Financial Innovation

RESEARCH Open Access

Impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth: evidence from India

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Abstract

This article investigates the impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth in India. Using static panel data methodology for a sample of NSE listed leading 138 non-financial companies over the time-frame 2011 to 2018, we find that CEO remuneration and tenure maintains significant positive associations with corporate reputation, while duality and CEO busyness are found to be associated with corporate reputation negatively. The results also show that female CEOs and CEO remuneration are associated with corporate financial performance positively, whereas CEO busyness, as expected, holds a significant negative relationship with corporate financial performance. Moreover, the results demonstrate that CEO age is associated with corporate sustainable growth negatively, while tenure appears to have a significant and positive association with corporate sustainable growth. The results are robust to various tests and suggest that in the Indian context, demographic and job-specific attributes of CEOs exert significant influence on corporate reputation, financial performance, and corporate sustainable growth. The empirical findings would provide a basis for the shareholders and companies to identify areas of consideration when appointing CEOs and determining their roles and responsibilities.

Keywords: CEO attributes, Corporate reputation, Financial performance, Corporate sustainable growth, Panel data methodology

JEL Classification: G30, G40, L25

Introduction

Leadership in organizations, regardless of size and form, is considered crucial to their success and growth (Wood and Vilkinas 2005). In today's vibrant corporate world, characterized by heightened market competitions, technological changes, volatility in inflation and interest rates, fluctuating exchange rates, tax law changes, and environmental issues, among others (Van Horne and Wachowicz 2015), the role of top management, especially CEO's, in shaping the organization as a whole is indispensable (Gordon et al. 2021; Li and Singal 2017; Berson et al. 2008). The CEO holds the top position in a firm

(Ting et al. 2017) and certainly, the face of the company (Gorn et al. 2008, as cited in Canace et al. 2020). The authority of overseeing the company's overall operations, making crucial strategic choices, and assessing the efficient use of the company's resources is entrusted to the CEO (Lindeman 2019). As such, within any organization, "the lever of power is uniquely concentrated in the hands of the CEO" (Nadler and Heilbern 1998, as cited in You et al. 2020), and arguably even the obligations, to set the direction of the firm (Hambrick and Mason 1984).

Given the strategic importance of the CEO's role, researchers and practitioners have become increasingly interested in exploring how CEOs affect the organizations that they lead. One of the primary ways that CEOs influence the way their firms manoeuvre, as argued by Berson et al. (2008), is by articulating the different sets of values they hold. An individual's value system includes his or her beliefs regarding acceptable modes of conduct in specific contexts, acting as principles that guide actions (Kluckhohn 1951). CEOs imprint their firms with their values through their strategic decisions (Agle et al. 1999). Moreover, the choices of executives, as argued by Zhu and Chen (2015a, 2015b), are swayed by their disposition and pre-existing experiences, and they choose organizational strategies that match their managerial schemas and preferences (as cited in Al-Shammari et al. 2019). Consistent with this, strategic decisions, according to strategic choice theory, are influenced by the beliefs, psychology, and experience of the main actors in an organization (Zor et al. 2019). This is because managerial decisions are dependent on how the decision-makers evaluate the organizations' position (Child 1997). The empirical literature provides strong support to the very notion that CEO's value system, disposition, and pre-existing experience proxied by CEO's demographic, psychological and job-specific attributes do matter and exert significant influence on their strategic choices and actions such as capital budgeting practices (see Zor et al. 2019), corporate risk-taking (see Martino et al. 2020; Farag and Mallin 2016), investment decisions (see Gupta et al. 2018; Serfling 2012; Li et al. 2011), corporate leverage (see Nilmawati et al. 2021; Kaur and Singh 2020; Ting et al. 2015; Tomak 2013), dividend policy (See Briano-Turrent et al. 2020), financial reporting policy (see Huang et al. 2012), merger and acquisition (see Li and Tang 2010; Brown and Sarma 2007), earnings management practices (Bouaziz et al. 2020; Qawasmeh and Azzam 2020), R&D spending (see Barker III and Mueller 2002; Lefebvre and Lefebvre 1992), and CSR practices (Xu and Hou 2021; Tran and Pham 2020; Li et al. 2020; Huang 2013), among others.

