International Journal of Asian Business and Information Management
Volume 14 • Issue 1

CEO Greed and Firms' Environmental Performance in Environmentally Sensitive Sectors of China

Saif-Ur-Rehman, Canadian University Dubai, UAE
Elgiliani Elshareif, Canadian University Dubai, UAE
Hashim Khan, COMSATS University Islamabad, Pakistan

ABSTRACT

In the current study, the authors explored how CEO greed concerning bonuses and rewards on restricted stock affects a firm's environmental performance (EP) in environmentally sensitive sectors of China. Moreover, they empirically tested the constraining role of the quad director on the relationship between CEO greed and EP. Findings indicate that (a) CEO greed negatively affects the strategic firm's environmental performance, particularly the negative relation is augmented by the person-pay interactionism rationale (bonus), (b) the presence of one quad director in the board does not constrain CEO greed and EP negative relation, and (c) the presence of two or more quad directors in the board significantly constraints the negative relation between CEO greed and EP. Thus, having at least two quad directors is more effective than combining directors with multiple features. Our results are robust to different CEOs' power dynamics. Our research has important practical implications for corporate governance and business strategy formulation.

KEYWORDS

CEO Greed, China, Corporate Governance, Environmental Performance, Environmentally Sensitive Sectors, Quad Director

1. INTRODUCTION

Self-interest is a general trait of CEOs, and too much altruism can harm firm performance (Takacs Haynes, Campbell, & Hitt, 2017). This reveals some businesses' dark and self-destructive propensities and presents an opportunity to correlate greed, egotism, and firm performance (financial and non-financial). Further, empirics have highlighted the consequences of CEO greed, and firms led by greedy CEOs suffer severe consequences (Francoeur, Melis, Gaia, & Aresu, 2017). In the current study, CEO greed refers to an intense and selfish desire for wealth, supporting the researchers' view that more greedy CEOs are less concerned with environmental performance (hereafter EP). During the last few decades, the governance monitoring role and firms' EP have become imperative for stakeholders.

DOI: 10.4018/ijabim.318473

Therefore, the search for rising yields in environmentally-sensitive organizations will probably coexist with improved governance and EP practices (Cheng et al., 2014). Environment strategy requires the resolution of scientific and engineering problems, and the solution could be costly and may temper short-run performance (Schrettle, Hinz, Scherrer-Rathje, & Friedli, 2014).

Therefore, a key factor can be how firms make decisions that affect the EP, and in this context, it is vital to understand how a greedy CEO influences corporate choices. Based on the Upper Echelon viewpoint, we stated that firms managed by greedy CEO are likely to be associated with poor EP, as EP represents a long-term-oriented strategic choice with limited instant return (Shou, Shao, Lai, Kang, & Park, 2019). Since CEO greed is associated with short-run profits (Haynes, Josefy, & Hitt, 2015), they are more likely to neglect EP. Likewise, executive behavior correlates with intrinsic and extrinsic motives (Wowak, Gomez-Mejia, & Steinbach, 2017)); we hypothesize that CEO greed and CSR relation are subject to the type of CEO pay measures (Wowak & Hambrick, 2010). Agency theory predicts that economic motivations are an influential tool for controlling CEOs' emphasis on stakeholders' essentials (Sajko, Boone, & Buyl, 2021). As the material gain is a promise of greed (Wang & Murnighan, 2011), we also propose that the willingness of greedy CEOs to opt for EP as a strategic choice is mainly sensitive to pay arrangements, like bonuses and restricted stocks. We empirically tested the negative role of CEO greed in EP, and our results supported the view. We also found that EP is highly sensitive to pay arrangements as a strategic choice. We found that bonus augments the CEO greed and EP negative relation in both coefficient and level of significance.

In contrast, restricted stocks weaken the relation in terms of coefficient only. Further, the negative relation is more pronounced when CEOs exercise powers (CEO duality and CEO compliance board). Our study contributes to the existing literature by providing evidence regarding CEO greed and EP performance in environmentally sensitive sectors of Chinese manufacturing firms. Our study contributes to the literature on the drivers of CEO behavior in the context of EP (Busenbark, Krause, Boivie, & Graffin, 2016). We integrated the Upper Echelon viewpoint and agency model to predict why and how the CEO shapes firms' EP profiles and responded to calls to integrate CEO's motives (pecuniary and non-pecuniary) as antecedents of firm strategic choices (Wowak et al., 2017).

To what extent governance can control the self-centered behavior of executives remains an unresolved myth. The corporate board is primarily responsible for the oversight of the conduct and efficiency of these executives (Banerjee, Nordqvist, & Hellerstedt, 2020). We believe that these executives may not be selfish or careless in their duties, but they are humanly determined. Therefore, the board needs to have their work cut out for them, and they every so often fail in their primary role-monitoring responsibilities, as revealed in governance failures. These incidences are localized, and the board behaves as spectators to these misconducts (Park, Boeker, & Gomulya, 2020). Acknowledging the large risks associated with EP, we devoted the second part of our research to studying how the board monitoring capability can be increased. Maybe the utmost track has been to suggest upsurges in board independence (Baulkaran & Bhattarai, 2020), reducing the board size. So the logic of effectiveness and responsibility of the board should be enhanced (Ho, Jenkins, Verreynne, Teo, & Singh, 2018); separating the duality role of the CEO (Havrylyshyn & Schepker, 2020) or, otherwise, employing a lead director[1]_ftn1 (Baulkaran & Bhattarai, 2020); and specifying the presence and confirmation of several committees like compensation or nominating (Almaqoushi & Powell, 2021). Though adopting these remedies has much face validity (Haynes, Zattoni, Boyd, & Minichilli, 2019), a substantial part of empirics specifies that these projected solutions do not serve as a critical solution at all.

Furthermore, organizations are still facing governance problems. In the current scenario, we presented new empirical evidence showing the board's effectiveness in monitoring the negative consequences of CEO greed in the context of EP. We proposed that the presence of quad directors improves board efficacy, thus, reducing the negative association between CEO greed and EP in China. At the outset, we emphasized that directors are engaged in the monitoring process, naturally unobservable by stakeholders. In contrast, governance failures allow influential individuals like CEOs to direct policies toward self-centered objectives, like CEO greed, as the focus of the current study

(Hambrick, Misangyi, & Park, 2015). So far, researchers have claimed that effective monitoring reduces the likelihood of self-centered decisions, the decisions that often reap short-run profits at the cost of long-run prospects but never ensure elimination (Boivie, Bednar, Aguilera, & Andrus, 2016; Hambrick et al., 2015). Our proposed quad director is vigilant on extensive façades: he does his homework; he asks for more information if required; once the problem is sensed, he raises his voice and backs the voice unless satisfied. As we know that effective monitoring is an onerous task, we empirically tested our quad model, providing evidence for the effectiveness of quad directors in monitoring CEO greed. For the construction of the quad model, we followed psychologist and organizational behavior researchers' view that the joint presence of ability and motivation enables a director to perform his task efficiently, and both qualities do not complement each other. Even these qualities, in sum, don't ensure task efficacy. Instead, ability and motivation above the threshold level enable a director to do his job well. Corporate directors are subject to diverse adherences and have the daunting task of time management, and attention in numerous tasks- the concept of ability mainly develops a complex. Indeed, we can find four critical traits of a director that are associated with his task efficacy and that are mapped onto the context:

1. Independence represents his ability to be objective.
2. Expertise refers to his ability to comprehend the issues.
3. Bandwidth shows his ability to give the necessary time and attention.
4. Motivation is his eagerness to exert his services on behalf of stakeholders.

So far, these attributes are treated separately in governance literature, in a ceteris paribus manner. In the current study, our insight is based on the interaction logic of the directors' ability and motivation context. We believe that effective monitoring is a phenomenon of joint abilities rather than a single outing. We developed hypotheses for the constraining role of the quad director for the negative association between CEO greed and EP (as developed in the first stage). Based on earlier fragmentary research not hitherto united, we empirically tested our theoretical proposition: the presence of quad director augments the corporate board's monitoring role, thus reducing the likelihood of negative consequences of CEO greed in the context of EP. Our logic is based on a split reality: first, distinct domains can indicate governance failures like CEO excessive pay, self-centered strategic choices, or needless acquisitions, and second, director effectiveness is domain-specific depending on expertise (Hillman & Dalziel, 2003).

Further, there is every probability that four attributes may not exist among board directors if these are scattered among members in a dispersed way. An independent director may not have all four attributes of our quad model, despite a satisfactory board's compositional average; we might not have adequate monitoring. To support our view empirically, we proposed that the presence of a quad director is associated with a strong probability of constraining the CEO's greedy actions, thereby increasing the likelihood of EP as a strategic choice. Besides following the critical mass theory, we also argued that two quad directors could substantively change the dynamics, creating an environment in which the CEO's self-centered choices can be diluted. So far, studying board directors in the aggregate is challenging; the study adopts the novel outlook of an ideal corporate monitor.

To justify our argument, we empirically investigated the role of quad directors in the environmentally sensitive sector in the Chinese context. Empirical findings did not support the view that the presence of one quad director constrains the negative impacts of CEO greed on EP in the Chinese context. However, it does weaken the negative relationship between CEO greed and EP. In contrast, CEO greed and EP negative relation is constrained once a board has two or more quad directors. In our in-depth analyses, we found that the constraining role of the quad director for a negative association between CEO greed and EP is augmented by a higher proposition of independent directors. Our quad model also monitors the negative association between CEO greed and EP, even for powerful CEOs, measured by CEO duality, CEO tenure, CEO ownership, and CEO founder. Lastly,

and most significantly, our predictions are tested using a sample of environment-sensitive firms from emerging economies (China). Rapid industrialization has put environmentally sensitive industries under new pollution stress as compensations are witnessed from the public to the ecosystem level. Public concerns about the environment rose in 2008, and the rise in concerns demanded greater exertions in ecological remediation and risk-governance (Ji et al. 2011; Li et al. 2016; Liu and Bae 2018; Wang et al. 2016). These make our study more critical and timelier in contributing to the sensitivity of topics in emerging economies.

The remainder of the paper is as follows. The relation between CEO Greed and Environmental Performance is highlighted in the next section. Next, the study develops hypotheses for empirical analyses followed by the methodological choices, main findings, additional analyses conclusion, and practical implications at the end.

2. CEO GREED AND ENVIRONMENTAL PERFORMANCE

The CEO is the company's top executive-the position does not just come with high expectations and a huge responsibility. It also comes with ludicrous pay, and CEOs of the world's biggest companies continue to earn more and more, not just in absolute statistics but also in relative terms. It is one of the most embarrassing symbols of corporate greed. Environment as a strategic choice has never been a no-win proposition for CEOs. The outdated phenomenon, "Help the environment and hurt your business," still prevails among CEOs who are self-centered and operate in an environment where the environmental protection laws are comparatively weaker or information asymmetry exists. For the last two decades, a novel corporate perception has emerged that assures the eventual settlement of environmental and financial apprehensions. There is a likelihood that the firm and the environment can be declared a winner in the modern arena. In the western context, being green is no longer a cost; it catalyzes revolution and long-term value creation (Wiengarten, Lo, & Lam, 2017).

The Strategic Choice Theory states that executives influence an organization by making choices in a dynamic process. Earlier to this theory, it was common to observe that organizations were expected to plan along operational necessities based on the surroundings. The strategic choice theory provides an alternative that emphasizes the agency of individuals and groups within organizations to make choices, sometimes serving their ends that dynamically influence the development of those organizations. In the current study context, we explored the continuing debate between shareholders' and stakeholders' views on the firm's purpose and managerial concern (Smith & Rönnegard, 2016). As per shareholders' view, in a free economy, the executives should act to the benefit of shareholders. They are generally accountable for exploiting the firm's earnings by keeping activities within the rule of the game (Tapaninaho & Kujala, 2019).

On the other hand, the stakeholder states that the executive needs to consider other related parties (stakeholders) during strategic choices (Sajko et al., 2021). Based on stakeholders' views in modern organizational settings, it is essential to integrate economic, social, and environmental performances, and advocates of CSR reasonably claim its possibility; this should be how all firms are evaluated. Empirical evidence is rising that courtesy to a triple bottom line is more than being "accountable" but, in its place, just good business. Since the negative view prevails that CSR reduces the significant financial role of the firm. Others contend that it is nothing more than apparent window dressing; others reason that it is an attempt to preempt the part of governments as a watchdog over powerful multinational corporations (Taylor, Vithayathil, & Yim, 2018).

