Ownership Concentration and Environmental, Social, Governance Engagement: Do CEO's Characteristics Moderate the Relationship?

Ranjan DasGupta[1] and Rajesh Pathak[2]

Abstract

In this study we examine the role of ownership concentration (OC) in determining environmental, social, governance (ESG) engagement of Indian firms. Furthermore, we evaluate the moderating role of firm's CEO's characteristics to attenuate or strengthen the OC and ESG linkage. This study has collected the firm level data from Centre for Monitoring Indian Economy's (CMIE's) Prowess Database. Its final sample consists of 161 firms for the period 2014-19, i.e., 805 firm-year observations. We have used panel fixed effect models with appropriate specifications and tests. Our results do not prove any ESG engagement due to PPC conflicts initially, however, when the firm is run by an old CEO or a busy CEO or a CEO with long tenure within a firm, ESG engagement increases. This augments agency problems in Indian firms. This is the first study to examine principal-principal conflicts from the lens of ESG performance and how CEO's characteristics can moderate those impacts in the emerging market context of India.

Keywords: Principal-principal conflicts; ESG performance; CEO characteristics; Indian firms.

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[1] Indian Institute of Management Raipur, India

[2] Indian Institute of Management Raipur, India

1. Introduction:

On one hand, empirical literature observes that firms within a given societal context can obtain legitimacy by exhibiting similar corporate social responsibility (CSR) practices (Kim et al., 2013). On the contrary, certain scholars show that firms within the same institutional context may unveil varied CSR practices in response to institutional pressures due to differences in firm characteristics such as ownership structure (Goodrick and Salancik, 1996) and chief executive officer's (CEO's) characteristics (Manner, 2010; Wei et al., 2018). Therefore, corporate governance studies have become increasingly inquisitive in investigating the effectiveness of different ownership structures especially in emerging markets (Aguilera et al., 2008; Singla et al., 2017). A series of studies offer evidence of the principal-principal conflicts (PPC) between controlling and minority shareholders in emerging markets owing to weak formal protection of shareholder rights (Dharwadkar et al., 2000; Young et al., 2008). Our study fits in this context whereby we investigate if PPC arising due to shareholding structure (i.e., higher holdings by largest shareholder, i.e., ownership concentration) impacts firm's engagement in environmental, social, governance (ESG) activities.

Our argument is based on the agency theory perspective which suggests that corporate social performance (CSP) is deployed by managers[3] (acting for largest shareholder(s)) to fulfil their self-interests such as enhancing social standing in the community, self-image, and personal reputation and prestige, instead of maximising shareholders' wealth (Atkinson and Galaskiewicz, 1988; Li et al., 2017). On one hand, we can presume that the largest shareholder in firms (with concentrated shareholding structure) may expropriate other shareholders by engaging more in ESG activities in order to extract more private social benefits (Delgado-García et al., 2010; La Porta et al., 2000). However, few recent studies (Friedman et al. 2003; Su et al. 2008) also show that controlling shareholders with relatively small percentages of ownership are more tempted to derive private benefit from their controlling interest and maximize their own utility. Therefore, a negative relationship is expected between percentage of ownership in the hands of largest shareholder (proxy of PPC) and ESG engagement of firms. Moreover, empirical literature offers the role of firm's top management team, especially the CEOs, in moderating firm's CSP (Hambrick and Mason, 1984; Manner, 2010).[4] For instance, CEO's age has an impression on the level of CSP in businesses (McCarthy et al., 2017; Li et al., 2020; Mukherjee and Sen, 2022). Hence, we confer that CEO's demographic characteristics might act as a moderator in determining PPC and ESG linkage. Specifically, we examine the role of CEO's age (Hambrick and Mason, 1984; Belenzon et al., 2019; McCarthy et al., 2017), busyness (Fich, 2005; Masulis and Mobbs, 2014), tenure in the firm (Henderson et al., 2006; Kor and Sundaramurthy, 2009), educational status (Meyer, 2015; Miller and Xu, 2020) and compensation (Callan and Thomas, 2011; Deckop et al., 2006) in moderating the largest shareholder's inclination to undertake ESG activities.

We conjecture that CEO's age and longer tenure reflects his built-up knowledge and expertise and is well-supported by prior studies (Henderson et al., 2006; Kor and Sundaramurthy, 2009; Shiah-Hou and Cheng, 2012) and hence, can potentially moderate the PPC-ESG relationship. Similarly, educational background of the CEO is an important determinant of personal values and cognitions (DasGupta and Pathak, 2021). Moreover, both the level and types (quality) of education impacts individual's patterns of thought and affective reactions (Hambrick and Mason, 1984; Manner, 2010). Additionally, Meyer (2015), Amore et

[3] This is referred to as managerial opportunism due to PPC between majority and minority owners (Aguilera and Crespi-Cladera, 2016; Peng and Yang, 2014)

[4] Hambrick and Mason (1984: 193) observed that firm strategies are considered as "reflections of the values and cognitive bases of powerful actors in the organization". Past empirical research has suggested that CEOs as the most powerful actors in their organizations heavily influence firms' strategic choices (Crossland et al., 2014: 656).

al. (2019), and Miller and Xu (2020) show that highly educated individuals are more concerned about social welfare and environmental issues, thereby spurring corporate energy efficiency by making greener private decisions. Accordingly, we focus on the moderation effects of formal professional education (e.g., the MBA/PGDM degree).

