2016. CEO compensation in relation to worker compensation across countries: the configurational impact of country-level institutions. *Strategic Management Journal* **37**: 793–815.

Hambrick DC, Finkelstein S, Mooney AC. 2005. Executive job demands: new insights for explaining strategic decisions and leader behaviors. *Academy of Management Review* **30**(3): 472–491.

Hambrick DC, Mason PA. 1984. Upper echelons: the organization as a reflection of its top managers. *Academy of Management Review* **9**(2): 193–206.

Hartzell JC, Starks LT. 2003. Institutional investors and executive compensation. *Journal of Finance* **58**(6): 2351–2374.

Haynes KT, Hillman A. 2010. The effect of board capital and CEO power on strategic change. *Strategic Management Journal* **31**(11): 1145–1163.

Henderson AD, Fredrickson JW. 2001. Top management team coordination needs and the CEO pay gap: a competitive test of economic and behavioral views. *Academy of Management Journal* **44**(1): 96–117.

Hirsh JB, DeYoung CG, Xu XW, Peterson JB. 2010. Compassionate liberals and polite conservatives: associations of agreeableness with political ideology and moral values. *Personality and Social Psychology Bulletin* **36**(5): 655–664.

Jost JT. 2006. The end of the end of ideology. *American Psychologist* **61**(7): 651–670.

Jost JT, Glaser J, Kruglanski AW, Sulloway FJ. 2003. Political conservatism as motivated social cognition. *Psychological Bulletin* **129**(3): 339–375.

Lambert RA, Larcker DF, Weigelt K. 1993. The structure of organizational incentives. *Administrative Science Quarterly* **38**(3): 438–461.

Lawler EE. 1990. *Strategic Pay: Aligning Organizational Strategies and Pay Systems*. Jossey-Bass: San Francisco, CA.

Layman G. 1997. Religion and political behavior in the United States: the impact of beliefs, affiliations, and commitment from 1980 to 1994. *Public Opinion Quarterly* **61**: 288–316.

Lazear EP, Rosen S. 1981. Rank-order tournaments as optimum labor contracts. *Journal of Political Economy* **89**(5): 841–864.

Liang KY, Zeger SL. 1986. Longitudinal data analysis using generalized linear models. *Biometrika* **73**(1): 13.

Lorsch JW, MacIver E. 1989. *Pawns and Potentates: The Reality of America's Corporate Boards*. Harvard Business School Press: Boston, MA.

Main BGM, O'Reilly CA, Wade J. 1993. Top executive pay: tournament or teamwork? *Journal of Labor Economics* **11**(4): 606–628.

Main BGM, O'Reilly CA, Wade J. 1995. The CEO, the board of directors and executive compensation: economic and psychological perspectives. *Industrial and Corporate Change* **4**: 293–332.

McDonald ML, Westphal JD, Graebner ME. 2008. What do they know? The effects of outside director acquisition experience on firm acquisition performance. *Strategic Management Journal* **29**(11): 1155–1177.

Michel JG, Hambrick DC. 1992. Diversification posture and top management team characteristics. *Academy of Management Journal* **35**(1): 9–37.

Mischel W. 1997. Personality dispositions revisited and revised: a view after three decades. In *Handbook of Personality Psychology*, Hogan R, Johnson J, Briggs S (eds). Academic Press: New York; 113–132.

Murtha TP, Lenway SA. 1994. Country capabilities and the strategic state: how national political institutions affect multinational corporations' strategies. *Strategic Management Journal* **15**(S2): 113–129.

Nielsen S. 2009. Why do top management teams look the way they do? A multilevel exploration of the antecedents of TMT heterogeneity. *Strategic Organization* **7**(3): 277–305.

O'Reilly CA, Main BG, Crystal GS. 1988. CEO compensation as tournament and social comparison: a tale of two theories. *Administrative Science Quarterly* **33**(2): 257–274.

Ployhart RE, Weekley JA, Baughman K. 2006. The structure and function of human capital emergence: a multilevel examination of the attraction-selection-attrition model. *Academy of Management Journal* **49**(4): 661–677.

Pollock TG, Fischer HM, Wade JB. 2002. The role of power and politics in the repricing of executive options. *Academy of Management Journal* **45**(6): 1172–1182.

Poole KT, Rosenthal H. 1984. The polarization of American politics. *Journal of Politics* **46**(4): 1061–1079.

Rasinski KA. 1987. What's fair is fair—or is it? Value differences underlying public views about social justice. *Journal of Personality and Social Psychology* **53**(1): 201–211.

Rosen S. 1986. Prizes and incentives in elimination tournaments. *American Economic Review* **76**(4): 701–715.

Semadeni M, Withers MC, Trevis CS. 2014. The perils of endogeneity and instrumental variables in strategy research: understanding through simulations. *Strategic Management Journal* **35**(7): 1070–1079.

Siegel PA, Hambrick DC. 2005. Pay disparities within top management groups: evidence of harmful effects on performance of high-technology firms. *Organization Science* **16**(3): 259–274.

Simsek Z, Veiga JF, Lubatkin MH, Dino RN. 2005. Modeling the multilevel determinants of top management team behavioral integration. *Academy of Management Journal* **48**: 69–84.

Skitka LJ, Tetlock PE. 1993. Providing public assistance: cognitive and motivational processes underlying liberal and conservative policy preferences. *Journal of Personality and Social Psychology* **65**(6): 1205–1223.

Starbuck WH, Milliken FJ. 1988. Executives perceptual filters: what they notice and how they make sense. In *The Executive Effect: Concepts and Methods for Studying Top Managers*, Hambrick DC (ed). JAI Press: Greenwich, CT; 35–65.

StataCorp. 2009. *Stata: Release 11*. StataCorp: College Station, TX.

Tedin KL. 1987. Political ideology and the vote. *Research in Micropolitics* **2**: 63–94.

Thompson M, Ellis R, Wildavsky A. 1990. *Cultural Theory*. Westview Press: Boulder, CO.

Verba S, Orren GR. 1985. The meaning of equality in America. *Political Science Quarterly* **100**(3): 369–387.

Wade JB, Porac JF, Pollock TG, Graffin SD. 2006. The burden of celebrity: the impact of CEO certification contests on CEO pay and performance. *Academy of Management Journal* **49**(4): 643–660.

Weber CR, Federico CM. 2013. Moral foundations and heterogeneity in ideological preferences. *Political Psychology* **34**(1): 107–126.

White H. 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica* **48**(4): 817–838.

Wiersema MF, Zhang Y. 2011. CEO dismissal: the role of investment analysts. *Strategic Management Journal* **32**(11): 1161–1182.

Wowak AJ, Mannor MJ, Arrfelt M. 2013. Can't buy me love? How charismatic CEOs supplement their charms with instrumental behaviors. *Academy of Management Proceedings* **2013**(1): 10304.