Similarly, upper echelons theory (Hambrick and Mason 1984) suggests that "firms are the mirror reflection of top management, and their performance is significantly influenced by the experiences, values, and personalities of decision-makers" (as cited in Gupta and Mahakud 2020). Hence, being a crucial member of the top management team and a decision-maker, CEOs influence organizational outcomes and structures through their strategic choices and actions, which are eventually a reflection of their characteristics (Finkelstein and Hambrick 1996). On the contrary, researchers, for example, Galbraith (1984) and Aldrich (1979) argue that top executives' efforts and leaderships do make a very little or no impact on corporate outcomes; corporate outcomes are the product of industry and company-specific factors. Furthermore, organizational outcomes are driven by environmental factors and industry trends, not by the work of top executives or their functional backgrounds (Bruton et al. 2010; Scott 2007). It's

worth noting, however, that the contextual variables, for example, industry and company-specific factors, technological factors, and environmental factors are the tangential elements and do make a very little difference in corporate outcomes (Child 1972, 1997). Because it is not these variables that decide and act; it is managers who decide the strategic action(s) to adopt in a particular context and how to use them (Zor et al. 2019)—and they likely differ in their traits, notably, their education, age, experience, and personality, among others. Accordingly, a CEO's psychological and observable traits do influence his or her choices and actions and hence organizational outcomes (Ren et al. 2020; Wang and Chen 2020; Gupta et al. 2018; Baker and Wurgler 2013; Chatterjee and Hambrick 2007). This view is supported by prior empirical research. With respect to demographic and job-specific attributes, for example, Lim and Lee (2019) find that the characteristics of CEOs such as tenure, ownership, and affiliation exert significant influence on corporate cash holding in Korea. In investigating the relationship between CEO attributes and corporate value, Liu and Jiang (2020) observe that CEO attributes like tenure and political ties are significantly associated with the value of the firm in China. More recently, the research by Edi et al. (2020) indicate that firms can maximize their reputation and performance by choosing experienced, capable and aggressive CEOs in Indonesia. You et al. (2020) find that CEOs attributes such as demographics, experience and compensation affect a firm's innovation and stock returns. Using North American publicly traded hospitality companies as a sample, Li and Singal (2017) find that CEOs attributes such as gender, age, and experience maintains significant associations with corporate financial performance as measured by ROA, Tobin's q and stock return. Likewise, many other studies (e.g. Bandiera et al. 2020; Saidu 2019; Wei et al. 2018; Kaur and Singh 2018a; Weng and Chen 2017; Diks 2016; Amran et al. 2014; Peni 2014) documents very similar results, supporting upper echelons theory. Furthermore, empirical studies provide evidence that knowledge about CEO's inherent personality traits, for instance, overconfidence (see Hirshleifer et al. 2012; Doukas and Petmezas 2007; Malmendier and Tate 2005), narcissism (see Brouwer 2018; Wang 2016), risk-tolerance (see Gordon et al. 2021), military background (see Lin et al. 2018; Benmelech and Frydman 2015), and political ideology (see Wei et al. 2018; Kashmiri and Mahajan 2017; Unsal et al. 2016), among others, are important and relevant for firms to operate efficiently.

The characteristics of CEOs do matter for improving corporate financial performance, as reported by several studies; no matter whether the enterprises are large, micro, small or medium-sized. Moreover, the leadership behaviour of the CEO, as argued by Ren et al. (2020) and Love et al. (2017) may influence the enterprises' sustainable growth and reputation as his/her strategic decision-making directly affects the enterprise's financial performance. However, it seems that prior studies have focused extensively on investigating the linkage between CEOs attributes and corporate financial performance—a short-term perspective, no emphasis to the best of our knowledge has been given to the enterprises' long-term dimensions —′ the engine for value creation and business sustainability'. Notably, at present, the concept of sustainable growth seems to have captivated the broad-based attention that traditional growth concepts lack (Mensah 2019), and gradually, the paradigm is becoming an integral part of the agenda of the corporate world too (Mukherjee and Sen 2019b). A mere maximizing growth perhaps may assist the firm to accomplish its short-term goals, but not the long-run objective what

they seek to—the 'value-creation' (Ramezani et al. 2001). The value-creation maximizes around the sustainable growth rate of an organization and decreases sharply, once actual growth exceeds the sustainable growth rate (Ataünal et al. 2016). In conjunction, managers are very concerned about establishing and maintaining a positive overall reputation (Schulz and Flickinger 2018). Because they did realize that in the recent highly competitive and dynamic business environment, corporate reputation is a valuable intangible asset—capable of influencing a firm's ability to create and sustain competitive advantage in the market (Deephouse 2000; Barney 1991), ensuring business sustainability. Given the strategic importance, whether the characteristics of the CEO affect the corporate reputation and corporate sustainable growth are still untapped to date.

Moreover, with exception to a few (e.g. Friedmann et al. 2018; Kaur and Singh 2018a; Raithatha and Komera 2016; Pandey et al. 2015), not much research has demonstrated the profound influence of the characteristics of CEOs on corporate outcomes in the context of the Indian market. With a population base of more than 1.25 billion, India is the world's largest democracy. Over the years, the country has emerged as an attractive investment destination, a manufacturing hub (Vaish and Daruwala 2021). "The capital markets in India are one of the fastest-growing markets in the world, attracting huge foreign investments" (Charantimath 2020, p. 140). According to a recent report by FICCI and Economic Survey of India, the country has received an eye-catching foreign direct investment (FDI) inflow of USD 81.72 billion in the fiscal year 2020–2021, attaining a 10 per cent rate of growth year-over-year (Loss and Bascunan 2020). And it is expected that the manufacturing sector of India could reach USD 1 trillion by 2025, with the sector accounting for around 25 per cent of the GDP and creating 90 million domestic jobs by that period (Charantimath 2020). More importantly, the country's economy, as per the World Bank's latest projection, is expected to grow at 8.3 per cent for the fiscal year 2021–2022, prompting many prominent global companies to create a niche in this emerging market (Khanka 2020).