A positive relationship has been found to exist between executive compensation and CSP (Callan and Thomas, 2011), long-term incentives and CSP (Deckop et al., 2006), and bonuses, stock options, and CSP strengths (Mahoney and Thorne, 2005). Therefore, we also consider CEO's compensation as a moderating variable affecting PPC and ESG linkages. Existing research also notes that firms treat social and environmental issues quite differently in practice (Bansal et al., 2014). Therefore, we investigate the influence of largest shareholder on each component of ESG separately.

Nevertheless, we conduct this study in Indian setting owing to the following reasons: First, India being an emerging country with firms largely having concentrated ownership (Sarkar and Sarkar, 2000), yet no existing study explores the influence of largest shareholding on firm's ESG engagement. Second, India being characterized with weak institutional environment and poor investor's protection (La Porta et al., 2000) which is referred to be the root cause of PPC (Dharwadkar et al., 2000; Young et al., 2008), exploring the evidence of PPC in impacting ESG performance using sample of Indian firms is apt to the main objectives of this study. Finally, post new corporate governance codes institutionalised by the Companies Act 2013, there are scarce studies examining impacts of CEO characteristics on firm's outcomes, hence we additionally explore the moderation effects of set of CEO's characteristics on PPC and ESG engagement relationship.

2. Literature review and hypotheses developed:

Empirical studies (Dharwadkar et al., 2000; Su et al. 2008; Young et al. 2008; etc.) show that PPC reflecting goal incongruence between controlling and minority shareholders, primarily prevailing in transitional economies such as China and India. Prior studies have also documented the exploitation of firm's economic resources by controlling shareholders such as purchasing of assets, borrowing funds, transferring of shares, providing credit and debit guarantees or even outright theft, to the detriment of minority shareholders (Aharony et al. 2010; Cheung et al. 2009; Su et al. 2008). While these studies have largely focused on the pecuniary forms of private benefits of control, such benefits can also take non-pecuniary forms such as prestige and social status for the controlling shareholders or the pursuit of social and political goals (He et al. 2008; Li and Qian 2013).

Agency theory (Jensen and Meckling, 1976) has described the various problems in the agent-principal relationship between shareholders and managers. However, in this study context, it is important to observe that interests may differ for small vis-a`-vis large shareholders. A large shareholder may exert effective monitoring and thereby affect the operations and strategy of the firm (Shleifer and Vishny, 1997). Gomes (2005) argue that large shareholders of firms with majority blocks are often central to their firms and can have interests that differ from those of minority shareholders. Large shareholders (block holders) may have more influence on the firm than dispersed small shareholders due to their stronger incentives or more effective monitoring. The high level of separation between cash flow rights and voting rights motivates the controlling shareholder to entrench him- or herself at the expense of outside minority shareholders (Claessens et al., 2000; La Porta et al., 1999). Decisions in the area of CSP are likely to reflect both high information asymmetry and low programmability (Deckop et al., 2006). Clark and Hebb (2005) also find that moral motives, such as climate change and HIV/AIDS, can drive the large shareholders actions.

However, few recent studies (Friedman et al. 2003; Su et al. 2008) show that controlling shareholders with relatively small percentages of ownership are more tempted to derive private benefit from their controlling interest and maximize their own utility.
Therefore, Theoretically, the relationship between ESG and concentrated ownership can go both ways. Concentrated ownership can result in a particular financial and social performance due to the efforts of the large owner(s). However, a particular ESG performance also might be viewed as attractive from the perspective of the large shareholder and result in substantial investment in the firm with this performance. In this respect, Bartkus et al. (2002) find strong evidence for 66 US companies that powerful owners discourage excessive philanthropy. Atkinson and Galaskiewicz (1988) as well as Brammer and Millington (2005) also arrive at negative relationship between ownership concentration and giving in the US.

Based on above discussions, this study conjectures the largest shareholder to impact firm's ESG practices negatively.

In addition, we examine the role of CEO's age (Hambrick and Mason, 1984; Belenzon et al., 2019; McCarthy et al., 2017), busyness (Fich, 2005; Masulis and Mobbs, 2014), tenure in the firm (Henderson et al., 2006; Kor and Sundaramurthy, 2009), educational status (Meyer, 2015; Miller and Xu, 2020) and compensation (Callan and Thomas, 2011; Deckop et al., 2006) in moderating the largest shareholder's inclination to undertake ESG activities.
Overall, this study conjectures the positive moderation impact of CEO's characteristics on the largest shareholder to impact firm's ESG practices positively.

3. Data and methodology:

3.1. Data and variables:

We collect firm level data from Centre for Monitoring Indian Economy's (CMIE's) Prowess Database. Our initial sample consists of Nifty 500 firms for the period 2014-19[5]. However, due to non-availability of environmental, social and governance (ESG) data[6] and missing data, our final sample consists of 161 firms for above period, i.e., 805 firm-year observations in total. Our main dependent variable is ESG performance, measured using a composite score of the environmental, social, and governance performance pillars from Thomson Reuter's Asset4 ESG platform (Shi and Veenstra, 2021; DasGupta, 2022)[7]. The largest shareholder's holding is the % of shares he/she holds during the last year[8]. These are considered alternate proxies of PPC.
We measure CEO age in a firm-year by subtracting the year of birth of the CEO from the present year, and then natural log transformation of that age-number (Chen et al., 2018; Fich

[5] Year 2020-21 was affected by Covid 19 outbreak all over the world. Accordingly, we have undertaken the study up to 2019.

[6] This data has been collected from Refinitive (erstwhile Thompson Reuters) Asset 4 database.