Both views are normative, but they present conflicting executive responsibilities standpoints (Donaldson, 2002). Notably, the views specify what executives should do, but both views vary in executives' motives (Gupta, Briscoe, & Hambrick, 2018). Hence, based on stakeholders' viewpoint, our study focuses on the argument of what they want to do (executive motive) rather than what they should. Suppose we focus on the executives' motives. In that case, CEO greed is one of the

relevant topics for investigation because CEO is the highest-ranking executive in a company, makes major corporate decisions, manages the overall operations and resources, acts as the main point of communication, and is the public face of the company. We contend that CEO greed often violates the normative assumptions of stakeholders' views, and it tempts greedy CEO to opt for self-centered choices that may hamper long-term performance (Huang, 2021). In the current study, we extended executive motive by signifying that greedy CEO negatively impacts firms' EP because it involves a lack of apprehension for social welfare (Wang, Malhotra, & Murnighan, 2011)

2.1 Hypotheses Development (CEO Greed and Environmental Performance)

In line with our theoretical background, we confer that CEO greed negatively impacts EP in the Chinese context. In the hunt for financial capital, greedy CEOs often hold on to resources that could be assigned to the environment and social welfare projects (Haynes et al., 2015; Takacs-Haynes, Josefy, & Hitt, 2015). For greedy CEOs, reacting to EP has always been a cause of concern because EP is perceived as a no-win offer for executives (Hambrick & Wowak, 2012). During the last decades, higher CEO turnover and escalating firm's quarterly-earnings densities force managers to rethink their strategies for short-run outcomes, and greed further augments their willingness to be materialistic. In such a scenario, devoting investments to social subjects becomes a subject of secondary relevance (Kang, Germann, & Grewal, 2016). Therefore, we hypothesize that:

H1: There is a negative relation between CEOs' greed and a firm's environmental performance (EP) in the Chinese context.

For further clarity, we rely on the agency theory perspective that executive behavior is subject to monetary incentives (Eisenhardt, 1989). Specifically, CEOs' packages are designed to compensate CEOs for achieving definite objectives. These incentives may be pecuniary (bonuses), and non-pecuniary. We also attempted to establish their role in CEO greed and EP relation, which might help policymakers and stakeholders design packages that might direct greedy CEO to ethical financial outcomes. In addition, the researchers so far provided a mixed role of these packages in the context of EP (Berrone & Gomez-Mejia, 2009; Berrone, Cruz, Gomez-Mejia, & Larraza-Kintana, 2010). Given this ambiguity, we theorized that CEOs' likelihood to opt for EP as a strategic choice depends on their motivations (CEO greed) followed by compensation packages. First, we used a bonus as a compensation package often associated with short-term objectives like yearly or quarterly profits (Hou, Li, & Priem, 2013). This represents a motivation for a CEO to boost short-term outcomes, and primarily short-term objectives are achieved at the cost of long-term prospects (Flammer & Bansal, 2017).

Consequently, a greedy CEO is more likely to opt for such strategic choices that may ultimately ensure his/her position in the company and his/her desire for greed is also satisfied (Fabrizi, Mallin, & Michelon, 2014). Therefore, the bonus may augment the negative relation between CEO greed and EP. Therefore, we hypothesize that:

H1a: A higher percentage of CEOs' compensation in annual bonuses amplifies the negative CEO greed and environmental performance relation in China.

In contrast to our short-term performance view, we confer that restricted stock ownership directs CEOs to opt for long-term strategies as a considerable fraction of the CEOs' capital becomes entrenched with the firm long-term performance (Merriman et al. 2006). As a result, he is motivated to achieve continuous stakeholder-backing (Johnson and Greening 1999). Once CEOs' compensation package is attached to restricted stock, they are more likely to care about stakeholders' longings

(Hambrick & Wowak, 2012). EP is one of the stakeholders' prospects with a return in comparatively longer tenure. We built the logic that CEOs with restricted stock compensation are more likely to follow long-term strategies. Therefore, we hypothesize that as under:

H1b: A higher percentage of a CEO's compensation is in restricted stock amplifies the negative CEO greed and environmental performance relation in China.

3. THE QUAD MODEL: SPECIFYING THE IDEAL GOVERNANCE MECHANISM

In modern organizational settings, it is exceptionally challenging to have effective monitoring, and it is imperative to ask: Who can perform the task well for us? To address the concern, we integrated two distinct perspectives. First, we confer the classic model of organizational behavior that states one's job efficiency relies on the mutual coordination of ability and motivation as A×M. So far, research has shown that individuals need to possess ability and motivation altogether to or above a threshold level to perform a task accordingly (Hambrick et al., 2015; Reinholt, Pedersen, & Foss, 2011). In brief, the lack of absence of any of these attributes produces little or no effect. To extend the core premise, research also has established that once a job entails several abilities, a task manager needs to have them all above a threshold level with motivation to perform a task effectively (concise in (Campion et al., 2011).

Second, we confer the logic of agency theory and empirical support from governance to postulate the needed qualities or abilities of the influential director who can perform the monitoring task well. In the modern organizational setting, mainly the firm's directors are hired, or quasi-agents themselves and well-known or prominent individuals are selected as he is known by other directors or the CEO or with the help of a search firm. Notably, a director may have prime tasks that lie anywhere other than the focal firm. His/her reasons for being an effective agent on the board receive little correspondence; indeed, he is vulnerable to diverse allegiances and challenges as to what establishes desired board (Adams, Hermalin, & Weisbach, 2010; Dalton & Dalton, 2011). So far, these uncertainties about directors' core attributes have urged governance researchers to theorize them, dropping to four ultimate qualities beyond all: independence, expertise, bandwidth, and motivation (Adams et al., 2010). In brief, governance scholars have ignored the multiple attributes required for individual directors to be effective monitors: however, these attributes have been identified in pieces. Therefore, based on prior literature support, we can specify four elements expected to enhance the likelihood that a particular executive would be an active observer. Thus, we can map these attributes into context: independence (he has been objective), expertise (has been capable of comprehending the subject), bandwidth (has been able to devote the required time frame to his/her focal firm), and motivation (has been eager to serve as agent). Over again, based on the context (ability/motivation), an individual need to have all four of these elements above specific threshold points to be an effective monitor.

3.1 Hypotheses Development (CEO Greed, Quad Model and Environmental Performance)

There is a need to test the monitoring role of the quad model and whether it produces a greater likelihood of a better governance role. It will add a novel insight into the governance literature. When stretched to the role of the corporate board, it provides improved insights about whether effective monitoring is likely to occur- as echoed by the reduced likelihood of CEO greed. Here, we described the logic for our empirical predictions. First, we assumed that the presence of one quad director might improve board monitoring efficiency. We argued that the quad director likes to get himself involved in challenging tasks of vigilant monitoring as he is motivated to do so. The four attributes, as discussed earlier, prepare the director to overcome the prevalent social forces that hinder active monitoring, as recognized in earlier studies. The high positive correlation between three necessary

forms of ability and motivation enables him/her not to be reliant on the CEO for info or exploration (Shen et al., 2021). Likewise, a quad director may not be desperately apprehensive about solid bonding with the CEO (Keeves, Westphal, & McDonald, 2017) and may be somewhat improbable to assent to the CEO's efforts to influence and dominate him/her. The quad director is more likely to raise the concern once he detects an issue. Thus, the quad director exemplifies the separate who can employ underground power. The quad director epitomizes the individual who can exert minority influence. The argument made here is openly in line with (Grant & Patil, 2012) narrative of a "theory of minority effect advocates that an effective individual can single-handedly challenge and change the unit norms" (Levine, 2017). Accordingly, in complex issues, other board members characteristically have different opinions. The majority view prevails as a director with a minority view is inclined to keep it reserved or private, primarily out of apprehension for overall consent and stage/proficiency thoughts. However, once it is voiced and backed by emphatic arguments, it attracts other attention and sets off a force of uncluttered discussion. This offers a setting where others can jump in whom hold minority views privately. Even scenarios force those having majority views to re-visit their opinion; specifically, it is initiated by a vigilant director (Martin & Hewstone, 2012). Therefore, we presumed that a quad director would have conviction and authority to speak with and by his/her motivation.

Further, his proven vigilance seems to alert him to tip-off, making him involved in the pre-emptive investigation, instigating thoughts of apprehensions when necessary, and the following evidence up until an adequate solution is found. The director can apply minority influence over the corporate board, provoking other members to review their private opinions and perhaps complement their apprehension. In brief, our quad director can help to change the boards' traditional role from compliance to observance; such "contestants may be able to exert minority impact on customs" (Wang, Reger, & Pfarrer, 2021). In pluralistic ignorance on boards, the prevalence of silence serves as "social proof" of satisfaction that everything is ok and is one of the key hindrances to board efficacy (Westphal & Bednar, 2005).

As per our expectation, the quad director is required to break the silence, as his attributes suggest, encouraging other members to raise their concerns, thus engendering a healthy environment for effective governance. Therefore, other directors often rally with the quad director allowing him to improve the board monitoring role (Steckler & Clark, 2019). Thus, once he/she is acknowledged as quad director, his presence ensures the post-detection and correction of managerial missteps like greed. Though empirics have shown the "dark side" of board dynamics (Westphal & Zajac, 2013), our statement of directors' vigilance from the outset is based on envisioning that they are diligent and vigilant to their fiduciary accountabilities, nevertheless are individually incomplete – in many conducts and in several notches. In contrast, the mainstream CEOs are diligent and benevolent but humanly vulnerable to slips and mistakes. There are instances where self-centeredness is prioritized over stakeholders' interests that CEO is hired. These are not prominent criminal acts- but they are not ethical. Therefore, if a board is generally compromised, even a single director- may not have the necessary voice to attract attention. Nonetheless, we believe that a single quad director will be persuasive in helping to avoid a self-centered problem like CEO greed. Therefore, we hypnotize that:

H2: The presence of quad directors on the corporate board constrains the negative relation between CEO greed and firm environmental performance in China.

In addition, we also believe that the board's vigilance will be augmented if two or more quad directors are on the corporate board. In the context of the corporate board, a minority's voice can only be acknowledged once it receives perceived validity (García-Izquierdo, Fernández-Méndez, & Arrondo-García, 2018). Though a quad director has attributes to raise a credible voice, the probability is relatively higher than the majority may discount the voice, elaborating that the director is mistaken. However, two or more quad directors make it harder to discount their voice (Jung, Bramson, & Crano,

2018). Furthermore, an agreed group voice has been reported to lead to effective board decisions on rational choices, thus, reducing the probability for the CEO to guard his/her personal interest at the cost of other stakeholders (Wang, Cheng, Chen, & Leung, 2019). Overall, we expect that voice raised by two or more quad directors is comparatively seen as more reliable because both can complement each other in their voices. They repeatedly stir others to act or to involve in the vigilant inquiry of the raised concern (Jung et al., 2018). Their voice may turn into the collective resistant phenomenon, and their vigorous inquiry creates a societal perspective. Thus, it becomes hard for them to behave inattentively and uncritically. This makes it hard to remain passively agreeable with management (Vidgen, Shaw, & Grant, 2017). Thus, we proposed as under:

H3: The presence of two or more quad directors (dummy2) constrains the negative relation between CEO greed and firm environmental performance in China.

4. OPERATIONALIZATION OF QUAD MODEL

To construct our quad model, we collected information from different resources. First, we collected information regarding directors' stock ownership and appointment from the published financial report in sections like 'director's stock ownership' and 'bibliography of the director.' Second, we follow LinkedIn for the director's characteristics. These include his/her current or past employment status with the focal firm; family or personal ties with the CEO[2], areas and levels of formal education and certification relevance, issues or challenges faced, his/her full employment status, the number of boards he already served on, and his current or former membership of any society, NGOs or any other public interest committee. Research has shown that LinkedIn is the most widely used professional Storage Networking Website (Aguado, Andrés, García-Izquierdo, & Rodríguez, 2019), precisely premeditated for experts looking for recruitment and jobs (Ellcessor, 2018). As per Bullhorn Reach's (2014) report, the employment podium, LinkedIn serves as a critical social network for specialists to use for staffing and assortment. We classify a director as a quad director if he meets the criterion mentioned in table 1.