Therefore, the present study endeavours to investigate the impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth in India. In doing so, this study contributes to the extant literature in several ways. First, the prior researches (e.g. You et al. 2020; Lim and Lee 2019; Ernestine and Setyaningrum 2019; Kaur and Singh 2018a; Bandiera et al. 2017; Diks 2016; Katsaros et al. 2015; Amran et al. 2014) have primarily focused on the effects of CEO attributes on corporate financial performance—a short-term perspective. This study by integrating corporate reputation and corporate sustainable growth within the existing framework shows the impact of CEOs attributes on both corporate perspectives, viz. short-term and long-term goals under one roof. Second, as mentioned, with exception to a few (e.g. Friedmann et al. 2018; Kaur and Singh 2018a; Raithatha and Komera 2016; Pandey et al. 2015), not much research has demonstrated the profound influence of the characteristics of CEOs on corporate outcomes in the context of the Indian market. The present study contributes to the existing literature by presenting the first-ever empirical evidence from an emerging economy like India on the impact of CEO's attributes on three diverse corporate dimensions, viz. corporate reputation, financial performance, and corporate sustainable growth. Third, the majority of the earlier studies exploring the effects of CEO traits on corporate outcomes have either focused on the CEO's demographic characteristics (e.g. Ghardallou

et al. 2020; Briano-Turrent et al. 2020; Saidu 2019; Lunkes et al. 2019; Li and Singal 2017; Baloyi and Nwakwe 2017; Zhang et al. 2016; Huang 2013) or job-specific traits (e.g.Zoghlami 2021; Al-Shammari 2021; Wijethilake and Ekanayake 2019; Schulz and Flickinger 2018; Smirnova and Zavertiaera 2017; Raithatha and Komera 2016; Duru et al. 2016; Pandey et al. 2015). This study also enriches the existing literature by introducing both the demographic and job-specific attributes of the CEO under one roof, capturing a comprehensive picture of the CEO's identity in explaining corporate reputation, financial performance, and corporate sustainable growth. Fourth, most importantly, the present study uses several alternative specifications and estimation techniques for data analysis, including 2SLS, 3SLS, and dynamic Sys-GMM to control for endogeneity issues effectively. Fifth, this study contributes to the framework upon which the policy-makers could take appropriate policies on corporate governance and other codes of best practice. Sixth, this research provides a basis for the shareholders and companies to identify areas of consideration when appointing CEOs and determining their roles and responsibilities. Finally, this research can be an essential source of information for investors and corporate managers when it comes to formulating and implementing investment policy.

The remainder of the paper proceeds as follows: Sect. 2 presents the review of relevant literature and the development of hypotheses. Section 3 describes the sample, research model, and variables. Section 4 presents empirical analysis and hypotheses testing results. Section 5 discusses the results, and Sect. 6 concludes the paper.

Literature review and development of hypotheses

Theoretical perspectives

There has been a dramatic increase in academic interest in the top executives of business organizations. A key theory that has accompanied and most likely fueled this upsurge in interest in top executives—the Upper Echelons theory (Nielsen 2010; Finkelstein et al. 2009; Carpenter et al. 2004, as cited in Hiebl 2014). Upper Echelons theory was initially introduced by Hambrick and Mason (1984), which posits that "an organization is a reflection of its top executives". This theory postulates that top executives analyze situations and prospective decisions via a lens, sculpted by their attributes (Hambrick et al. 2015). These lenses thereby leverage the strategic choice (e.g. innovation, diversification, capital structure, and dividend policy, among others) and organization performance (e.g. profitability, growth, and survival, among others) (Thijssen 2017; Carpenter et al. 2004). This suggests that organizational outcomes, strategic choices and actions and level of performance are determined by executives' background attributes or traits (Hambrick and Mason 1984). The theory, further states that top executives' discretion is largely influenced by cognitive, psychological and social factors (Farag and Mallin 2016). However, cognitive bases and values are hard-to-obtain variables; information regarding these aspects is quite difficult to acquire (Kaur and Singh 2020). Given the challenge of quantifying cognition and perception, the upper echelons perspective views observable demographic traits as measures for cognitive frames (Hambrick 2007, as cited in Guathier et al. 2019). Such observable demographic attributes include age, tenure, functional background, education, socio-economic roots, and financial position, among others (Zandi et al. 2019; López-Munoz and Escribá-Esteve 2017). On the other side of the spectrum, scholars, for instance, Aldrich (1979), Hall (1977), and Lieberson and