[7] Under robustness analyses we test largest shareholder's impact on firm's individual environmental (E), social (S), and governance (G) performance. The environmental, social, and governance scores cover a firm's business actions in terms of, respectively, environmental responsibility, commitment to the community (not only the community in which it operates but also beyond), and the degree to which its processes and systems guarantee that its functionaries act in the best interest of its shareholders (see Duque-Grisales and Augilera-Caracuel, 2021, for details).

[8] In addition, we also test two shareholding differential situations - First, when there is a difference of minimum 25% shareholding (ranges 25-50%) in between largest and second largest shareholders when both are holding 10% or more (Desender and Epure, 2014; Faccio et al., 2001); and second, when there is a difference of less than 5% shareholding (ranges 1-5%) in between largest and second largest shareholders when both are holding 10% or more. Our results are consistent. They are not reported for brevity and is available at request.

and Shivdasani, 2012; etc.). CEO's tenure is the natural log of the number of years the CEO has held his/her current job (Wei et al., 2018) whereas CEO's busyness is proxied by natural log of number of outside directorships he/she holds during a firm-year in addition to his/her own focal firm (Geletkanycz and Boyd, 2011; Mutlu et al., 2021). We measure CEO's education through a dummy variable that takes a value of 1 if the CEO has a post graduate degree in business and 0 otherwise (Manner, 2010; Miller and Xu, 2020). CEO compensation is measured by the natural log of CEO's total annual compensation in a firm-year (Chen et al. 2018; Fich and Shivdasani, 2006; etc.).

We also use firm size (natural logarithm of net sales), firm age (current year minus year of incorporation), R&D intensity (R&D expenditure divided by net sales), return on assets (ROA; a profitability measure), leverage (debt to asset), and liquidity (natural log transformed value of cash and cash equivalents), as controls which is consistent with existing relevant literature (DasGupta, 2022; Duque-Grisales and Augilera-Caracuel, 2021; Shi and Veenstra, 2021; etc.). This would mitigate omitted variables bias and raise the robustness of our study findings.

3.2. Methods:

We have used panel data analysis which captures both dimensions, i.e., cross-sectional and time-series (Hsiao, 1986). The major benefit of using panel data is that it controls for heterogeneity, increases the degree of freedom, reduces collinearity among independent variables and produces better prediction as heterogeneity in data leads to efficient estimators (Baltagi, 2008). However, before applying the suitable panel model, a choice must be made between the different estimation approaches - pooled OLS, fixed effect model (FEM) and/or random effect model (REM). Since OLS estimators might yield biased and inconsistent results on account of heteroscedastic error terms and autocorrelation (Martin et al., 2013), the two most commonly used estimators are FEM & REM. We apply the panel diagnostic test of Hausman (1978) which recommends FEM (p-value < 0.05) as preferred estimation technique. Moreover, to avoid the problem of reverse causality and endogeneity, we have employed a lagged model structure where the explanatory and control variables are lagged by one year after the dependent variable (Sanders and Hambrick, 2007; Xu et al., 2019). We also control for potential autocorrelation and heteroskedasticity by calculating the robust standard errors clustered by firm.

4. Results and discussions:

Table 1 reports the correlations results for our sample. The absolute values of Pearson coefficients between the independent variables are less than 0.5. This further corroborates our VIF results showing no multicollinearity in regression models. In contrast with our initial assumptions, we find that the association between ESG and largest shareholder holdings is negative but insignificant. The moderating variables like CEO tenure (negative), education and remuneration however show significant association with largest shareholder's holdings. All these results augment our initial inferences that ownership concentration could determine firm's ESG in the presence of CEO characteristics differentials. Some control variables (age, size, liquidity, R&D, etc.) also have a strong impact on ESG.

Table 1: Correlations results

Variables	ESG	ESG_{t-1}	1stPSH	CEO Age	CEO Busyness	CEOOE	CEO Tenure	CEO Education	CEOREM	Age	Size	Leverage	Liquidity	ROA	R&D
ESG	1														
ESGt-1	**.964****	1													
1stPSH	-0.004	0.016	1												
CEO Age	-0.039	-0.045	-.501**	1											
CEO Busyness	0.046	0.04	-0.034	0.102	1										
CEOOE	-0.069	-0.076	-.308**	.449**	-.234**	1									
CEO Tenure	**-.102***	**-.108****	**-.230****	**.452****	**-.120***	0.075	1								
CEO Education	**.109****	**.123****	**-.207****	**.507****	**-.154****	**.173****	0.077	1							
CEOREM	**.278****	**.273****	**-.343****	**.282****	0.033	**.152****	**.127****	**.104***	1						
Age	**.145****	**.149****	0.002	**-.165****	0.077	-0.033	**-.129****	0.066	**.108***	1					
Size	**.376****	**.378****	-0.015	**-.222****	-0.046	**-.116****	**-.133****	0.053	**.276****	**.260****	1				
Leverage	0.004	0.009	-0.061	0.024	-0.107	0.073	**.155****	-0.054	**-.102***	-0.079	-0.045	1			
Liquidity	**.353****	**.377****	**.086***	**-.251****	0.071	**-.200****	**-.171****	-0.031	**.127****	**.217****	**.474****	-0.018	1		
ROA	-0.004	-0.001	**.086***	**-.132****	-0.043	**-.150****	**-.082***	0.027	0.081	0.072	0.029	**-.264****	0.027	1	
R&D	**.091***	**.090***	0.007	**.091***	**.134***	0.008	0.033	**.119****	**.186****	**.127****	-0.036	-0.006	0.057	-0.037	1
VIF	1.698	1.787	1.234	1.106	1.247	1.339	1.353	1.250	1.658	1.158	2.491	1.246	1.784	1.290	1.167

This table presents correlations results and also variance inflation factors [VIFs]. ** denotes significance at 1% level, and * implies significance at 5% level. Here, environmental, social, governance (ESG) performance and largest promoter's (shareholder's) shareholdings (i.e., 1stPSH) is the main variables. CEO's age, outside directorships (busyness), outside experience (OE), tenure within the firm, relevant education and remuneration (REM) are the moderating variables. Furthermore, firm age (Age), size (Size), leverage (Lev), liquidity (Liq), profitability (ROA) and R&D intensity (R&D) are used as controls.