Table 1. Operationalization of quad model

Description	Measure
Independence: Ability to be objective	
Is the director currently or formerly an employee of the company?	Dummy
Does the director have family or personal ties to the CEO?	Dummy
Was the director selected during the current CEO's tenure?	Dummy
Expertise: Ability to comprehend the issues at hand	
Is the director's areas and levels of formal education and certification relevant to accounting and finance (e.g., CPA, MBA (finance), CFA, PhD (finance))	Dummy
How much experience does the director have in the focal company's industry?	Median split
Bandwidth: Ability to devote requisite time and attention	
Is the director fully employed elsewhere?	Dummy
How many other boards do the director serve on?	Median split
Motivation: Eagerness to exert oneself on behalf of stakeholders	
Does the director have an ownership stake in the company?	Dummy
Is the director currently or formerly a member of any society, NGO or public interest committee?	Dummy

For analysis purposes, we constructed two measures of quad-director. First, we coded one if at least a quad director on the board and 0 otherwise (dummy 1) (Hambrick et al., 2015). Likewise, we constructed a second measure of quad director (dummy2) equal to 1 if there are at least two quad-directors on the corporate board and 0 otherwise. As discussed earlier, we classified a director as a quad director if he (1) is independent, (2) has the expertise, (3) has the bandwidth, and (4) is motivated (Hambrick et al., 2015). We used the measures suggested by Hambrick et al. (2015) to construct our quad model. However, we made slight adjustments to the suggested quad model that can easily be applied and interpreted in empirical investigation. The measures for each construct of our quad model are mentioned in table 1. After discussing with experts, we used only those measures that can be operationalized for empirical testing. We created a dummy for each variable; however, some variables are continuous by nature. These include the number of boards serving, experience, and directors' ownership in the focal firm. We used median split criteria to operationalize our quad model to construct the dummy. For this purpose, we constructed two different groups, and the group having a value equal to the median or above is ranked 1, 0 otherwise. This is in line with Brandes, Dharwadkar, Ross, & Shi, (2021).

5. MEASURES OF ENVIRONMENTAL PERFORMANCE

We used the ASSET4 database from Thomson Reuters. The ASSET4 database covers more than 6000 firms and has been used by many researchers in the recent past (Aouadi & Marsat, 2018; Drempetic, Klein, & Zwergel, 2019). In comparison, Asset4 has the advantage over other ESG databases. It publically publishes data points along with questions related to each point. The ASSET4 matric is public and apparent, allowing researchers to understand deeper. Notably, the ASSET4 database has absent data points; we used unbalanced panel data from 2010 to 2019. The ASSETS4 data is available on three pillars: environmental, social, and corporate governance (ESG). In the current study, we used environmental score as a proxy for EP as our dependent variable.

6. OPERATIONALIZATION OF CEO GREED

To operationalize CEO greed as a variable, we follow Takacs Haynes et al., (2017). They established discriminant constructs and predictive validity to operationalize CEO greed. They conducted frequent meetings with professionals, directors, and industry predictors. Notably, they empirically found greed as a distinctive and independent concept from narcissism and hubris. In line with Haynes et al. (2017), we used three proxies of unanticipated CEO pay to calculate CEO greed:

1. The market-based reward.
2. The relative pay to the highest-paid executive.
3. The expected pay established on familiar predictors of executive reward.

Through these measures, we can imply comprehended unpredicted wealth, which measures greed, defined as a desire to increase undue material wealth. However, we used realized forms of pay to quantify greed, and it lets us depend on modest indicators from archival data. At the same time, poor response rate and data reliability remain question marks in primary data due to the topic's sensitivity. Besides, executive abnormally high compensation presents a case where the probability of solid pursuit of wealth is likely to be reflected since BOD is responsible for evaluating and setting executive pay (Jeong, 2019). The actual pursuit of wealth is more likely to be represented by a high score on the compensation-based measure of greed.

Based on these viewpoints, as a first proxy, we used annual compensation other than the bonus, lasting inducements, or salary. The proxy captures CEO perks and other related benefits, which are

inclined to reveal agency costs and rent extraction since stockholders usually ignore these forms of return to reveal pay for executive ability. The modern executives receive little perquisite rewards, and the poor correlation between perks and firm size backs the opinion (Haynes et al., 2017). Our second proxy represents pay inconsistency measured by the CEO's cash pay scaled by the next-most-highly-paid officer (Campbell et al., 2017; Sajko, Boone et al., 2020). CEOs' position enables them to considerably influence the pay of top executives in the firms (Chatterjee & Hambrick, 2007). Therefore, the more significant the pay gap, the higher the pay disparity. The pay disparity between CEO and top executives reveals the presence of greedy CEOs since the disparity leads to uneven distribution of resources, which is a crucial outcome of greed (Wang & Murnighan, 2011). Our third proxy is based on overpayment-the unexplained CEO pay, and it is measured as residuals from a CEO-pay regression (Fong, Misangyi, & Tosi, 2010). Following the standardized approach, we used CEO level and firm control to obtain residual from regression. We also include country and year fixed effects to avoid any misconception about the residual, and we are sure that the residual truly represents CEO-overpayment logic. We used GMM regression to avoid any endogeneity concerns. The regression is presented as under:

$$\begin{aligned} CEO-pay_{i,t} = \alpha &+ \beta_1 CEO-PAY_{t-1} + \beta_2 CEO-age_{i,t} + \beta_3 CEO-tenure_{i,t} + \beta_4 CEO-duality_{i,t} \\ &+ \beta_5 CEO-tenure_{i,t} + \beta_6 CEO-ownership_{i,t} + \beta_7 Board\ independence_{i,t} \\ &+ \beta_8 Firm\ age_{i,t} + \beta_9 Firm\ size_{i,t} + \beta_{10} Firm\ age_{i,t} + \beta_{11} Firm\ risk_{i,t} \\ &+ \beta_{12} Financial\ leverage_{i,t} + \beta_{13} ROA_{i,t} + \beta_{14} Year\ fixed\ effect_{i,t} \\ &+ \beta_{15} Country\ fixed\ effect_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The equation represents CEO overpayment-the excessive portion of CEO pay that could not be justified by firms and its related aspects (Haynes et al., 2017). In equation 1, we used the log of CEO pay. As we are interested in capturing CEO overpayment, which firm-level aspects cannot justify, we used the residual from the above equation to construct a measure of CEO greed in line with earlier findings (Haynes et al., 2017). We constructed a CEO overpayment dummy equal to 1 if the residual is positive and 0 otherwise.

We constructed the CEO greed variable by combining the three proxies through principal component analysis (PCA) with varimax rotation (Haynes et al., 2017). The rotation is mainly applied to maximize the variance shared among different items. The finding of PCA with varimax rotation depicted discriminant validity for our dependent variable (CEO greed). Three variables loaded on factor, with significant loadings on the expected factor (CEO greed) and insignificant cross-loadings. In a single factor, we found significant loadings of all three pay-based greed measures (eigenvalue = 1.21; 47% variance explained). Therefore, the factor weighting technique is used to compute a single measure of CEO greed. We winsorized variables at the 1% and 99% levels to mitigate outliers' concerns.

7. DATA DESCRIPTION AND SAMPLE DESIGN

7.1 Data Description

We identify a firm as sensitive if it belongs to energy (oil and gas), chemicals, forestry, paper and pulp, mining, steel making, and construction materials in line with Lee and Faff (2009). We started with 1227 firms that published their financial report in English starting from 2010. As the number of listed firms and data availability increased over time, we used unbalanced panel data in our primary analysis. However, only those firms are included in our sample that has continues data availability for at least six years or more, thus, allowing the director and CEO ample time to influence the firm's

policies. At the same time, we excluded those firms where the CEO or quad director has less than five years in the focal firm. Second, firms with missing information relating to directors' stock ownership and the date of appointment of the independent director are excluded. The information regarding stock ownership and appointment is collected from their published reports. Fourth, we cross-matched these firms' data on the Thomson Reuter database. Thomson Reuter offers one of the most comprehensive ESG databases in the industry, covering over >80% of the global market cap, across more than 450 different ESG metrics, with a history going back to 2002. Further, it has ESG data coverage for >10,000 global companies across 76 countries, spanning major global and regional indices. This caused further restrictions in our sample size year-wise.

8. STUDY DESIGN

Our study design includes firms with the quad director on their board and a contrast group of non-quad director firms. The matched pairs sample design serves as a quasi-experiment with some unique features. First, the causal interference is strengthened by its application. Second, it keeps internal validity above a satisfactory level and thirdly attains high external validity (Gorshunov, Armenakis, Harris, & Walker, 2021). Further, we also included 13 covariates for EP to control possible confounding special effects by statistical analysis.

In line with earlier researchers (Berns, Gupta, Schnatterly, & Steele, 2021), the nearest-neighbor matching approach is applied to match firms based on four criteria.

First, we matched firms based on similar industries conferring to their four-digit SIC code. Second, firms are matched based on their size measured as total assets. Third, firms are matched based on similar financial reporting practices (IFRS). Fourth, the same time measured (fiscal year) is used. This is a valuable and effective method while assessing causal inferences in the research of uncommon portents (Rehman, Orij, & Khan, 2020) in the presence of a quad director. In addition, the approach is customary in governance research (Gorshunov et al., 2021).

To ensure equivalency in firm size, we matched firms with total assets closest to that of firms with the quad director. As the number of firms with a quad director varied significantly across years, we matched our sample yearly in terms of assets, revenues, net income, shares outstanding, and stock price in line with earlier studies (Cole, Johan, & Schweizer, 2021). Yearly matching also allowed us to control for any change in macroeconomic conditions since literature has highlighted that macroeconomic conditions impact firms' strategic choices (Karpoff, Koester, Lee, & Martin, 2017). Further, a firm within any industry may follow specific criteria to develop a better governance mechanism that may restrict greed or/and improve EP. Industries in China vary significantly in the level of monitoring by regulatory agencies (Eddleston, Banalieva, & Verbeke, 2020). Firm size is also positively related to SEC's scrutiny. Therefore, size and industry are our reasonable effort to control ordering quad director and non-quad director firms.

As shown in Table 1, in the matched pair final sample, nearly 86% of firms did not exceed a difference of 50% in total assets between quad director firms and non-quad director firms. Meanwhile, around 11% of pairs varied from 50% to 100%, while nearly 3% of pairs varied somewhere from 50% to 100% in total assets. We did not include any firms outside China for matching to evade perplexing effects because of differences in governance structure (Mafrolla, 2019).

9. REGRESSION MODELS

We apply the dynamic panel estimator proposed by Arellano & Bond, (1991), based on the generalized method of moments (hereafter GMM). GMM addresses the endogeneity concerns and controls for unobservable heterogeneity. It incorporates internal instruments that consist of first differences of multiple lags on all variables (from the right-hand side). In addition, the study employs the two-step estimators following (Arellano & Bover, 1995). The reason for applying GMM is based on closely

Table 2. Data description

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Overall firms (manufacturing)	1227	1350	1485	1522	1577	1577	1577	1577	1577	1577
Less (Firm with CEO or quad director tenure < 5 years)	(86)	(135)	(148)	(152)	(158)	(158)	(158)	(158)	(158)	(158)
	1141	**1215**	**1336**	**1370**	**1419**	**1419**	**1419**	**1419**	**1419**	**1419**
Firms with missing information of directors' stock ownership and date of appointment	(126)	(134)	(147)	(151)	(156)	(156)	(156)	(156)	(156)	(156)
	1016	**1081**	**1189**	**1219**	**1263**	**1263**	**1263**	**1263**	**1263**	**1263**
Firms with missing data on A-4	(112)	(119)	(131)	(134)	(139)	(139)	(139)	(139)	(139)	(139)
Net Panel firms	**904**	**962**	**1058**	**1085**	**1124**	**1124**	**1124**	**1124**	**1124**	**1124**
Number of independent directors	1970	2098	2307	2365	2451	2451	2451	2451	2451	2451
Firm with at least one quad director on their board	**339**	**361**	**397**	**407**	**422**	**422**	**423**	**423**	**423**	**423**
Firm with two or more quad director on their board	**101**	**108**	**118**	**121**	**126**	**126**	**126**	**126**	**126**	**126**
Number of quad directors	416	450	485	520	542	542	543	544	541	543
Matched pairs firms	**339**	**361**	**397**	**407**	**422**	**422**	**423**	**424**	**423**	**423**
Up to 50% difference in total assets between matched pairs firms	**288**	**307**	**337**	**346**	**359**	**359**	**360**	**360**	**360**	**360**
Difference in between 50% and 100% in total assets between matched pairs firms	**41**	**43**	**48**	**49**	**51**	**50**	**51**	**51**	**51**	**50**
Difference above 100% in total assets between matched pairs firms	**10**	**11**	**12**	**12**	**13**	**12**	**12**	**13**	**12**	**13**
Firm following IFRS as standard for reporting	**268**	**277**	**280**	**292**	**299**	**299**	**300**	**301**	**301**	**301**

Note: In this table, we presented yearly data description. We used different scanning techniques to finalize our data. For CEO tenure, we observed CEO name form financial report. We also treated a director as quad director who must have at least three year experience in the focal firm. For matching sample, we used SIC industrial code, firm size, year of observation and IFRS. We have shown the firms with matching criteria based on firm size and IFRS.

related relationships: (a) the effect of CEO greed on firm EP performance and (b) the moderating role of the quad director for a negative association between CEO greed and EP performance.