O'Connor (1972) do hold a completely different notion, that organizational outcomes are the product of industry and company-specific factors; top executive's efforts and leaderships does make a very little or no impact on corporate performance (Galbraith 1984). Similarly, the proponents of institutional theory argue that organizational performance is driven by environmental factors and industry trends, not by the work of top executives or their functional backgrounds (Bruton et al. 2010; Scott 2007). They put forward that business units and institutions are not merely the production houses, rather they are social and cultural systems being composed of cultural-cognitive, normative, and regular components that, in conjunction with related activities and resources, influence the way various groups, business units and firms position themselves to pursue their long term goals of profitability, sustainability and survival. Nevertheless, drawing on the upper echelons theory, we argue that CEOs strategic choices and actions are largely swayed by their demographic attributes such as age, gender, education, tenure, and nationality, among others, and these attributes are likely to influence corporate reputation, financial performance and sustainable growth, either directly or indirectly through organizational outcomes. For example, younger CEOs, as argued by Hambrick and Mason (1984), tend to take on greater risks than older ones, which will be reflected in their strategic actions and, over time, in the organization's outcomes. Better-educated CEOs, for instance, are expected to have a greater cognitive ability to process information and to adopt sophisticated systems, which will be reflected in their strategic actions and choices and, in due course, in the organization's outcomes (Elsharkawy et al. 2018).

Another theory that is gaining traction in research on the relationship between CEO characteristics and corporate outcomes is the resource dependence theory (see Kaur and Singh 2018a; Farag and Mallin 2016). This theory explains "the role and implications of inter-corporate ownership linkages in managing input–output dependencies" (McNaughton and Cozzarin 2014, p. 3). The resource dependence theory posits that a company's internal environment, including its resources and capabilities, is important for gaining a competitive advantage (Teece et al. 1997, as cited in Arosa et al. 2013). This translates to the view that a top management team is a strategic resource for obtaining and securing the firm's critical resources (Pfeffer and Salancik 1978). A company can use their top management team as a vehicle to interact with potential companies with whom it is interconnected (Pfeffer 1973). This, as a result, can reduce the organization's reliance on external contingencies (Pfeffer and Salancik 1978), reduce the firm's uncertainty (Pfeffer 1973), cut transaction costs (Williamson 1984), and eventually aid in the firm's growth and survival (Krause et al. 2016; Nicholson and Kiel 2007; Singh et al. 1986). We argue that different CEO attributes, viz. gender, education, tenure, nationality, and busyness, among others, bring to the top management team different strategic resources, such as perspectives, expertise, skills, backgrounds and knowledge, and can thus influence corporate reputation, financial performance and sustainable growth. For example, CEOs holding additional positions in other companies are likely to bring to the firms a wide range of strategic resources, including industry expertise, experience, knowledge and skills, which can have an impact on corporate outcomes (Harymawan et al. 2019; Hillman and Dalziel 2003). Hiring overseas CEOs, for instance, may bring in a different set of information-processing, resource-seeking, legitimacy-building abilities and risk attributes, which can influence firms' competitiveness (Sebbas 2017).

Furthermore, experience and education, according to Human Capital theory, are the core human capital an individual possesses (Becker 1975). Education and experience allow individuals to pile a stock of knowledge, skills and expertise that (Becker 1962), when ingrained, can constitute valuable, non-imitable, scarce, and non-substitutable resources which are a potential source of competitive advantage (Barney 1991) and superior performance for the organization (Altuwaijri and Kalyanaraman 2020; Mukherjee and Sen 2019a; Patzelt 2010; Becker 1962). This theory postulates that different top executives or different personnel may bring to the organization unique human capital, including different perspectives, backgrounds and experiences, which can prove beneficial for the future development path of the organization (Nielsen and Huse 2010; Hillman et al. 2000). The human capital theorists argue that the more skilled and competent the organization's personnel, the more likely the organization will attain its strategic goals and surpass competitors in the near future, maximizing the shareholders' wealth (Tumwine et al. 2014; Hitt et al. 1994). Particularly, the human characteristics of top executives, as argued by Farag and Mallin (2016) and Patzelt (2010), are crucial for the attainment of desired organizational performance, growth and sustainability since they are the ones that draw strategic decisions (Hambrick and Mason 1984). Based on human capital theory, we argue that different demographic attributes of CEO's, in particular gender, education, tenure, and nationality bring to the organization different human capitals, including perspectives, expertise, skills, backgrounds and knowledge, and can thus influence corporate reputation, financial performance and sustainable growth. For example, longer-tenured CEOs are likely to bring in human capital including vast experience and considerable expertise, which can influence organizational performance and sustainability (Esho and Verhoef 2020; Dong et al. 2007). Female CEOs, for instance, bring forward unique human capital including new opinions and perspectives, which can have an impact on corporate outcomes (Nielsen and Huse 2010).