Table 2: Regression results (basic model and moderation effects)

Variables	Basic model	CEO Age moderation	CEO Busyness moderation	CEOOE moderation	CEO Tenure Moderation	CEO Education Moderation	CEO Remuneration Moderation
Constant	**5.485 (0.005) [1.940]**	**9.305 (0.001) [2.840]**	**7.218 (0.015) [2.933]**	4.948 (0.052) [2.534]	**8.967 (0.000) [2.111]**	**5.568 (0.003) [1.846]**	**7.444 (0.046) [3.710]**
Explanatory variable							
1st PSH	**-0.025 (0.000) [0.003]**	**-0.072 (0.000) [0.020]**	**-0.056 (0.000) [0.011]**	**-0.025 (0.001) [0.008]**	**-0.064 (0.000) [0.012]**	**-0.033 (0.002) [0.010]**	-0.097 (0.157) [0.069]
CEOAge		**-0.886 (0.007) [0.327]**					
CEOBusyness			-2.085 (0.155) [1.459]				
CEOOE				-0.177 (0.826) [0.802]			
CEOTenure					**-4.941 (0.000) [1.375]**		
CEOEducation						-1.263 (0.369) [1.403]	
CEOREM							-1.304 (0.346) [1.383]

Interaction variables							
1stPSH*CEOAge		**0.015 (0.026) [0.007]**					
1stPSH*CEOBusyness			**0.104 (0.045) [0.052]**				
1stPSH*CEOOE				0.034 (0.265) [0.030]			
1stPSH*CEOTenure					**0.060 (0.000) [0.016]**		
1stPSH*CEOEducation						0.028 (0.441) [0.037]	
1stPSH*CEOREM							0.036 (0.288) [0.034]
Control variables							
ESG_{t-1}	**0.876 (0.000) [0.019]**	**0.880 (0.000) [0.021]**	**0.891 (0.000) [0.030]**	**0.877 (0.000) [0.020]**	**0.874 (0.000) [0.019]**	**0.877 (0.000) [0.019]**	**0.873 (0.000) [0.018]**
Age	1.366 (0.376) [1.540]	1.537 (0.247) [1.326]	-0.123 (0.954) [2.144]	1.584 (0.259) [1.399]	1.256 (0.417) [1.545]	1.611 (0.180) [1.198]	1.537 (0.293) [1.458]
Size	0.010 (0.975) [0.329]	-0.106 (0.748) [0.328]	-0.115 (0.850) [0.607]	-0.095 (0.808) [0.390]	0.070 (0.826) [0.318]	0.021 (0.952) [0.356]	0.032 (0.925) [0.339]
Leverage	**-0.022 (0.003) [0.007]**	**-0.019 (0.021) [0.008]**	-0.012 (0.326) [0.012]	**-0.018 (0.020) [0.008]**	0.002 (0.473) [0.002]	**-0.025 (0.000) [0.004]**	**-0.032 (0.007) [0.012]**
Liquidity	0.465 (0.334) [0.480]	0.252 (0.568) [0.440]	0.606 (0.442) [0.787]	0.568 (0.285) [0.529]	0.356 (0.443) [0.463]	0.410 (0.378) [0.465]	0.627 (0.315) [0.623]
ROA	-0.008 (0.383) [0.010]	-0.013 (0.267) [0.011]	0.034 (0.332) [0.035]	-0.004 (0.723) [0.012]	-0.010 (0.338) [0.010]	-0.007 (0.497) [0.011]	-0.003 (0.846) [0.013]
R&D	0.014 (0.802) [0.055]	0.006 (0.920) [0.059]	-0.060 (0.406) [0.072]	0.008 (0.888) [0.054]	0.012 (0.825) [0.055]	0.021 (0.699) [0.055]	0.003 (0.961) [0.052]
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.913	0.911	0.912	0.910	0.910	0.909	0.910
F stat (p value)	261.531 (0.000)	224.603 (0.000)	136.801 (0.000)	224.249 (0.000)	223.875 (0.000)	223.267 (0.000)	207.207 (0.000)

This table presents basic and moderation regression results. The dependent variable is environmental, social, governance (ESG) performance and main independent variable is largest shareholder's (promoter's) holdings. Moderation impacts of CEO's characteristics of age, outside directorships (busyness), outside experience (OE), tenure within the firm, relevant education and remuneration (REM) are also shown here. We have also included firm-level control variables under panel fixed effect models with year fixed effects. Heteroskedasticity robust firm-clustered standard errors are shown in third brackets and p values are reported in parentheses.

From table 2 results, we observe no evidence of PPC in Indian firms as the largest shareholder would have a significant negative impact (β = -0.025; p = 0.000) on firm's ESG. Besides, firm's leverage also impacts investment in ESG negatively. Moreover, it reports how firm's CEO's characteristics moderate the relationship. We observe that an old CEO (β = 0.015; p = 0.026), busy CEO (β = 0.104; p = 0.045) and CEOs with higher tenure within the firm (β = 0.060; p = 0.000) moderates the relationship positively indicating the expropriation by the largest shareholder resulting in PPC. Though, CEOs outside experience, relevant education and remuneration does not have a significant moderating impact. These results corroborate our initial arguments that CEO characteristics augment largest shareholder's inclination towards more ESG performance thereby forming PPC.