To test hypothesis 1, we estimated the following baseline regressions:

$$Model\ 1-EP=\alpha+\beta_1 EP_{t-1}+\beta_2 CEO\ \ greed+\beta_3 firm\ \ controls \\ +\beta_4 year\ \ effects+\beta_5 industry\ \ effects+\varepsilon_i$$

To test our sub-hypotheses (H1a and H1b), we estimated the following baseline regressions:

$$Model\ 2-EP=\alpha+\beta_1 EP_{t-1}+\beta_2 CEO\ \ greed+\beta_3 CEO\ \ greed\times CEO\ \ incentives \\ +\beta_4 firm\ \ control+\beta_5 year\ \ effect+\beta_6 industry\ \ effect+\varepsilon_i$$

In model 2, we used two different incentives (bonus and restricted stock option) to test their moderating role.

To test the moderating role of quad director, we estimated the following baseline regressions:

$$Model\ 3-EP=\alpha+\beta_1 EP_{t-1}+\beta_2 CEO\ \ greed+\beta_3 Quad\ \ director\ \ dummy1 \\ +\beta_5 CEO\ \ greed\times Quad\ \ director\ \ dummy2+\beta_7 firm\ \ control \\ +\beta_8 year\ \ effect+\beta_9 industry\ \ effect+\varepsilon_i$$

In model 3, we also used two quad director dummies to test our main hypotheses 2 and 3.

10. CONTROL VARIABLES

We used several control factors in our analyses. First, we included year and industry dummies to control time-variant and industry membership for our sample firms. Second, we also control for firm-specific factors based on prior literature support. These include firm size (the log of total sales) (Gupta, Banerjee, & Onur, 2017), ROA (net income divided by book value of assets) (Tang et al., 2015), slack resources (firm's long-term debt to equity ratio) (Stevens, Moray, Bruneel, & Clarysse, 2015), R & D intensity (R&D expenses divided by sales + 1) (McWilliams & Siegel, 2000), institutional ownership (the ratio of share held by the institution) (Zhang & Gimeno, 2016)), family ownership (the ratio of share held by family members) (Zhang & Gimeno, 2016), board independence (the ratio of independent directors to total directors) (Hart et al., 2015) and board gender diversity (the ratio of female to total directors).

We also control for CEO-level human capital factors: CEO duality, CEO experience, CEO tenure, CEO age, CEO Western education, and CEO Western experience (dummy variable equal to 1 if CEO has the Western firm experience, 0 otherwise). In the context of agency theory perspectives, we posit that CEOs with the dual role are likely to compromise the governance effectiveness in line with earlier studies (Mallette & Fowler, 1992). Further, we also control CEO age because CEOs with mature age are more likely to involve in ethical choices like CSR and EP. Ethical, strategic choices like EP allow them to end their career on high moral grounds. Additionally, these CEOs have fewer career concerns, and at the same time, their decision-making process is not merely dictated by economic return only. We also control education and experience but with modification of western context.

11. MAIN FINDINGS

Table 3 presents descriptive statistics, variance inflation factors, and correlations. For our matched sample, the average EP score is 47.04 (S.D=1.13). Among the matched pair sample, CEO greed has a mean value of 0.0512 and a standard deviation of 0.881. As we have created a matched sample for our primary analysis, 50% of firms have at least one quad director on their corporate board. We found that 88.6 percent of firms have an independent director (ability to be objective), 85.65 directors have expertise in the relevant field (ability to comprehend the issues at hand), 64.71% of directors offer bandwidth (ability to devote requisite time and attention) at work and 59.11% are motivated (eagerness to exert oneself on behalf of stakeholders). Variance inflation factor (VIF) is also provided. The value of VIF is within the range for each variable (<5.00); there is no evidence of a multicollinearity problem. The correlation analysis also supports this conclusion.

Table 4 reports the findings of the generalized method of moments (GMM) estimator. We regressed different models for our hypotheses 1, 1a, and 1b. In model 1, we included CEO greed, moderators, and control factors. The results indicate that EP (t-1) is a statistically strong predictor of EP (β = .852, p = .000; refer to model 1). Further, we found that CEO greed is a negative and statistically significant predictor of EP (β = -.2690, p = .0292), supporting Hypothesis 1. In line with our supposition, we find a negative and statistically significant association between bonus and EP (β = -.0605, p = .0721). However, the restricted stock option is an insignificant predictor of EP in China. Both the stockholder and stakeholder views specify what executives should do and are normative (Donaldson & Preston, 1995). In contrast, these views do not narrate what executives want in actuality. Our findings show that a high level of CEO greed violates both normative assumptions in line with Haynes et al. (2017). Further, we emphasize a strategic driver for executives: greed reduces EP as executives hold on to firm resources that could be assigned to the environmental projects (Haynes et al., 2015; Takacs-Haynes, Josefy, & Hitt, 2015). Therefore, we add to the existing literature by

Table 3. Descriptive statistics, variance inflation factor and correlation

	Mean	S/D	VIF	1	2	3	4	5	6	7	8	9
1. EP	47.042	3.138	2.719	1.000								
2. CEO greed	0.0512	0.881	1.991	-0.563	1.000							
3. Quad director (dummy1)	0.5000	0.500	2.143	0.475	-0.260	1.000						
4. Independence	0.8860	0.505	2.757	0.113	-0.165	0.162	1.000					
5. Expertise	0.8565	0.066	2.168	0.101	-0.148	0.121	0.099	1.000				
6. Bandwidth	0.6471	0.666	1.952	0.092	-0.088	0.151	0.092	0.085	1.000			
7. Motivation	0.5911	1.584	3.281	0.213	0.211	0.208	0.276	0.222	0.194	1.000		
8. Bonus	0.157	0.087	1.344	0.081	-0.059	-0.199	-0.187	-0.176	-0.136	-0.105	1.000	
9.Restricted stock	0.244	0.196	2.616	0.176	-0.109	0.128	0.120	0.113	0.087	0.067	-0.143	1.000
10. CEO duality	32.91	0.776	2.243	-0.133	0.108	-0.109	-0.102	-0.096	-0.074	-0.057	0.110	-0.113
11. CEO tenure	4.151	0.678	2.247	0.110	0.166	0.354	0.333	0.313	0.242	0.187	0.083	0.122
12 Board independence	8.226	0.146	2.135	0.228	-0.096	0.236	0.222	0.209	0.162	0.125	-0.129	0.096
13 Gender diversity	96.971	0.745	2.112	0.138	-0.116	0.511	0.480	0.452	0.350	0.271	-0.191	0.088
14. Firm size	7.1620	0.514	1.924	0.099	-0.208	0.235	0.221	0.208	0.161	0.125	0.079	0.112
15. firm age	19.293	0.45	2.828	0.061	-0.099	0.218	0.205	0.193	0.149	0.115	-0.155	0.171
16. ROA	6.183	0.973	1.899	0.123	0.162	0.185	0.174	0.164	0.127	0.098	0.216	-0.013
17. Financial leverage	1.892	1.736	1.792	-0.187	0.115	-0.223	-0.209	-0.197	-0.152	-0.118	0.063	-0.054
18. Firm growth	3.510	0.234	3.371	0.086	-0.176	0.314	0.295	0.278	0.215	0.166	0.212	0.096
19. R&D	0.081	4.437	1.375	-0.155	0.211	-0.340	-0.319	-0.300	-0.232	-0.179	0.111	-0.146
20. Cash flow volatility	25.95	5.236	1.322	-0.104	0.136	-0.201	-0.189	-0.178	-0.138	-0.107	0.156	-0.098
		10	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
10. CEO duality		1.000										
11. CEO tenure		0.056	1.000									
12 Board independence		-0.093	0.152	1.000								
13 Gender diversity		0.046	0.068	0.134	1.000							
14. Firm size		0.048	0.450	0.219	0.200	1.000						
15. firm age		0.268	0.076	0.408	0.261	0.268	1.000					
16. ROA		0.245	0.073	0.116	0.125	0.127	0.154	1.000				
17. Financial leverage		0.087	0.020	0.116	-0.107	0.211	0.087	-0.101	1.000			
18. Firm growth		0.047	0.132	0.108	0.113	0.231	0.376	-0.076	-0.124	1.000		
19. R&D		0.150	-0.191	0.124	0.124	0.091	0.114	0.099	-0.199	0.191	1.000	
20. Cash flow volatility		-0.115	-0.195	-0.130	-0.125	-0.064	-0.122	0.146	0.134	-0.091	-0.132	1.000

Note: Table 3 provides descriptive statistics, correlation and VIF of the main variables used in regression analysis. The values of the matched sample are provided in the table. VIF values are within the range (below 5) as specified by earlier studies. Further, we also found a correlation between variables within the range (below .70). The measurement of variables is shown in the appendix.

empirically investigating that CEO greed is negatively related to executives' strategic choices in firms' best interests.

To test our hypothesis 1a, we introduced the interaction term between CEO greed and bonus in model 2. The finding shows that the interaction term between CEO greed and the bonus is negative and statistically significant ($\beta = -.3128$, $p < .01$). The study finds higher coefficient estimates (subtracting

Table 4. GMM regression analyses for hypotheses (H1, H1a and H1b)

Dependent variable = Environmental performance (EP)				
	Hypothesis 1	**Hypothesis 1a**	**Hypothesis 1b**	**Combined**
EP (t-1)	.8524***	.8497***	.8482***	.8513***
	(.2458)	(.2608)	(.2772)	(.2692)
CEO greed	-.2690**	-.2664**	-.2499**	-.2611**
	(.1232)	(.1311)	(.1214)	(.1197)
Bonus	-.06255*	-.06931*	-.06174*	-.0626*
	(.0388)	(.0401)	(.0346)	(.0379)
Restricted stock	.0192	.0181	.0188	.0177
	(.0156)	(.0158)	(.0150)	(.0134)
Interaction terms				
CEO greed X bonus		-.3128***		-.3121***
		(.0983)		(.1002)
CEO greed X restricted stock			.0773	.0782
			(.0529)	(.0535)
Control factors				
Firm size	.0644**	.0624**	.0605**	.0586**
	(.0293)	(.0267)	(.0279)	(.0236)
ROA	.1337**	.1296**	.1255**	.1294**
	(.0522)	(.0522)	(.0498)	(.0475)
Firm age	.0017	.0016	.0016	.0015
	(.0016)	(.0015)	(.0015)	(.0014)
Slack-resources	.1606*	.1556*	.1508*	.1461*
	(.0881)	(.0843)	(.0820)	(.0789)
R & D intensity	.1006**	.1017**	.1029**	.1040**
	(.0448	(.0453)	(.0404)	(.0457)
Internationalization	.0907**	.0882**	.0926**	.0855**
	(.0336)	(.0328)	(.0346)	(.0309)
institutional ownership	.0754	.0762	.0771	.0779
	(.0772)	(.0779)	(.0795)	(.0813)
family ownership	.0881	.0891	.0901	.0911
	(.0882)	(.0892)	(.0954)	(.0954)
board independence	.0018	.0027	.0019	.0017
	(.0007)	(.0007)	(.0009)	(.0003)
board gender diversity	.0954**	.0961**	.0969**	.0896**
	(.0265)	(.0270)	(.0265)	(.0258)

continued on following page

Table 4. Continued

Dependent variable = Environmental performance (EP)				
	Hypothesis 1	**Hypothesis 1a**	**Hypothesis 1b**	**Combined**
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
AR-1 p-value	0.0000	0.0000	0.0000	0.0000
AR-2 p-value	0.5706	0.6424	0.5673	0.5992
Hansen-J	0.3094	0.3148	0.3111	0.3064
Difference in Hansen J	0.8822	0.8697	0.8434	0.8552
F-stat p-value	0.0000	0.0000	0.0000	0.0000

Note: To test our first hypothesis including it sub-hypotheses, we regressed four different models. In all models, we included control factors, year and industry effect. The results of diagnostic tests are also reported in the table. These include auto-regression of first and second order, Hansen-J test (the Sargan–Hansen test or Sargan's J test is a statistical test used for testing over-identifying restrictions in a statistical model for over-identification of instruments) and the difference-in Hansen-J test. In order to predict t-statistics, Heteroscedastic consistent standard errors are used and these standard errors are presented in parentheses. ***p < 0.01, ** p < 0.05 and * p < 0.10

β of interaction term from β of CEO greed = -.3128-(-.2664) =-4.64%) and level of significance (from 5% from CEO to 1%) for the interaction term. Hence, our hypothesis 1a is supported in terms of coefficient estimates and significance level. This implies that a negative association between CEO greed and EP is more pronounced if the CEO's pay is mainly in the short-term (bonuses). This shows that a greedy CEO is more likely to evade long-term socially directed activities that do not have in a shorter period and ultimately hurt his/her material gain.