Kaur and Singh (2018a) argued that the agency lens is instrumental for comprehending the nexus between top-level executives, a firm's strategic direction, and overall performance. Agents or managers may not always act in the best interest of shareholders' once the control and ownership are separated (Bonazzi and Islam 2007). This is because "an individual is self-interested and self-opportunist, rather than altruistic" (Rashid 2010). Agency theory discusses the problems and solutions connected to the delegation of authority from principals (shareholders) to agents (managers) in the context of conflicting interests between the parties (Panda and Leepsa 2017; Linder and Foss 2015). The theory attempts to align managers' interests with those of shareholders' by establishing a good governance framework tying appropriate incentives and adequate monitoring mechanisms (Berk and Demarzo 2016). This translate to the view that agency theory gives an idea of what may control the actions and motives of the top-level executives that, directly or indirectly may have an impact on the firm's outcomes (Kaur and Singh 2018a; Panda and Leepsa 2017). Soloman (2007), drawing on agency theory, argue that CEO attributes such as duality and tenure lead to the fortification of authority and power which may encourage CEO entrenchment by weakening or lowering the efficacy of the board's supervision. Unless confined, such a powerful CEO will engage in self-serving activities or actions that may be detrimental to the owners' financial well-being (Elsayed 2007). On the other hand, the stewardship theorists (e.g. Duru et al. 2016;

Miller and Sardais 2011; Donaldson and Davis 1991) contend that non-financial factors such as intrinsic satisfaction from achievement, recognition, respect and reputation motivate CEOs to maximize corporate value. Therefore, the best stewardship role can only be executed when the CEO has the authority and power to do so; such a power and authority a CEO accumulates, only when he serves the company for several years in the same position (as CEO) or performs a dual role (Schillemans and Bjurstrøm 2020).

Hypotheses

CEO gender

CEO gender has been the theme of several corporate governance-related articles where the aim is set at determining whether gender has an impact on corporate outcomes. The resource dependence theory suggests that female executives bring in different knowledge resources, relationship resources and mindset resources which would replenish the resource deficiency of the top management teams populated completely with male executives (Zhang et al. 2016). Female executives often offer contrasting opinions, thereby adding to discussion new dimensions, including more innovative and creative solutions to complex problems (Ye et al. 2019; Terjsen et al. 2009). Putri and Rusmanto (2019) argued that although men and women do the same task, their way of handling and finishing the tasks are quite different. Women have more unwavering and matured emotions (Wani and Masih 2015), are more risk-averse (Farag and Mallin 2016; Croson and Gneezy 2009; Weber et al. 2002), and are accustomed to multitasking (Ruderman et al. 2002) as compared to men; therefore, female CEO's are more effective in coordinating, controlling, and supervising the management, which in turn may improve the firm performance (Adams et al. 2011; Adams and Ferreira 2009). On the other hand, academics and scholars, for example, Torchia et al. (2018), Adams et al. (2015), and Erhardt et al. (2003) do hold a completely different notion. They argued that increasing heterogeneity in top executive teams may impede team communication and collaboration; such situations could result in a significant increase in the cost of decision-making along with the risk of conflicts within the top management team, which may weaken corporate performance (Zhang et al. 2016).

Empirical studies showed mixed and inconclusive results. For example, Davis et al. (2010) show that the companies led by female CEOs attain higher market growth and better financial performance than the companies led by male CEOs. Francoeur et al. (2008) document that firms' with female CEOs generate positive abnormal stock returns in a complex environment. Faccio et al. (2016) indicate that firms run by female CEOs are characterized by less volatile earnings and higher survivability. Peni and Vähämaa (2010) discover that female CEOs are more conservative when implementing earning management activities. Lindeman (2019), Eduardo and Poole (2016), and Khan and Vieito (2013) find that firms with female CEOs exhibit lower risk levels, and perform better on average. In contrast, using the US sample, Adams and Ferreira (2009) document a significant negative relationship between the proportion of female executives and corporate performance. Similarly, Singhathep and Pholphirul (2015), Lee and Marvel (2014), and Amran (2011) observe that the firms led by male CEOs perform better than the firms led by female CEOs. On the other hand, Kaur and Singh (2018a) document no significant association between CEO gender and corporate performance, as measured

by ROA. In the same line, using Brazilian companies as a sample, Lunkes et al. (2019) find no link between CEO gender and the financial performance of companies. Using all the listed Bucharest Stock Exchange companies as a sample, Vintilă et al. (2015) also find very similar results.

Despite the contradictory evidence presented by the above theoretical and empirical studies on the costs and benefits of female CEOs, we expect female CEOs to have a favourable impact on company outcomes. Thus, we propose the following:

- H_{1a}: CEO gender has a positive impact on corporate reputation.
- H_{1b}: CEO gender has a positive impact on corporate financial performance.
- H_{1c}: CEO gender has a positive impact on attaining corporate sustainable growth.