To provide more substantive insights, we further analyze the decomposed scores of ESG performance into firm environmental (E), social (S), and governance performance (G), separately. Individual scores of E, S and G are obtained from Asset4. We report these results in Tables-3-5 and observe that largest shareholder negatively affects the governance score with no impact on other constituents of ESG. However, CEO's age strongly moderates the influence of the largest shareholder by through engaging more in social and governance performance (β = 0.009; p = 0.006; β = 0.028; p = 0.000 respectively) activities and thereby showing evidence of expropriation. Further, we find evidence of expropriation through higher ESG engagement by largest shareholders when firms have CEO's with outside experience and longer tenure. On the contrary, CEO's business education gives rise to PPC through moderating the linkage of social engagements and largest shareholders. However, surprisingly, CEO's longer tenure within a firm reduces PPC by weakening the largest shareholder's inclination to undertake more social performance.

Overall, we authenticate that CEO characteristics take an active role in moderating the relationship between the stake of largest shareholder in the firm and its engagement in ESG activities. Otherwise, we do not observe the evidence of engagement in ESG to gain the private benefits by the largest shareholders for Indian firms. Therefore, we conclude that engaging more in ESG activities is in no way is the evidence of expropriating other shareholders by the largest shareholder i.e., PPC conflicts, in order to extract more private social benefits (Delgado-García et al., 2010; La Porta et al., 2000). However, when the firm is run by an old CEO (Belenzon et al., 2019) or a busy CEO (Shiah-Hou and Cheng, 2012) or a CEO with long tenure (Henderson et al., 2006) within a firm, ESG engagement increases (DasGupta and Pathak, 2021; McCarthy et al., 2017), i.e., extracting private benefits by the largest shareholder at the expense of others happens. This implies that in a somewhat weak and manageable internal corporate governance environment largest shareholder rules within the firm to gain private benefits.

5. Conclusion and policy implications:

We contribute to the literature on ownership concentration, ESG performance and CEO characteristics by reporting the distinctive impact firm's largest (first) shareholder has in undertaking ESG performance in the emerging market context of India. We find no evidence of the possible PPC as the largest shareholder doesn't expropriate private benefits through more ESG performance. However, we observe that CEO's characteristics, and more specifically CEO's age, busyness and tenure play a strong moderating role in creating the largest shareholder-driven PPC. One of the possible limitations and scope for future researchers to look into is the role of governance mechanisms quality such as board independence, diversity, size, etc. in attenuating this type of PPC and also whether nation-level institutional environment can weaken such conflicts. The policy-makers and regulators should enforce more stringent regulations to monitor firm's intentions and implementation practices in ESG performance, especially for firms with CEO's characteristics having potential of giving rise to PPC.

Table 3: Regression results (basic model and moderation effects – environmental score)							
Variables	**Basic model**	**CEO Age moderation**	**CEO Busyness moderation**	**CEOOE moderation**	**CEO Tenure Moderation**	**CEO Education Moderation**	**CEO Remuneration Moderation**
Explanatory variable							
1st PSH	0.000 (0.992) [0.008]	-0.043 (0.202) [0.033]	-0.037 (0.352) [0.039]	0.008 (0.682) [0.019]	-0.043 (0.500) [0.064]	-0.004 (0.725) [0.010]	-0.017 (0.848) [0.090]
CEOAge		-0.828 (0.191) [0.631]					
CEOBusyness			-0.419 (0.869) [2.530]				
CEOOE				1.091 (0.692) [2.749]			
CEOTenure					-4.622 (0.443) [6.022]		
CEOEducation						-0.560 (0.568) [0.979]	
CEOREM							-1.230 (0.532) [1.969]
Interaction variables							
1stPSH*CEOAge		0.008 (0.664) [0.018]					
1stPSH*CEOBusyness			0.043 (0.698) [0.112]				
1stPSH*CEOOE				-0.017 (0.865) [0.101]			
1stPSH*CEOTenure					0.070 (0.533) [0.112]		
1stPSH*CEOEducation						0.001 (0.987) [0.044]	
1stPSH*CEOREM							0.008 (0.851) [0.042]
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.897	0.897	0.917	0.897	0.897	0.897	0.905
F stat (p value)	226.843 (0.000)	191.589 (0.000)	145.813 (0.000)	193.393 (0.000)	193.492 (0.000)	193.316 (0.000)	273.001 (0.000)

This table presents basic and moderation regression results. The dependent variable is environmental (E) performance and main independent variable is largest shareholder's (promoter's) holdings. Moderation impacts of CEO's characteristics of age, outside directorships (busyness), outside experience (OE), tenure within the firm, relevant education and remuneration (REM) are also shown here. We have also included firm-level control variables under panel fixed effect models with year fixed effects. Control results are not shown here for the sake of brevity. Heteroskedasticity robust firm-clustered standard errors are shown in third brackets and p values are reported in parentheses.