Further, we introduced the interaction term between CEO greed and restricted stock option in model 3 (hypothesis 1b). The interaction term between CEO greed and restricted stock option is positive but statistically insignificant (β = .0773, p = .1806). The finding can be interpreted in two dimensions. First, the presence of restricted stock options dilutes the negative impact of CEO greed on EP as a strategic choice. Second, the option does not constrain the negative association between CEO greed and EP. Therefore, the stock option serves as a constraining mechanism for the negative association between CEO greed and EP. In model 4, we regressed a combined regression and yielded additional support for our main findings as both interaction terms produced identical results. To visualize both interaction terms, we plotted the relations between CEO greed and EP in figures 1 and 2 at high and low levels of bonus and restricted stock options. Our findings show that incentive-based compensation influences the negative association between CEO greed and EP. The negative relation is more robust in firms where CEO pay is mainly in the short-term (bonuses). Thus, firms with poor EP should not use short-term compensation tools to avoid the negative effect of CEO greed on EP.

In contrast, restricted stock option constrains the negative relation between CEO greed and EP, implying that long-term incentive-based compensation restricts CEO opportunistic behavior. Compensation based on short-term (bonuses) incentives is not designated to influence CEOs who feel rewarded by playing a steward role for EP (Blome and Paulraj 2013; Kopel and Brand 2013). Based on our findings, the compensation committee and external advisors should consider restricted stock options in case of environmentally sensitive firms that might affect CEO motivation towards strategic choices that affect EP

As far as the relation of control factors is concerned, we find that firm size (p<.05) and ROA (p<.05) are positive and significant predictors of EP in line with earlier findings of Tang et al., (2015). Slack resources are also a positive and significant predictor of EP; in line with those excess resources allow management to invest in social and environmental goals (Stevens, Moray, Bruneel, & Clarysse, 2015). Further, a firm with higher R&D intensity (p<.05) and internationalization (p<.05)

invest more in EP in China. Lastly, board gender diversity also significantly impacts firm EP, in line with earlier findings ($p<0.05$).

Additionally, our argument for CEO greed and a firm's EP is based on the logic that a greedy CEO is biased and mainly emphasizes the short-run gain. Therefore, there should be a positive relation between CEO greed and the firm short-run performance. We investigated the relation between CEO greed and firm short-run performance, ROA, in line with Connelly et al. (2016). The same set of

Figure 1. Interaction impact of CEO greed and bonus on environment performance

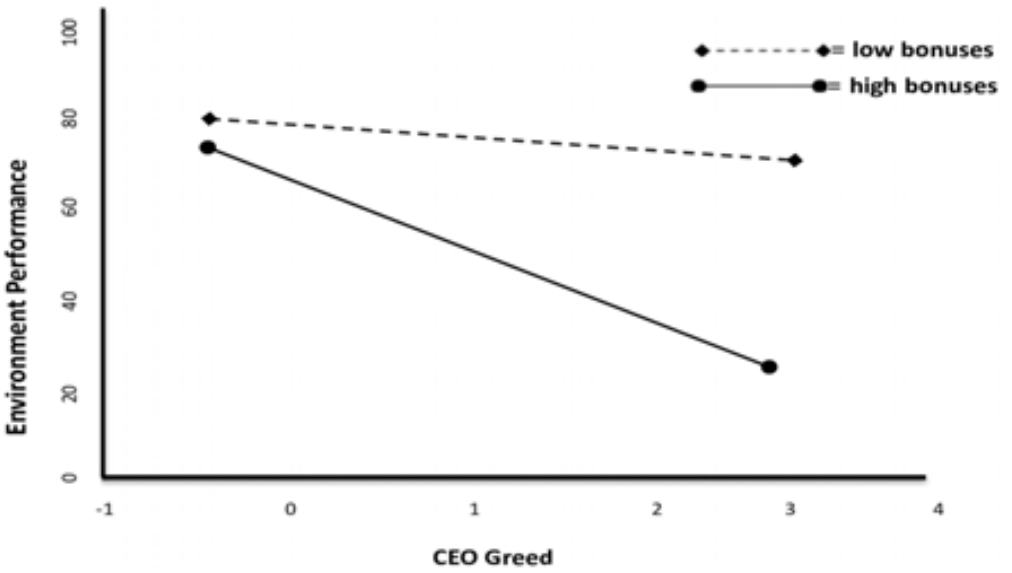
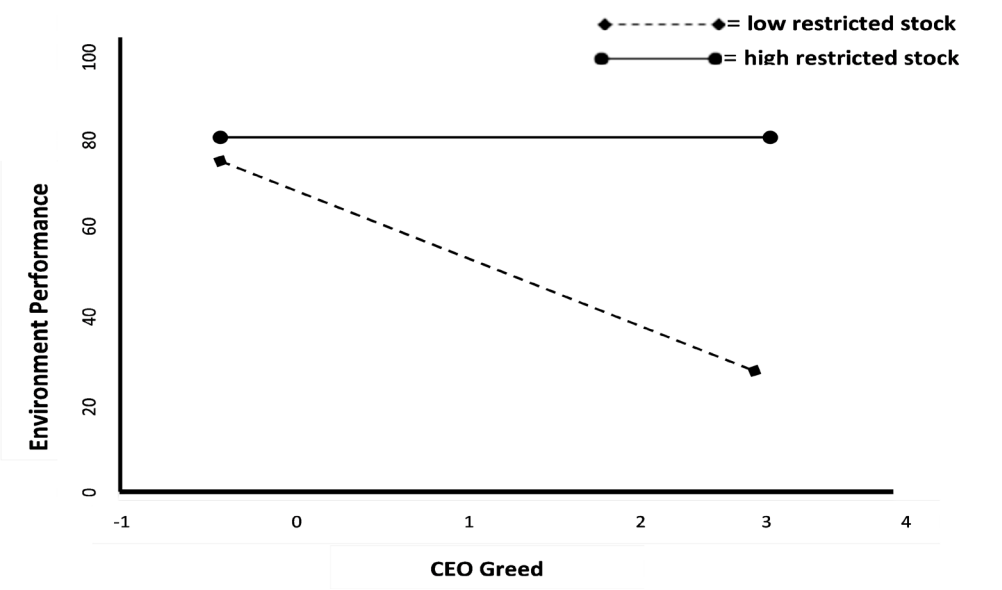


Figure 2. Interaction impact of CEO greed and restricted stock option on environment performance



lagged covariates is used in this regression. The results of GMM estimation are reported in table 5. We find the CEO greed coefficient is positive and reaches a statistical significance level of 10% ($\beta = .0804$, $p = .075$). Further, the bonus also has a positive and statistically significant association with ROA ($\beta = .2117$, $p = .034$). However, we find no evidence of a significant association between restricted stock and ROA. Hence, these implications strengthen our theoretical arguments that CEO greed is associated with short-run gains.

Lastly, we also addressed that CEO greed (measured by abnormally high CEO compensation) may be motivated by the CEO's human capital, including CEO age, experience, qualification, CEO duality or CEO founder. We included CEO capital attributes in our primary model and re-ran the regression to justify our main findings. Our estimates and level of significance remain identical to our main findings supporting the view that CEO greed is not driven by human capital in our measure of CEO greed (see table 5). Likewise, we excluded insignificant CEO attributes in the primary model, and our results hold for the main findings (see column 2 in table 5).

12. CEO GREED, QUAD DIRECTOR AND ENVIRONMENTAL PERFORMANCE

In the second stage, we again used GMM to explore the constraining role of the Quad director for the negative association between CEO greed and EP. The results are presented in Table 6. In model 1, we used each construct of the quad director as an independent variable to test its direct impact

Table 5. CEO greed, CEO's human capital and environmental performance

Dependent variable= ROA				
	Coefficient	**Standard -Error**	**t-statistics**	**p-value**
EP (t-1)	.8428***	0.2205	3.8631	P<.01
CEO greed	.0804**	0.1062	-2.5325	P<.05
Bonus	.2117*	0.0313	-1.9347	P<.10
Restricted stock	.0193	0.0166	1.1606	P=.2069
CEO age	.0162	0.0129	1.2554	P=.1623
CEO experience	.0617*	0.0327	1.8872	P<.10
CEO qualification	.1151**	0.0420	2.7432	P<.051
CEO duality	-.0017	0.0016	-1.0782	P=.1208
CEO founder	.0951*	0.0562	1.6935	P<.10
Control factors	Included			
Year effect	Included			
Industry effect	Included			
AR-1 p-value	0.0000			
AR-2 p-value	0.4040			
Hansen-J	0.3647			
Difference in Hansen J	0.7868			
F-stat p-value	0.0000			

Note: In this table, we used ROA as a dependent variable. The results are provided to support the view that CEO greed is associated with short-run profits measured by ROA. In this table, we included control factors, year and industry effect. The results of diagnostic tests are also reported in the table. These include auto-regression of first and second order, Hansen-J test (the Sargan–Hansen test or Sargan's J test is a statistical test used for testing over-identifying restrictions in a statistical model for over-identification of instruments) and the difference-in Hansen-J test. ***p < 0.01, ** p < 0.05 and * p < 0.10

Table 6. Quad director's monitoring role (Hypotheses 2 and 3)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
EP (t-1)	.8472***	.8443***	.8417***	.8660***	.8365***	.8400***	.8509***	.8505***
	(.2199)	(.2398)	(.2296)	(.2127)	(.2227)	(.2185)	(.2164)	(.2185)
CEO greed	-.3189**	-.3440**	-.3421**	-.3401**	-.3401**	-.3401**	-.3401**	-.3401**
	(.1440)	(.1507)	(.1495)	(.1375)	(.1546)	(.1439)	(.1426)	(.1551)
Bonus	-.0605*	-.0633*	-.0617*	-.0626*	-.0599*	-.0611*	-.0628*	-.0601*
	(.0355)	(.0359)	(.0349)	(.0350)	(.0352)	(.0357)	(.0348)	(.0333)
Restricted stock	.0192	.0181	.0188	.0177	.0264	.0264	.0274	.0264
	(.0169)	(.0151)	(.0154)	(.0139)	(.0198)	(.0171)	(.0242)	(.0217)
Independence	.0761							
	(.0589)							
Expertise	.0182							
	(.0132)							
Bandwidth	0.0022							
	(.0014)							
Motivation	.0922*							
	(.0477)							
Quad director (dummy1)		.1133*			.0941*		.0941*	
		(.0673)			(.0526)		(.0504)	
Quad director (dummy2)			.2392***			.2992***		.2992***
			(.0690)			(.0814)		(.0795)
Interaction terms								
CEO greed X independence				-.3016**				
				(-.1111)				
CEO greed X Expertise				-.2408**				
				(.1035)				
CEO greed X Bandwidth				-.2279**				
				(.0972)				
CEO greed X Motivation				-.2551**				
				(.0922)				
CEO greed X quad director (dummy1)					-.0012			
					(.0014)			

continued on following page

Table 6. Continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
CEO greed X quad director (dummy2)						.1601**		
						(.0548)		
CEO greed X bonus X Quad director (dummy1)							-.4071**	
							(.1554)	
CEO greed X bonus X Quad director (dummy2)								.0905**
								(.0369)
Control factors	Included	Included	Included	Included	Included	Included	Included	Included
Year effect	Included	Included	Included	Included	Included	Included	Included	Included
Industry effect	Included	Included	Included	Included	Included	Included	Included	Included
AR-1 p-value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
AR-2 p-value	0.5783	0.6511	0.5749	0.6073	0.5811	0.6599	0.5826	0.6155
Hansen-J	0.3136	0.3190	0.3153	0.3105	0.3137	0.3233	0.3196	0.3147
Difference in Hansen J	0.7941	0.6814	0.5548	0.5667	0.7048	0.6906	0.5623	0.5743
F-stat p-value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: To test our hypothesis 3 and 4, we regressed separate model for interaction terms to avoid any biases in our estimates (overall eight models). In all models, we included control factors, year and industry effect. For brevity, we did not present. The results of diagnostic tests are also reported in the table. These include auto-regression of first and second order, Hansen-J test (the Sargan–Hansen test or Sargan's J test is a statistical test used for testing over-identifying restrictions in a statistical model for over-identification of instruments) and the difference-in Hansen-J test. In order to predict t-statistics, Heteroscedastic consistent standard errors are used and these standard errors are presented in parentheses. ***p < 0.01, ** p < 0.05 and * p < 0.10

on EP. The findings show that motivation is positively associated with EP in China ($\beta = .09218$, $p<.10$). This indicates that higher motivation leads to better EP performance. We find an insignificant association between the other three measures (independence, expertise, and bandwidth). In model 2, after controlling for covariates, we introduced quad director (dummy1), and the finding shows that quad director (dummy 1) is a positive and significant determinant of EP in China ($\beta = .1133$, $p<.10$). In model 3, quad director (dummy2) is a positive and significant determinant of EP ($\beta = .2392$, $p<.01$). In comparison to the quad director (dummy1), the presence of two or more quad directors ensures better EP performance as we find higher coefficient estimates and levels of significance.