CEO age

The chronological age of the CEO reflects his/her life experience and history (Mouta and Meneses 2021), and is believed to play a crucial role in the firm's decision-making process, and thus in its performance (Tarus and Aime 2014). The existing literature has highlighted two schools of thought concerning the effect of a CEO's age on corporate performance. The first school of thought posits that younger CEOs face higher risks when making decisions and may avoid radical actions which may hurt corporate performance (e.g. Putri and Rushmanto 2019; Sitthipongpanich and Polsiri 2015; Peni 2014; Holmström 1999; Zwiebel 1995; Hirshleifer and Thakor 1992; Scharfstein and Stein 1990). They argue that older CEOs are likely to make more rational decisions compared to younger CEOs, who inevitably have less understanding of the company and less experience in the business. While the second school of thought put forward more conservatism on the part of older CEOs (e.g. Serfling 2014; Li et al. 2014; Amran et al. 2014; Robert and Rosenberg 2006; Bertrand and Schoar 2003; Prendergast and Stole 1996; Hambrick and Mason 1984; Child 1974). They believe that as CEOs get older they tend to accept less risk; moreover, they are less likely to bring up new ideas, because they are more conservative. While younger CEOs are usually risk lovers, who are likely to make bolder decisions and riskier investments, which in turn may bring in superior corporate performance.

The empirical evidence is mixed. For example, Carter et al. (2010) find that companies led by older CEOs perform better. Child (1974) documents that the firms led by younger CEOs exhibit higher return volatility. Peni (2014) noted that older CEOs are associated with positive firm performance. More recently, Li et al. (2020) also observe very similar results that CEO age is positively interlinked with the growth and CSR activity of the firm in China. However, Amran et al. (2014) and Davidson et al. (2007) show that CEO's age negatively affects corporate performance, indicating that younger CEOs are associated with positive firm performance. Bhabra and Zhang (2016) find that the companies led by younger CEOs attain higher average growth than the companies led by older ones. Using a sample of owner-managed private firms in three Western European countries, Belenzon et al. (2019) document that as the CEO ages, the firm experiences lower investment, lower sales growth, and lower profitability. Likewise, many other studies document very similar results (e.g. Farag and Mallin 2016; Graham et al. 2013; Barker

III and Mueller 2002). On the other hand, Lindeman (2019), Educardo and Poole (2016), and Vintilă et al. (2015) did not find any linkage between the CEO's age and Corporate Performance. In the same line, Liu and Jiang (2020) document no significant association between CEO age and corporate performance in China.

In the context of this study, we expect the negative effect of CEO age to overshadow any potential positive effects it has. Thus, we propose the following:

- H_{2a}: CEO age has a negative impact on corporate reputation.
- H_{2b}: CEO age has a negative impact on corporate financial performance.
- H_{2c}: CEO age has a negative impact on attaining corporate sustainable growth.

CEO education

Executives with sound educational qualifications provide valuable human capital for a company (Lunkes et al. 2019). The level of education, to a certain extent, reflects one's value system and cognitive preferences (Hambrick 2007). A good level of education has significance in raising the managers' prestige hence enabling them to give out optimum decisions (Certo 2003). Sitthipongpanich and Polsiri (2015) believe executives with higher levels of education have greater cognitive complexity enabling them to learn and accept new ideas. In support, Barker III and Mueller (2002) affirm that CEOs with sound educational backgrounds are less risk-averse and tend to accept new ideas, innovative changes, and investment opportunities. Moreover, better-educated CEOs have finer training, substantial cognitive growth, and a wealthy knowledge box that possibly could shape future corporate performance towards the desired direction by developing their decision-making and encouraging more strategic action (Wei et al. 2018; Dragoni et al. 2011). This view is supported by many prior empirical studies. For example, using a large sample of Chinese firms, Lin et al. (2011) find a positive association between CEO's educational background and innovation. Barker III and Mueller (2002) observe that CEOs with an advanced science degree are less risk-averse and more inclined to spend in R&D activities. More recently, using a Nigerian sample, Saidu (2019) show that the companies led by well-educated CEOs perform better than the other companies. Ghardallou et al. (2020) find that the companies with CEOs who possess a postgraduate degree(s) have much better stock performance. Similarly, Kokeno and Muturi (2016), Wang et al. (2016), Koyuncu et al. (2010), Jalbert et al. (2010), Warren and Thomas (2005), Rajagopalan and Datta (1996), and Berkeley et al. (1991) document the very similar results. However, Kaur and Singh (2018a), Morresi (2017), Lindorff and Jonson (2013), Ayaba (2012), Gottesman and Morey (2010) did not find any noticeable impact of CEO's education on corporate performance.