Table 3: Regression results (basic model and moderation effects – environmental score)							
Variables	**Basic model**	**CEO Age moderation**	**CEO Busyness moderation**	**CEOOE moderation**	**CEO Tenure Moderation**	**CEO Education Moderation**	**CEO Remuneration Moderation**
Explanatory variable							
1st PSH	0.000 (0.992) [0.008]	-0.043 (0.202) [0.033]	-0.037 (0.352) [0.039]	0.008 (0.682) [0.019]	-0.043 (0.500) [0.064]	-0.004 (0.725) [0.010]	-0.017 (0.848) [0.090]
CEOAge		-0.828 (0.191) [0.631]					
CEOBusyness			-0.419 (0.869) [2.530]				
CEOOE				1.091 (0.692) [2.749]			
CEOTenure					-4.622 (0.443) [6.022]		
CEOEducation						-0.560 (0.568) [0.979]	
CEOREM							-1.230 (0.532) [1.969]
Interaction variables							
1stPSH*CEOAge		0.008 (0.664) [0.018]					
1stPSH*CEOBusyness			0.043 (0.698) [0.112]				
1stPSH*CEOOE				-0.017 (0.865) [0.101]			
1stPSH*CEOTenure					0.070 (0.533) [0.112]		
1stPSH*CEOEducation						0.001 (0.987) [0.044]	
1stPSH*CEOREM							0.008 (0.851) [0.042]
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.897	0.897	0.917	0.897	0.897	0.897	0.905
F stat (p value)	226.843 (0.000)	191.589 (0.000)	145.813 (0.000)	193.393 (0.000)	193.492 (0.000)	193.316 (0.000)	273.001 (0.000)

This table presents basic and moderation regression results. The dependent variable is environmental (E) performance and main independent variable is largest shareholder's (promoter's) holdings. Moderation impacts of CEO's characteristics of age, outside directorships (busyness), outside experience (OE), tenure within the firm, relevant education and remuneration (REM) are also shown here. We have also included firm-level control variables under panel fixed effect models with year fixed effects. Control results are not shown here for the sake of brevity. Heteroskedasticity robust firm-clustered standard errors are shown in third brackets and p values are reported in parentheses.

Table 5: Regression results (basic model and moderation effects – governance score)							
Variables	**Basic model**	**CEO Age moderation**	**CEO Busyness moderation**	**CEOOE moderation**	**CEO Tenure Moderation**	**CEO Education Moderation**	**CEO Remuneration Moderation**
Explanatory variable							
1st PSH	**-0.108 (0.000) [0.016]**	**-0.162 (0.000) [0.022]**	-0.094 (0.053) [0.048]	**-0.131 (0.000) [0.012]**	**-0.269 (0.001) [0.076]**	**-0.121 (0.000) [0.025]**	-0.238 (0.058) 0.125]
CEOAge		**-0.964 (0.034) [0.451]**					
CEOBusyness			2.896 (0.555) [4.894]				
CEOOE				-3.447 (0.209) [2.737]			
CEOTenure					-15.648 (0.110) [9.762]		
CEOEducation						-1.725 (0.401) [2.050]	
CEOREM							-1.187 (0.666) [2.746]
Interaction variables							
1stPSH*CEOAge		**0.028 (0.000) [0.003]**					
1stPSH*CEOBusyness			0.087 (0.521) [0.135]				
1stPSH*CEOOE				**0.201 (0.003) [0.068]**			
1stPSH*CEOTenure					**0.270 (0.050) [0.138]**		
1stPSH*CEOEducation						0.069 (0.254) [0.060]	
1stPSH*CEOREM							0.064 (0.276) [0.059]
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.774	0.777	0.690	0.780	0.775	0.774	0.768
F stat (p value)	89.675 (0.000)	77.116 (0.000)	30.135 (0.000)	79.664 (0.000)	77.352 (0.000)	76.659 (0.000)	96.178 (0.000)
This table presents basic and moderation regression results. The dependent variable is governance (G) performance and main independent variable is largest shareholder's (promoter's) holdings. Moderation impacts of CEO's characteristics of age, outside directorships (busyness), outside experience (OE), tenure within the firm, relevant education and remuneration (REM) are also shown here. We have also included firm-level control variables under panel fixed effect models with year fixed effects. Control results are not shown here for the sake of brevity. Heteroskedasticity robust firm-clustered standard errors are shown in third brackets and p values are reported in parentheses.							

References:

Aharony, J., Wang, J., & Yuan, H. (2010). Tunneling as an incentive for earnings management during the IPO process in China. Journal of Accounting and Public Policy, 29(1), 1-26. https://doi.org/10.1016/j.jaccpubpol.2009.10.003

Aguilera, R. V., & Crespi-Cladera, R. (2016). Global corporate governance: On the relevance of firms' ownership structure. Journal of World Business, 51(1), 50-57. https://doi.org/10.1016/j.jwb.2015.10.003

Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An organizational approach to comparative corporate governance: Costs, contingencies, and complementarities. Organization science, 19(3), 475-492. https://doi.org/10.1287/orsc.1070.0322

Amore, M. D., Bennedsen, M., Larsen, B., & Rosenbaum, P. (2019). CEO education and corporate environmental footprint. Journal of Environmental Economics and Management, 94, 254-273. https://doi.org/10.1016/j.jeem.2019.02.001

Atkinson, L., & Galaskiewicz, J. (1988). Stock ownership and company contributions to charity. Administrative science quarterly, 82-100. https://doi.org/10.2307/2392856

Bansal, P., Gao, J., & Qureshi, I. (2014). The extensiveness of corporate social and environmental commitment across firms over time. Organization Studies, 35(7), 949-966. https://doi.org/10.1177/0170840613515564

Bartkus, B. R., Morris, S. A., & Seifert, B. (2002). Governance and corporate philanthropy: restraining Robin Hood?. Business & Society, 41(3), 319-344. https://doi.org/10.1177/000765030204100304