However, we are mainly interested in interaction terms. For clarity, we introduced interaction terms between CEO greed and four constructs of quad director in model 4. Findings show that all interaction terms are negative and significant, implying that these constructs do not constrain the negative relation between CEO greed and EP. This also supports the view that these constructs do not have any significant individual role in overseeing CEO's self-centered choices.

However, the interaction term between CEO greed and quad director (dummy1) is positive but insignificant (refer to model 5 in table 6). This implies that the presence of one quad director dilutes the negative impact of CEO greed on EP. However, this result indicates that the presence of one quad director does not constrain the negative impact of CEO greed on EP. Therefore, we fail to support hypothesis 2, that quad director constrains the negative association between CEO greed and EP in China. Further, we introduced interaction terms between CEO greed and quad director (dummy2). Findings showed strong support for our hypothesis 3 ($\beta = .1601$, $p<.05$: refer to model 6 in table

5), implying that the presence of two quad directors constrains the negative impact of CEO greed on EP in China.

To support hypothesis 3, we introduced interaction terms between CEO greed and bonus and quad director in models 7 and 8. The interaction term between CEO greed and bonus and quad director (dummy1) is negative and statistically significant ($\beta = -.4071$, $p = <.05$; refer to model 7 in table 5). Implying that the presence of one quad director does not ensure effective monitoring if the CEO's pay is mainly in bonuses. This is in line with the view that mere a single quad director cannot draw the corporate board's attention to social concern. In contrast, the interaction term between CEO greed and bonus and quad director (dummy 2) is positive and significant ($\beta = .0905$, $p = <.05$; refer to model 8), justifying the argument that the presence of two or more quad directors leads to influential monitoring role of the corporate board. Overall, these findings suggest that the other board members see an apprehension raised by two or more quad directors as comparatively more credible than if raised by one quad director. If their presence is more than one, they can fortify their voices once it is raised; and their collective concern often stirs other board members' action or at least engage themselves in vigilant scrutiny of the subject at hand (Jung et al., 2018).

Further, the collective concern is often inclined to crack the societal-proof phenomenon on its head: thus, silence remains no longer an indication that every act is right. The active questioning phenomenon becomes more prevalent in these boards, thus creating a societal perspective where, at least, other members cannot be passive with the subject matter, turning it difficult for them to remain friendly with management choices (Grant & Patil, 2012). Their strength is even proven by the three-way interaction term (CEO greed X bonus X quad director). It suggests that they serve as a constraining mechanism for the negative impacts of CEO greed on EP even if CEO greed is augmented by short-term pay (bonus). This strongly justifies our argument that quad directors serve as effective monitors and improve board vigilance by constraining CEO power and reducing the probability of personal gain in China.

Further, they can draw the attention of the corporate board toward socially responsible investment (environment). Monitoring effectiveness is subject to the collective presence of all four aspects (three aspects of ability plus motivation) plus their presence in terms of critical mass (at least two). In conclusion, these four requisite aspects mutually augment the likelihood that a given board director is a better observer. Thus, the qualification and the significant presence of quad directors equip the corporate board to withstand the prevailing social power that overpowers effective monitoring. The effect is crucial to sustaining EP owing to the ability to:

1. Be composed.
2. Be aware of the managerial influence and stand up to directors in socially responsible manners.
3. Dedicate the required time and dynamism to have in-depth insight and vigilant governance; the quad directors can efficiently nullify the negative impact of CEO greed on EP.

Once their number is more than one, their concerns are likely to raise apprehension when others are unable or willing to do so (Hambrick et al., 2015).

13. CONCLUSION

Why does a firm' EP suffer so much, and what is the most appropriate governance mechanism that may address the concern (EP's poor performance)? We combined literature on Upper Echelon (CEO), EP, and corporate governance to answer these queries to conjecture. We tested CEO greed and EP negative relation and the constraining role of corporate governance mechanism (quad director). First, a greedy CEO shows a reduced concern for EP and is inclined to relinquish long-term strategic choices (EP) that entail short-term financial detriments in line with earlier studies (Wowak & Hambrick, 2010). Furthermore, following the person-pay interaction logic, we pooled agency theory's comprehension

and found that monetary incentives direct CEO behavior (Miller, Wiseman, & Gomez-Mejia, 2002). A greedy CEO is more likely to neglect EP as a strategic choice once his pay depends on annual bonuses (Hou et al., 2013).

Conversely, we find an insignificant direct impact of restricted stock on EP. However, an interaction between CEO greed and restricted stock shows that restricted stock options weaken the negative CEO greed and EP relation. This may be attributed to their more responsive behavior to long-term emphasis once their stake is relatively higher in their focal firm (Flammer & Ioannou, 2018). Further, we tested the quad model as an effective monitor by focusing on firms' specific domain, i.e., firms with CEO greed. We used a matched-pair sample technique as it is an experimental design that is used when an experiment only has two treatment conditions. Recognizing the governance challenges in the research of misuse of power, we explored the constraining or constraining role of quad directors and found that the presence of at least two quad directors serves as an ideal monitor of CEO greed. Our findings are supported by additional tests like CEO's human capital (CEO age, experience, qualification, CEO duality or CEO founder) and CEO power dynamics (CEO duality and CEO tenure).

14. PRACTICAL IMPLICATIONS

So far, a quad model was firmly a predictive theory; we empirically tested its application as a governance mechanism in constraining greedy CEO self-interested behavior in an environmentally sensitive sector of China. The global business space has been redefined by spans of developing technologies, regulatory conjunction, and multi-nationalism- empowering firms to gauge, cross-borders, and develop to become essential components within their respective industries. Nevertheless, the bigger an organization becomes, the harder it falls. This is the cause that's why the last two decades have been marred by a spell of business failings and disastrous failures from Enron and WorldCom in the early 2000s to AIG and Royal Bank of Scotland, Société Générale, BP, Kodak, and dozens in between and. At the same time, many of these letdowns seem blatantly identical; these essentially comprise a worrying point of shared symptom, i.e., corporate governance failure. To help financial leaders learn from these failures and avoid repeating them, we empirically tested the proposed quad model that may help them to reduce the likelihood of corporate failure. We firmly believe that stakeholders desire to view out for their interests, so it is rational to formulate such policies that might increase the presence of quad directors on corporate boards. Likewise, as the quad model comprises, the availability of quad directors could be a challenging task for any modern organization. Therefore, firms' policymakers must institute several programs and priorities to achieve quad directors' desired level or percentage. There is also a need to reassure or even entail directors to experience up-to-date periodic training on emerging corporate subjects like EP or CSR.

On the other hand, there is a need to seek out professional directors who meet the criteria of quad director (Lester, Hillman, Zardkoohi, & Cannella Jr, 2008). Besides, as the results suggest, the quad director's role is enhanced by EP once a corporate board has a higher proportion of female directors, thus, suggesting a complementary role of female directors on the corporate board. Among the four attributes of quad director, we found motivation significantly lower due to lack of shareholding by independent for the mean value of four constructs). Firms must have a threshold portion of stock for an independent director to qualify as a director. Lastly, we strongly recommend that firms should introduce term-limits for their directors over time. These directors may become emotionally loyal to their focal firm's strategic choices (Reay et al., 2013) or mature bonding and develop obliged to the CEO (Hambrick et al., 2015), therefore dropping their impartiality.

15. LIMITATIONS AND FUTURE RESEARCH

Our study has several limitations. First, it is confined to China-specific sample of firms and generalizing findings may be sample biased. So, there is a need to explore the role of quad director in the US

and other emerging economies to support and generalize our empirical findings. Second, our data is limited to only around 400 firms due to missing information. The sample can be increased through a primary data survey as firms with missing data can be addressed through the technique. Third, as this research focuses on EP, there is a need to explore the role of quad director in respect of other domains like financial fraud, earnings management, etc. Lastly, the comparative analysis between a high governance economy and low governance economy may provide new insight into the role of the quad director.

NOTES TO THE PAPER

- The reason for using ASSET-4 data to measure EP is based on some specific logic. First, ASSET-4 assigned a number based on publicly reported and objective information. Second, ESG lets us objectively assess firms' ESG performance (Semenova and Hassel, 2015). Third, it categorizes environmental data into three groups: resource reduction, emission reduction and product innovation, and then merge it into a single unit. Lastly, it has strong empirically supported justification (Cheng et al., 2014; Eccles et al., 2014; Lys et al., 2015; Gupta, 2018).
- As our data is restricted to firms with quad directors on their board, our main analyses may be exposed to the challenges of a sufficient number of observations for empirical justification (Cohen, 1992). Therefore, we used a medium-anticipated-effect size ((f^2=0.15), α=0.10 and power=0.90). In all our analyses, the observations are above the required number.
- Hambrick et al., (2015) proposed that a director can only be declared a quad director once he has three qualities and stock ownership above a threshold level. In the current study context, we cannot construct a threshold level because there is a restriction (up to 1% of overall stock issued) on independent directors having stock ownership. Therefore, after a long discussion with experts and academicians, we constructed a dummy equal to 1 if a director has stock ownership in his focal firm; otherwise, 0. The reason for using a dummy is also based on the nature of our independent variable (EP), which is also motivated by the second measure used for motivation (member of any welfare society).
- For constructing our primary sample based on the premise of the sensitive sector, we made a slight adjustment in environmentally sensitive, as proposed by Lee and Faff (2009). We included construction materials and forestry, as both sectors represent a significant portion of China's production.
- We also ran OLS and fixed effect models to compare their coefficient estimate of EP (-1) with GMM. The value of coefficient estimates of GMM lies between coefficient estimates of OLS and fixed effect. This further validates our regression approach. It should be noted that the fixed effect model is used following the results of the Hausmann test criteria for the selection of panel models (random or fixed).

REFERENCES

Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, *48*(1), 58–107. doi:10.1257/jel.48.1.58

Aguado, D., Andrés, J. C., García-Izquierdo, A. L., & Rodríguez, J. (2019). LinkedIn "Big four": Job performance validation in the ICT sector. *Revista de Psicología del Trabajo y de las Organizaciones*, *35*(2), 53–64. doi:10.5093/jwop2019a7

Almaqoushi, W., & Powell, R. (2021). Audit committee quality indices, reporting quality and firm value. *Journal of Business Finance & Accounting*, *48*(1-2), 185–229. doi:10.1111/jbfa.12478

An, S. (2021). Board Diversity and Monitoring: An Investigation of Gender and Task-Related Diversity. *Public Performance & Management Review*, 1–26.

Aouadi, A., & Marsat, S. (2018). Do ESG controversies matter for firm value? Evidence from international data. *Journal of Business Ethics*, *151*(4), 1027–1047. doi:10.1007/s10551-016-3213-8

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, *68*(1), 29–51. doi:10.1016/0304-4076(94)01642-D

Arora, P. (2018). Financially linked independent directors and bankruptcy reemergence: The role of director effort. *Journal of Management*, *44*(7), 2665–2689. doi:10.1177/0149206316648384

Banerjee, A., Nordqvist, M., & Hellerstedt, K. (2020). The role of the board chair—A literature review and suggestions for future research. *Corporate Governance*, *28*(6), 372–405. doi:10.1111/corg.12350

Baulkaran, V., & Bhattarai, S. (2020). Board effectiveness: Evidence from firm risk. *Journal of Economics and Business*, *110*, 105907. doi:10.1016/j.jeconbus.2020.105907

Berns, J. P., Gupta, V. K., Schnatterly, K. A., & Steele, C. R. (2021). Chief Executive Officer Dismissal: A Multidisciplinary Integration and Critical Analysis. *Group & Organization Management*, *46*(2), 362–398. doi:10.1177/1059601120987452

Berrone, P., Cruz, C., Gomez-Mejia, L. R., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? *Administrative Science Quarterly*, *55*(1), 82–113. doi:10.2189/asqu.2010.55.1.82

Berrone, P., & Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: An integrated agency-institutional perspective. *Academy of Management Journal*, *52*(1), 103–126. doi:10.5465/amj.2009.36461950

Bhagat, S., & Tookes, H. (2013). *Voluntary and mandatory skin in the game: understanding outside directors' stock holdings. In Entrepreneurship, Finance, Governance and Ethics*. Springer.