Nevertheless, we believe CEOs with a higher educational background are more knowledgeable and skilful and can provide more innovative and creative solutions. Thus, we hypothesize:

- H_{3a}: CEO education has a positive impact on corporate reputation.
- H_{3b}: CEO education has a positive impact on corporate financial performance.
- H_{3c}: CEO education has a positive impact on attaining corporate sustainable growth.

CEO duality

CEO duality is considered to be an important mechanism of the board control structure (Bathula 2008). 'Duality' represents the situation in which the titles of both the board chair and CEO go to one individual (Rashid 2010). Simply put, duality is a board leadership structure in which the CEO wears two hats; one as the CEO of the firm, the other as chairman of the board of directors (Rechner and Dalton 1991). Finkelstein and Hambrick (1996) argue that CEO duality is essential for strong firm leadership and power in managing the firm operations. A CEO with consolidated power provides more clarity regarding the leadership and direction of the firm, allowing for more productive dealings with external parties (Dalton et al. 1998). Moreover, the concentration of power in one's hand, allows firms to make speedier decisions (Larcker and Tayan 2011) and respond faster to external events (Harris and Helfat 1998); such effective actions and choices tend to improve competitiveness and bring in superior firm performance (Boyd 1995). On the contrary, Tien et al. (2013) argue that CEO-chairman duality weakens the board control which in turn adversely affects the firm's performance. It is argued when a CEO plays a dual role accumulates enormous power; such accumulation of power is prone to weaken the internal control system (Goyal and Park 2002) and reduce the check and balances (Tricker 1994), which in turn tends to deteriorate the firm performance. However, a few contend that there is no optimal board leadership structure; both forms of leadership structure may have potential costs, as well as benefits (Elsayed 2007; Mak and Li 2001; Boyd 1995).

Previous empirical research on CEO duality-corporate performance link documents a mixed result. For example, Lindeman (2019) and Yang and Zhao (2014) find that CEO duality is significantly and positively associated with firm performance. Using the Canadian sample, Gill and Mathur (2011a, 2011b) show that combined leadership maintains significant positive associations with profitability and the value of the firm. Taking US firms as a sample, Brickley et al. (1997) observe that duality firms are associated with better performance. Likewise, many other studies (e.g. Kota and Tamar 2010; Lin 2005; Tian and Lau 2001; Coles et al. 2001; Boyd et al. 1997; Finkelstein and D'Aveni 1994) document very similar results, supporting stewardship theory. In contrast, Azeez (2015) show that separation of CEO and board chairman function improves firm performance. Using the Sri Lankan sample, Wijethilake and Ekanayake (2019) observe that CEO duality exerts a strong negative influence on enterprise performance, especially in times the CEO does have additional informal power. In the same line, the research by Nazar (2016) finds that CEO duality is significantly and negatively associated with firm performance after controlling the effects of board size, firm size, and leverage. Several other studies report very similar results (e.g. Wanjiru 2013; Kula 2005; Simpson and Gleason 1999; Rechner and Dalton 1991), supporting agency theory. On the other hand, Kaur and Singh (2018a) do not find any significant association between CEO duality and firm performance in India. Similarly, Vintilă et al. (2015), Rashid (2010), Iyengar and Zampelli (2009), Elsayed (2007), Wan and Ong (2005), Abdullah (2004), and Judge et al. (2003) observe that there is no noticeable linkage between duality status and abnormal returns.

Drawing on agency theory, we expect that a combined leadership structure could influence corporate outcomes adversely. Thus, we propose the following:

- H_{4a}: CEO duality has a negative impact on corporate reputation.
- H_{4b}: CEO duality has a negative impact on corporate financial performance.
- H_{4c}: CEO duality has a negative impact on attaining corporate sustainable growth.

CEO Remuneration

The agency theory assumes that "both the owner and the manager are utility maximizers with different interests" (Capitalism 2009, p.7). When control and ownership are separated, as argued, a conflict of interest arises between the owners and the managers (Fama and Jensen 1983; Holmstrom 1979); aligning their interests comes at a cost (Berk and Demarzo 2016). The agency theorists argue that attractive remuneration to CEO is an effective governance mechanism that mitigates this conflict of interest, improves CEOs involvement in achieving the shareholders objective, and consequently improves the firm's performance (Raithatha and Haldar 2021; Al-Shammari 2021; Zoghlami 2021; Smirnova and Zavertiaeva 2017; Kazan 2016). Using expectancy theory of motivation as a guide, Murphy (1986) put forward that the level of managerial effort depends on an executive's incentive contact; the remuneration act as a good stimulus and motivates the CEO to work in the favour of shareholders and capitulate superior corporate performance (Jekins et al. 1998; Vroom 1964). The pay component of the compensation package may thus be designed in such a way that stimulates the CEO to work in the best interest of shareholders and discourage risk-taking activities or actions that may put the firm into problems that adversely affect the firm's performance (Malik and Shim 2019). While the stewardship theory suggests that executives are quite aware of the fact that they have to maximise the wealth of the company's stockholders, thus they don't require enticing pay packages (Zoghlami 2020). Fernandes (2008) and Bebchuk and Fried (2005) put forward that excessive CEO remuneration would increase the firm expenses unnecessarily, and can thus hurt corporate performance.