Belenzon, S., Shamshur, A., & Zarutskie, R. (2019). CEO's age and the performance of closely held firms. Strategic Management Journal, 40(6), 917-944. https://doi.org/10.1002/smj.3003

Brammer, S., & Millington, A. (2005). Corporate reputation and philanthropy: An empirical analysis. Journal of business ethics, 61(1), 29-44. https://doi.org/10.1007/s10551-005-7443-4

Callan, S. J., & Thomas, J. M. (2011). Executive compensation, corporate social responsibility, and corporate financial performance: a multi-equation framework. Corporate Social Responsibility and Environmental Management, 18(6), 332-351. https://doi.org/10.1002/csr.249

Chen, H., Hua, S., & Sun, X. C. (2018). CEO Age and the Persistence of Internal Control Deficiencies. Journal of Accounting & Finance (2158-3625), 18(7).
https://doi.org/10.33423/jaf.v18i7.459

Cheung, Y. L., Jing, L., Lu, T., Rau, P. R., & Stouraitis, A. (2009). Tunneling and propping up: An analysis of related party transactions by Chinese listed companies. Pacific-Basin Finance Journal, 17(3), 372-393
https://doi.org/10.1016/j.pacfin.2008.10.001

Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. Journal of financial Economics, 58(1-2), 81-112.
https://doi.org/10.1016/S0304-405X(00)00067-2

Clark, G. L., & Hebb, T. (2005). Why should they care? The role of institutional investors in the market for corporate global responsibility. Environment and planning A, 37(11), 2015-2031.
https://doi.org/10.1068/a38116

Crossland, C., Zyung, J., Hiller, N. J., & Hambrick, D. C. (2014). CEO career variety: Effects on firm-level strategic and social novelty. Academy of Management Journal, 57(3), 652-674.
https://doi.org/10.5465/amj.2012.0469

DasGupta, R. (2022). Financial performance shortfall, ESG controversies, and ESG performance: Evidence from firms around the world. Finance Research Letters, 46, 102487.
https://doi.org/10.1016/j.frl.2021.102487

DasGupta, R., & Pathak, R. (2021). Role of educational, regional and religious attributes of CEOs in performance of Indian family firms. International Journal of Managerial Finance.
https://doi.org/10.1108/IJMF-06-2021-0268

Deckop, J. R., Merriman, K. K., & Gupta, S. (2006). The effects of CEO pay structure on corporate social performance. Journal of Management, 32(3), 329-342.
https://doi.org/10.1177/0149206305280113

Delgado-García, J. B., De Quevedo-Puente, E., & De La Fuente-Sabaté, J. M. (2010). The impact of ownership structure on corporate reputation: Evidence from Spain. Corporate Governance: An International Review, 18(6), 540-556.
https://doi.org/10.1111/j.1467-8683.2010.00818.x

Desender, K. A., & Epure, M. (2014). Corporate governance and corporate social performance. GSE.
https://doi.org/10.5465/ambpp.2014.16483abstract

Dharwadkar, B., George, G., & Brandes, P. (2000). Privatization in emerging economies: An agency theory perspective. Academy of management review, 25(3), 650-669.
https://doi.org/10.2307/259316

Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, social and governance (ESG) scores and financial performance of multilatinas: Moderating effects of geographic international diversification and financial slack. Journal of Business Ethics, 168(2), 315-334. https://doi.org/10.1007/s10551-019-04177-w

Faccio, M., Lang, L. H., & Young, L. (2001). Dividends and expropriation. American economic review, 91(1), 54-78. https://doi.org/10.1257/aer.91.1.54

Fich, E. M. (2005). Are some outside directors better than others? Evidence from director appointments by Fortune 1000 firms. The Journal of Business, 78(5), 1943-1972. https://doi.org/10.1086/431448

Fich, E. M., & Shivdasani, A. (2012). Are busy boards effective monitors? In Corporate governance (pp. 221-258). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-31579-4_10

Friedman, E., Johnson, S., & Mitton, T. (2003). Propping and tunneling. Journal of Comparative Economics, 31(4), 732-750. https://doi.org/10.1016/j.jce.2003.08.004

Geletkanycz, M. A., & Boyd, B. K. (2011). CEO outside directorships and firm performance: A reconciliation of agency and embeddedness views. Academy of management journal, 54(2), 335-352. https://doi.org/10.5465/amj.2011.60263094

Gomes-Casseres, B. (2005). Reshape Competition. Handbook of strategic alliances, 39. https://doi.org/10.4135/9781452231075.n3

Goodrick, E., & Salancik, G. R. (1996). Organizational discretion in responding to institutional practices: Hospitals and cesarean births. Administrative science quarterly, 1-28. https://doi.org/10.2307/2393984

Hambrick, D. C. (2007). Upper echelons theory: An update. Academy of management review, 32(2), 334-343. https://doi.org/10.5465/amr.2007.24345254

Hausman, J. A. (1978). Specification tests in econometrics. Econometrica: Journal of the econometric society, 1251-1271. https://doi.org/10.2307/1913827

He, W., Zhang, Z., & Zhu, S. (2008). Ownership structure and the private benefits of control: An analysis of Chinese firms. Corporate Governance, 8(3), 286-298. https://doi.org/10.1108/14720700810879178

Henderson, A. D., Miller, D., & Hambrick, D. C. (2006). How quickly do CEOs become obsolete? Industry dynamism, CEO tenure, and company performance. Strategic Management Journal, 27(5), 447-460.
https://doi.org/10.1002/smj.524

Jensen, M., and W. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and

Ownership Structure," Journal of Financial Economics , 3 (1976), pp. 305-360.
https://doi.org/10.1016/0304-405X(76)90026-X