Boivie, S., Bednar, M. K., Aguilera, R. V., & Andrus, J. L. (2016). Are boards designed to fail? The implausibility of effective board monitoring. *The Academy of Management Annals*, *10*(1), 319–407. doi:10.5465/19416520.2016.1120957

Brandes, P., Dharwadkar, R., Ross, J. F., & Shi, L. (2021). Time is of the Essence!: Retired Independent Directors' Contributions to Board Effectiveness. *Journal of Business Ethics*, 1–27.

Brochet, F., & Srinivasan, S. (2014). Accountability of independent directors: Evidence from firms subject to securities litigation. *Journal of Financial Economics*, *111*(2), 430–449. doi:10.1016/j.jfineco.2013.10.013

Campion, M. A., Fink, A. A., Ruggeberg, B. J., Carr, L., Phillips, G. M., & Odman, R. B. (2011). Doing competencies well: Best practices in competency modeling. *Personnel Psychology*, *64*(1), 225–262. doi:10.1111/j.1744-6570.2010.01207.x

Cao, J., Pan, X., & Tian, G. (2011). Disproportional ownership structure and pay–performance relationship: Evidence from China's listed firms. *Journal of Corporate Finance*, *17*(3), 541–554. doi:10.1016/j.jcorpfin.2011.02.006

Cashman, G. D., Gillan, S. L., & Jun, C. (2012). Going overboard? On busy directors and firm value. *Journal of Banking & Finance*, *36*(12), 3248–3259. doi:10.1016/j.jbankfin.2012.07.003

Chiu, S.-S., Pathak, S., Hoskisson, R. E., & Johnson, R. A. (2020). Managerial commitment to the status quo and corporate divestiture: Can power motivate openness to change? *The Leadership Quarterly*, 101459.

Choe, C., Tian, G. Y., & Yin, X. (2014). CEO power and the structure of CEO pay. *International Review of Financial Analysis*, *35*, 237–248. doi:10.1016/j.irfa.2014.10.004

Cole, R., Johan, S., & Schweizer, D. (2021). Corporate failures: Declines, collapses, and scandals. *Journal of Corporate Finance*, *67*, 101872. doi:10.1016/j.jcorpfin.2020.101872

Cowen, A. P., & Marcel, J. J. (2011). Damaged goods: Board decisions to dismiss reputationally compromised directors. *Academy of Management Journal*, *54*(3), 509–527. doi:10.5465/amj.2011.61967992

Dalton, D. R., & Dalton, C. M. (2011). Integration of micro and macro studies in governance research: CEO duality, board composition, and financial performance. SAGE Publications.

Donaldson, T. (2002). The stakeholder revolution and the Clarkson principles. *Business Ethics Quarterly*, *12*(2), 107–111. doi:10.5840/beq200212211

Drempetic, S., Klein, C., & Zwergel, B. (2019). The influence of firm size on the ESG score: Corporate sustainability ratings under review. *Journal of Business Ethics*, 1–28.

Eddleston, K. A., Banalieva, E. R., & Verbeke, A. (2020). The bribery paradox in transition economies and the enactment of 'new normal' business environments. *Journal of Management Studies*, *57*(3), 597–625. doi:10.1111/joms.12551

Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, *32*(3), 543–576. doi:10.2307/256434

Ellcessor, E. (2018). "One tweet to make so much noise": Connected celebrity activism in the case of Marlee Matlin. *New Media & Society*, *20*(1), 255–271. doi:10.1177/1461444816661551

Ertimur, Y., Ferri, F., & Maber, D. A. (2012). Reputation penalties for poor monitoring of executive pay: Evidence from option backdating. *Journal of Financial Economics*, *104*(1), 118–144. doi:10.1016/j.jfineco.2011.12.004

Fabrizi, M., Mallin, C., & Michelon, G. (2014). The role of CEO's personal incentives in driving corporate social responsibility. *Journal of Business Ethics*, *124*(2), 311–326. doi:10.1007/s10551-013-1864-2

Fama, E. F. (1980). Banking in the Theory of Finance. *Journal of Monetary Economics*, *6*(1), 39–57. doi:10.1016/0304-3932(80)90017-3

Fernandez, W. D., & Sundaramurthy, C. (2020). Boards' relevant experience and international strategy: A recipe for success or a case of too many cooks? *Global Strategy Journal*, *10*(4), 726–749. doi:10.1002/gsj.1392

Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *The Journal of Finance*, *58*(3), 1087–1111. doi:10.1111/1540-6261.00559

Flammer, C., & Bansal, P. (2017). Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal*, *38*(9), 1827–1847. doi:10.1002/smj.2629

Flammer, C., & Ioannou, I. (2018). *To save or to invest? Strategic management during the financial crisis*. Resource Based Strategy & Policy.

Francoeur, C., Melis, A., Gaia, S., & Aresu, S. (2017). Green or greed? An alternative look at CEO compensation and corporate environmental commitment. *Journal of Business Ethics*, *140*(3), 439–453. doi:10.1007/s10551-015-2674-5

García-Izquierdo, A. L., Fernández-Méndez, C., & Arrondo-García, R. (2018). Gender diversity on boards of directors and remuneration committees: The influence on listed companies in Spain. *Frontiers in Psychology*, *9*, 1351. doi:10.3389/fpsyg.2018.01351 PMID:30174626

Gorshunov, M. A., Armenakis, A. A., Harris, S. G., & Walker, H. J. (2021). Quad-qualified audit committee director: Implications for monitoring and reducing financial corruption. *Journal of Corporate Finance*, *66*, 101854. doi:10.1016/j.jcorpfin.2020.101854

Grant, A. M., & Patil, S. V. (2012). Challenging the norm of self-interest: Minority influence and transitions to helping norms in work units. *Academy of Management Review*, *37*(4), 547–568. doi:10.5465/amr.2010.0437

Gupta, A., Briscoe, F., & Hambrick, D. C. (2018). Evenhandedness in resource allocation: Its relationship with CEO ideology, organizational discretion, and firm performance. *Academy of Management Journal*, *61*(5), 1848–1868. doi:10.5465/amj.2016.1155

Gupta, K., Banerjee, R., & Onur, I. (2017). The effects of R&D and competition on firm value: International evidence. *International Review of Economics & Finance*, *51*, 391–404. doi:10.1016/j.iref.2017.07.003

Hambrick, D. C., & Jackson, E. M. (2000). Outside directors with a stake: The linchpin in improving governance. *California Management Review*, *42*(4), 108–127. doi:10.2307/41166056

Hambrick, D. C., Misangyi, V. F., & Park, C. A. (2015). The quad model for identifying a corporate director's potential for effective monitoring: Toward a new theory of board sufficiency. *Academy of Management Review*, *40*(3), 323–344. doi:10.5465/amr.2014.0066

Hambrick, D. C., & Wowak, A. J. (2012). Whom do we want as our business leaders? How changes in the corporate milieu have brought about a new breed of CEOs. *Towards a new theory of the firm, 29*, 60.

Havrylyshyn, A., & Schepker, D. J. (2020). Succeeding at CEO Succession Planning: Linking Expertise, Board Attention, and Planning Activities. *Academy of Management Proceedings*. doi:10.5465/AMBPP.2020.165

Haynes, K. T., & Hillman, A. (2010). The effect of board capital and CEO power on strategic change. *Strategic Management Journal*, *31*(11), 1145–1163. doi:10.1002/smj.859

Haynes, K. T., Josefy, M., & Hitt, M. A. (2015). Tipping point: Managers' self-interest, greed, and altruism. *Journal of Leadership & Organizational Studies*, *22*(3), 265–279. doi:10.1177/1548051815585171

Haynes, K. T., Zattoni, A., Boyd, B. K., & Minichilli, A. (2019). Figureheads or potentates? CEO power and board oversight in the context of Sarbanes Oxley. *Corporate Governance*, *27*(6), 402–426. doi:10.1111/corg.12293

Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, *28*(3), 383–396. doi:10.2307/30040728

Hillman, A. J., Nicholson, G., & Shropshire, C. (2008). Directors' multiple identities, identification, and board monitoring and resource provision. *Organization Science*, *19*(3), 441–456. doi:10.1287/orsc.1080.0355

Ho, M., Jenkins, A., Verreynne, M.-L., Teo, S., & Singh, S. (2018). How social and leadership resources and reconfiguration activities lead to relational, stakeholder, and operational outcomes post-disaster. *ICSB World Conference Proceedings*.

Hou, W., Li, S., & Priem, R. L. (2013). How do CEOs matter? The moderating effects of CEO compensation and tenure on equity ownership in international joint ventures. *Journal of International Management*, *19*(2), 138–151. doi:10.1016/j.intman.2013.02.001

Huang, D. Z. (2021). Environmental, social and governance (ESG) activity and firm performance: A review and consolidation. *Accounting and Finance*, *61*(1), 335–360. doi:10.1111/acfi.12569

Jensen, M., & Zajac, E. J. (2004). Corporate elites and corporate strategy: How demographic preferences and structural position shape the scope of the firm. *Strategic Management Journal*, *25*(6), 507–524. doi:10.1002/smj.393

Jeong, N. (2019). The impact of two types of CEO overcompensation on corporate social responsibility. *The Journal of Management and Governance*, 1–19.

Jeong, S.-H., Kim, H., & Kim, H. (2021). Strategic nepotism in family director appointments: Evidence from family business groups in South Korea. *Academy of Management Journal*.

Jiang, H., Cannella, A. A. Jr, Xia, J., & Semadeni, M. (2017). Choose to fight or choose to flee? A network embeddedness perspective of executive ship jumping in declining firms. *Strategic Management Journal*, *38*(10), 2061–2079. doi:10.1002/smj.2637

Jones, T. M., & Keevil, A. A. (2015). *"Agents without Principals" Revisited: Theorizing the Effects of Increased Shareholder Participation in Corporate Governance. In Shareholder empowerment*. Springer.

Jung, J., Bramson, A., & Crano, W. D. (2018). An agent-based model of indirect minority influence on social change and diversity. *Social Influence*, *13*(1), 18–38. doi:10.1080/15534510.2017.1415961

Kang, C., Germann, F., & Grewal, R. (2016). Washing away your sins? Corporate social responsibility, corporate social irresponsibility, and firm performance. *Journal of Marketing*, *80*(2), 59–79. doi:10.1509/jm.15.0324

Karpoff, J. M., Koester, A., Lee, D. S., & Martin, G. S. (2017). Proxies and databases in financial misconduct research. *The Accounting Review*, *92*(6), 129–163. doi:10.2308/accr-51766

Keeves, G. D., Westphal, J. D., & McDonald, M. L. (2017). Those closest wield the sharpest knife: How ingratiation leads to resentment and social undermining of the CEO. *Administrative Science Quarterly*, *62*(3), 484–523. doi:10.1177/0001839216686053

Kim, I., Pantzalis, C., & Park, J. C. (2013). Corporate boards' political ideology diversity and firm performance. *Journal of Empirical Finance*, *21*, 223–240. doi:10.1016/j.jempfin.2013.02.002

Krishnan, G., & Visvanathan, G. (2009). Do auditors price audit committee's expertise? The case of accounting versus nonaccounting financial experts. *Journal of Accounting, Auditing & Finance*, *24*(1), 115–144. doi:10.1177/0148558X0902400107

Leblanc, R., & Gillies, J. (2005). *Inside the boardroom: How boards really work and the coming revolution in corporate governance*. John Wiley & Sons.