Kim, C. H., Amaeshi, K., Harris, S., & Suh, C. J. (2013). CSR and the national institutional context: The case of South Korea. Journal of business research, 66(12), 2581-2591.
https://doi.org/10.1016/j.jbusres.2012.05.015

Kor, Y. Y., & Sundaramurthy, C. (2009). Experience-based human capital and social capital of outside directors. Journal of management, 35(4), 981-1006.
https://doi.org/10.1177/0149206308321551

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. The journal of finance, 54(2), 471-517.
https://doi.org/10.1111/0022-1082.00115

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. Journal of financial economics, 58(1-2), 3-27.
https://doi.org/10.1016/S0304-405X(00)00065-9

Li, H., Hang, Y., Shah, S. G. M., Akram, A., & Ozturk, I. (2020). Demonstrating the impact of cognitive CEO on firms' performance and CSR activity. Frontiers in Psychology, 11, 278.
https://doi.org/10.3389/fpsyg.2020.00278

Li, J., & Qian, C. (2013). Principal-principal conflicts under weak institutions: A study of corporate takeovers in China. Strategic Management Journal, 34(4), 498-508.
https://doi.org/10.1002/smj.2027

Li, S., Wu, H., & Song, X. (2017). Principal-principal conflicts and corporate philanthropy: Evidence from Chinese private firms. Journal of business ethics, 141(3), 605-620.
https://doi.org/10.1007/s10551-015-2720-3

Mahoney, L. S., & Thorne, L. (2005). Corporate social responsibility and long-term compensation: Evidence from Canada. Journal of Business Ethics, 57(3), 241-253.
https://doi.org/10.1007/s10551-004-5367-z

Manner, M. H. (2010). The impact of CEO characteristics on corporate social performance. Journal of business ethics, 93(1), 53-72.
https://doi.org/10.1007/s10551-010-0626-7

Martin, V., Hurn, S., & Harris, D. (2013). Econometric modelling with time series: specification, estimation and testing. Cambridge University Press. https://doi.org/10.1017/CBO9781139043205

Masulis, R. W., & Mobbs, S. (2014). Independent director incentives: Where do talented directors spend their limited time and energy? Journal of financial economics, 111(2), 406-429. https://doi.org/10.1016/j.jfineco.2013.10.011

McCarthy, S., Oliver, B., & Song, S. (2017). Corporate social responsibility and CEO confidence. Journal of Banking & Finance, 75, 280-291. https://doi.org/10.1016/j.jbankfin.2016.11.024

Meyer, A. (2015). Does education increase pro-environmental behavior? Evidence from Europe. Ecological economics, 116, 108-121. https://doi.org/10.1016/j.ecolecon.2015.04.018

Miller, D., & Xu, X. (2020). CEO long-term orientation and elite university education. Strategic Organization, 18(4), 520-546. https://doi.org/10.1177/1476127019840765

Mukherjee, T., & Sen, S. S. (2022). Impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth: evidence from India. Financial Innovation, 8(1), 1-50. https://doi.org/10.1186/s40854-022-00344-7

Mutlu, C. C., Mutlu, S., & Sauerwald, S. (2021). CEO outside directorships and managerial efficiency: The role of host board capital. Corporate Governance: An International Review, 29(1), 45-66. https://doi.org/10.1111/corg.12337

Peng, C. W., & Yang, M. L. (2014). The effect of corporate social performance on financial performance: The moderating effect of ownership concentration. Journal of Business Ethics, 123(1), 171-182. https://doi.org/10.1007/s10551-013-1809-9

Sanders, W. G., & Hambrick, D. C. (2007). Swinging for the fences: The effects of CEO stock options on company risk taking and performance. Academy of Management Journal, 50(5), 1055-1078. https://doi.org/10.5465/amj.2007.27156438

Sarkar, J., & Sarkar, S. (2000). Large shareholder activism in corporate governance in developing countries: Evidence from India. International Review of finance, 1(3), 161-194. https://doi.org/10.1111/1468-2443.00010

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. The journal of finance, 52(2), 737-783.
https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Shi, W., & Veenstra, K. (2021). The moderating effect of cultural values on the relationship between corporate social performance and firm performance. Journal of business ethics, 174(1), 89-107.
https://doi.org/10.1007/s10551-020-04555-9

Shiah-Hou, S. R., & Cheng, C. W. (2012). Outside director experience, compensation, and performance. Managerial Finance.
https://doi.org/10.1108/03074351211255146

Singla, C., George, R., & Veliyath, R. (2017). Ownership structure and internationalization of Indian firms. Journal of Business Research, 81, 130-143.
https://doi.org/10.1016/j.jbusres.2017.08.016

Su, Y., Xu, D., & Phan, P. H. (2008). Principal-principal conflict in the governance of the Chinese public corporation. Management and Organization Review, 4(1), 17-38.
https://doi.org/10.1111/j.1740-8784.2007.00090.x

Wei, J., Ouyang, Z., & Chen, H. A. (2018). CEO characteristics and corporate philanthropic giving in an emerging market: The case of China. Journal of Business Research, 87, 1-11.
https://doi.org/10.1016/j.jbusres.2018.02.018

Xu, D., Zhou, K. Z., & Du, F. (2019). Deviant versus aspirational risk taking: The effects of performance feedback on bribery expenditure and R&D intensity. Academy of Management Journal, 62(4), 1226-1251.
https://doi.org/10.5465/amj.2016.0749

Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal-principal perspective. Journal of management studies, 45(1), 196-220.
https://doi.org/10.1111/j.1467-6486.2007.00752.x