Leblanc, R., & Schwartz, M. S. (2007). The black box of board process: Gaining access to a difficult subject. *Corporate Governance*, *15*(5), 843–851. doi:10.1111/j.1467-8683.2007.00617.x

Lester, R. H., Hillman, A., Zardkoohi, A., & Cannella, A. A. Jr. (2008). Former government officials as outside directors: The role of human and social capital. *Academy of Management Journal*, *51*(5), 999–1013. doi:10.5465/amj.2008.34789675

Levine, J. M. (2017). Factional conflict in groups: How majorities and minorities relate to one another. *Group Processes & Intergroup Relations*, *20*(5), 644–657. doi:10.1177/1368430217702726

Linck, J. S., Netter, J. M., & Yang, T. (2009). The effects and unintended consequences of the Sarbanes-Oxley Act on the supply and demand for directors. *Review of Financial Studies*, *22*(8), 3287–3328. doi:10.1093/rfs/hhn084

Liu, Y., Miletkov, M. K., Wei, Z., & Yang, T. (2015). Board independence and firm performance in China. *Journal of Corporate Finance*, *30*, 223–244. doi:10.1016/j.jcorpfin.2014.12.004

Mafrolla, E. (2019). Tax avoidance in government-owned firms: Evidence from Italy. *Public Money & Management*, *39*(3), 186–192. doi:10.1080/09540962.2018.1516955

Martin, R., & Hewstone, M. (2012). *Minority influence: Revisiting Moscovici's blue-green afterimage studies*. Academic Press.

McDonald, M. L., & Westphal, J. D. (2013). Access denied: Low mentoring of women and minority first-time directors and its negative effects on appointments to additional boards. *Academy of Management Journal*, *56*(4), 1169–1198. doi:10.5465/amj.2011.0230

McDonald, M. L., Westphal, J. D., & Graebner, M. E. (2008). What do they know? The effects of outside director acquisition experience on firm acquisition performance. *Strategic Management Journal*, *29*(11), 1155–1177. doi:10.1002/smj.704

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, *21*(5), 603–609. doi:10.1002/(SICI)1097-0266(200005)21:5<603::AID-SMJ101>3.0.CO;2-3

Miller, J. S., Wiseman, R. M., & Gomez-Mejia, L. R. (2002). The fit between CEO compensation design and firm risk. *Academy of Management Journal*, *45*(4), 745–756. doi:10.2307/3069308

Mullins, F., & Holmes, J. (2018). Balancing board? The effects of board independence and capital on firms offering work-family benefits. *Human Resource Management*, *57*(2), 457–469. doi:10.1002/hrm.21877

Paniagua, J., Rivelles, R., & Sapena, J. (2018). Corporate governance and financial performance: The role of ownership and board structure. *Journal of Business Research*, *89*, 229–234. doi:10.1016/j.jbusres.2018.01.060

Park, U. D., Boeker, W., & Gomulya, D. (2020). Political ideology of the board and CEO dismissal following financial misconduct. *Strategic Management Journal*, *41*(1), 108–123. doi:10.1002/smj.3088

Reay, T., Chreim, S., Golden-Biddle, K., Goodrick, E., Williams, B. E., Casebeer, A., Pablo, A., & Hinings, C. (2013). Transforming new ideas into practice: An activity based perspective on the institutionalization of practices. *Journal of Management Studies*, *50*(6), 963–990. doi:10.1111/joms.12039

Rehman, S., Orij, R., & Khan, H. (2020). The search for alignment of board gender diversity, the adoption of environmental management systems, and the association with firm performance in Asian firms. *Corporate Social Responsibility and Environmental Management*, *27*(5), 2161–2175. doi:10.1002/csr.1955

Reinholt, M., Pedersen, T., & Foss, N. J. (2011). Why a central network position isn't enough: The role of motivation and ability for knowledge sharing in employee networks. *Academy of Management Journal*, *54*(6), 1277–1297. doi:10.5465/amj.2009.0007

Sajko, M., Boone, C., & Buyl, T. (2021). CEO greed, corporate social responsibility, and organizational resilience to systemic shocks. *Journal of Management*, *47*(4), 957–992. doi:10.1177/0149206320902528

Schrettle, S., Hinz, A., Scherrer-Rathje, M., & Friedli, T. (2014). Turning sustainability into action: Explaining firms' sustainability efforts and their impact on firm performance. *International Journal of Production Economics*, *147*, 73–84. doi:10.1016/j.ijpe.2013.02.030

Schwartz-Ziv, M., & Weisbach, M. S. (2013). What do boards really do? Evidence from minutes of board meetings. *Journal of Financial Economics*, *108*(2), 349–366. doi:10.1016/j.jfineco.2012.04.011

Shen, W., Ponomareva, Y., & Uman, T. (2021). Can you catch two birds with one stone? The impacts of nominating committee composition on board monitoring on resource provision. *Long Range Planning*, 102127.

Shou, Y., Shao, J., Lai, K., Kang, M., & Park, Y. (2019). The impact of sustainability and operations orientations on sustainable supply management and the triple bottom line. *Journal of Cleaner Production*, *240*, 118280. doi:10.1016/j.jclepro.2019.118280

Smith, N. C., & Rönnegard, D. (2016). Shareholder primacy, corporate social responsibility, and the role of business schools. *Journal of Business Ethics*, *134*(3), 463–478. doi:10.1007/s10551-014-2427-x

Steckler, E., & Clark, C. (2019). Authenticity and corporate governance. *Journal of Business Ethics*, *155*(4), 951–963. doi:10.1007/s10551-018-3903-5

Stevens, R., Moray, N., Bruneel, J., & Clarysse, B. (2015). Attention allocation to multiple goals: The case of for-profit social enterprises. *Strategic Management Journal*, *36*(7), 1006–1016. doi:10.1002/smj.2265

Takacs Haynes, K., Campbell, J. T., & Hitt, M. A. (2017). When more is not enough: Executive greed and its influence on shareholder wealth. *Journal of Management*, *43*(2), 555–584. doi:10.1177/0149206314535444

Takacs-Haynes, K., Josefy, M., & Hitt, M. A. (2015). *Altruistic CEOs can be as risky as greedy ones*. LSE Business Review.

Tapaninaho, R., & Kujala, J. (2019). *Reviewing the stakeholder value creation literature: Towards a sustainability approach. In Social responsibility and sustainability*. Springer.

Taylor, J., Vithayathil, J., & Yim, D. (2018). Are corporate social responsibility (CSR) initiatives such as sustainable development and environmental policies value enhancing or window dressing? *Corporate Social Responsibility and Environmental Management*, *25*(5), 971–980. doi:10.1002/csr.1513

Vidgen, R., Shaw, S., & Grant, D. B. (2017). Management challenges in creating value from business analytics. *European Journal of Operational Research*, *261*(2), 626–639. doi:10.1016/j.ejor.2017.02.023

Wang, J., Cheng, G. H. L., Chen, T., & Leung, K. (2019). Team creativity/innovation in culturally diverse teams: A meta-analysis. *Journal of Organizational Behavior*, *40*(6), 693–708. doi:10.1002/job.2362

Wang, L., Malhotra, D., & Murnighan, J. K. (2011). Economics education and greed. *Academy of Management Learning & Education*, *10*(4), 643–660. doi:10.5465/amle.2009.0185

Wang, L., & Murnighan, J. K. (2011). On greed. *The Academy of Management Annals*, *5*(1), 279–316. doi:10.5465/19416520.2011.588822

Wang, X., Reger, R. K., & Pfarrer, M. D. (2021). Faster, hotter, and more linked in: Managing social disapproval in the social media era. *Academy of Management Review*, *46*(2), 275–298. doi:10.5465/amr.2017.0375

Westphal, J. D., & Bednar, M. K. (2005). Pluralistic ignorance in corporate boards and firms' strategic persistence in response to low firm performance. *Administrative Science Quarterly*, *50*(2), 262–298. doi:10.2189/asqu.2005.50.2.262

Westphal, J. D., Park, S. H., McDonald, M. L., & Hayward, M. L. (2012). Helping other CEOs avoid bad press: Social exchange and impression management support among CEOs in communications with journalists. *Administrative Science Quarterly*, *57*(2), 217–268. doi:10.1177/0001839212453267

Westphal, J. D., & Zajac, E. J. (2013). A behavioral theory of corporate governance: Explicating the mechanisms of socially situated and socially constituted agency. *The Academy of Management Annals*, *7*(1), 607–661. doi:10.5465/19416520.2013.783669

Wiengarten, F., Lo, C. K., & Lam, J. Y. (2017). How does sustainability leadership affect firm performance? The choices associated with appointing a chief officer of corporate social responsibility. *Journal of Business Ethics*, *140*(3), 477–493. doi:10.1007/s10551-015-2666-5

Wintoki, M. B., & Xi, Y. (2019). Friendly directors and the cost of regulatory compliance. *Journal of Corporate Finance*, *58*, 112–141. doi:10.1016/j.jcorpfin.2019.04.011

Wowak, A. J., Gomez-Mejia, L. R., & Steinbach, A. L. (2017). Inducements and motives at the top: A holistic perspective on the drivers of executive behavior. *The Academy of Management Annals*, *11*(2), 669–702. doi:10.5465/annals.2015.0121

Wowak, A. J., & Hambrick, D. C. (2010). A model of person-pay interaction: How executives vary in their responses to compensation arrangements. *Strategic Management Journal*, *31*(8), 803–821. doi:10.1002/smj.839

Yayla, A. A., & Hu, Q. (2014). The effect of board of directors' IT awareness on CIO compensation and firm performance. *Decision Sciences*, *45*(3), 401–436. doi:10.1111/deci.12077

Zhang, Y., & Gimeno, J. (2016). Earnings pressure and long-term corporate governance: Can long-term-oriented investors and managers reduce the quarterly earnings obsession? *Organization Science*, *27*(2), 354–372. doi:10.1287/orsc.2016.1056

ENDNOTES

[1] A lead director is a board member, usually elected by the independent members of the board, who perform specific duties on behalf of the board. This director often serves as chair of the governance committee of the board.

[2] We matched the names with "surname," area of residence, and degree awarding institute. A directed in scaled as personally affiliated if he/she satisfies first "surname," and area of residence or degree awarding institute of both otherwise. We carefully observed the surname and area of residence regarding family to avoid any biases in scaling. There is every possibility of having a similar name to the residence. We also examined that the CEO is a member of other corporate boards if the Quad director serves as the company's CEO.

APPENDIX

Table 7. Variable and their definition

Variables	Measurement
Environment Performance	Environment performance score obtained from the ASSET4 database from Thomson Reuters
CEO greed	The residual value following Equation 1 in this paper is in line with the methodology proposed by (Campbell et al. 2017)
ROA	Net income scaled by total assets
Bonus	The annual value of the bonus scaled by all CEO compensation
Restricted stock	The annual value of restricted stocks scaled by all CEO compensation
CEO age	Age of the CEO
CEO experience	experience serving as CEO
CEO qualification	The aggregate level of CEO qualification
CEO duality	The dummy variable is equal to 1 if the CEO exercises a duality role, otherwise 1
CEO founder	The dummy variable is equal to 1 if the CEO is the founder of the focal firm, otherwise 1
Firm size	Measured as the total asset of the firm
Firm age	The difference in the year of observation and year of incorporation of a firm
Slack-resources	the logarithm of the ratio of long-term debt scaled by the market-value of equity
R & D intensity	The ratio of R&D expenses to total expenses
Internationalization	%age of export to total sales
institutional ownership	%age of share held by the institution
family ownership	%age of share held by family members
board independence	independent director (after excluding quad director, if any) scaled by board size
Board gender diversity (%)	Number of female directors scaled by board size

Saif Ur Rehman holds a postdoc certification from Nyenrode Business Universiteit, the Netherlands. He also holds a PhD in Management from National University of Modern Language, Islamabad. Dr. Saif has produced over 76 research papers in Scopus, WOS, ABS and other high quality indexed journals in the field of strategic management, human resource management, corporate governance, CSR, environmental management systems and many other related areas. He has supervised 13 PhDs and has completed four research projects successfully during 27 years of academic experience.

Elgiliani Elshareif holds a PhD in Finance, M. Sc. in Finance, B.Sc. in Cost and Management Accounting and a professional certification from UK (ACCA). Prior to joining CUD, He has taught for more than 20 years in both public and private universities at both the undergraduate and graduate levels. Dr. Elshareif is also experienced in industry, having worked as Managing Director of the National Institute of Accounting Studies, a chartered accountant and one of the co-founders of RYE intentional for auditing and consultancy services in Sudan.

Hashim Khan holds a PhD certification from Universiti Teknologi Malaysia (QA Ranked 189) Malaysia. He has produced over 37 research papers in Scopus, WOS, ABS, and other high quality indexed journals in the field of Corporate Governance, Finance, CSR, environmental management systems and many other related areas. He has supervised 04 PhDs and has completed four research projects successfully during 15 years of academic experience.