The empirical evidence to the effect of a CEO's remuneration on corporate performance documents a mixed result. For example, Kaur and Singh (2018a) and Murphy (1985) find that CEO remuneration is associated with positive corporate performance. Using a large sample of European companies, Smirnova and Zavertiaeva (2017) observe that there is a significant and positive relationship between CEO compensation and corporate performance measured by ROA and the Sharp index. Consistent with the studies, Sigler (2011) noted that CEO's remuneration and ROE are positively associated. Matousek and Tzeremes (2016) show that with an increase of one per cent in CEO pay, increases by around ten per cent of the firm's value. Interestingly, Schulz and Flickinger (2018) find a weak positive association between overpayment in total compensation and a firm's reputation, while overpayment in stock options appears to have a significant and negative impact on corporate reputation. While Brick et al. (2006) document that there is a strong negative relation between CEO remuneration and corporate performance. Using a sample of non-financial firms listed in the KSE, Ejaz et al. (2019) show a significant and negative relationship between CEO compensation and corporate financial performance measured by Tobin's Q and EPS. Similarly, Cooper et al. (2014) and Malmendier and Tate (2009) find very similar results. On the other hand, Ozkan (2011),

Tosi et al. (2000), Finkelstein and Boyd (1998) did not find any significant relationship between CEOs remuneration and corporate performance.

Drawing on agency theory and expectancy theory of motivation, we expect that higher CEO remuneration would enhance CEO productivity and improve corporate performance. Thus, we hypothesize the following:

- H_{5a}: CEO remuneration has a positive impact on corporate reputation.
- H_{5b}: CEO remuneration has a positive impact on corporate financial performance.
- H_{5c}: CEO remuneration has a positive impact on attaining corporate sustainable growth.

CEO tenure

The term of office/tenure is defined as the length of time a person occupies a position as a leader in an organization (Fujianti 2018). In particular, organization tenure is recognized as an indicator of experience in a particular job within an organization (Herri et al. 2017). Long-serving CEOs, according to Chen (2011), bring to the top management team more stability, efficiency, lower conflict, and better interpersonal communication, leading to social cohesiveness and shared social knowledge. In addition, they may have also built stronger social and business connections, which might help in solving complex problems linked to knowledge and technology, as well as capital accumulation (Wei et al. 2018; Vintila et al. 2015). Also, as longer-tenured CEOs possess more experience and knowledge of the business environment and corporate activities, they are more likely to make rational decisions than shorter-tenured CEOs (Shakir 2009). Longer-tenured CEOs, as argued by Zelechowski and Bilimoria (2006) are much familiar with the firm's resources and methods of operation, thereby likely to provide more informed direction and guidance, which may bring in better corporate performance. Afthanorhan et al. (2019), on the other hand, argue that the longer the CEO tenure, the more established the CEO become and the more undue influence they exert over the corporate board. Unless restricted, such a powerful CEO will undertake self-serving activities that could be detrimental to the economic welfare of the principal, moreover, may adversely affect corporate performance as a whole (Elsayed 2007).

The empirical evidence for the effect of a CEO's tenure on corporate performance documents a mixed result. For example, Van Ness et al. (2010) show that the average term of office of the executives has a positive and significant impact on company performance. Garcia-Blandon et al. (2019), Lindeman (2019), Mohamed et al. (2015), and Peni (2014) find that CEO's tenure is associated with positive corporate performance. Consistent with the studies, Anna et al. (2016) document that the CEO's term of office has a significant positive effect on corporate performance measured by ROE, ROA, and Tobin's Q. Using all the listed Bucharest Stock Exchange companies as a sample, Vintilă et al. (2015) observe that CEO tenure positively influences firm value measured by Tobin's Q. However, Hamori and Koyuncu (2015) find that CEO's tenure is associated with negative corporate performance. Likewise, Han et al. (2017) find that the CEO's term of office has a significant negative effect on corporate cash holding. Using data from four Latin American countries from 2004 to 2014, Briano-Turrent et al. (2020) observe that CEO

tenure has a consistent and significant negative effect on the dividend payout. On the other hand, Tien et al. (2013) did not find any significant association between CEOs tenure and corporate performance.

In the context of this study, we expect the positive effect of CEO tenure to outshine any negative effects it has. Thus, we propose the following:

- H_{6a}: CEO tenure has a positive impact on corporate reputation.
- H_{6b}: CEO tenure has a positive impact on corporate financial performance.
- H_{6c}: CEO tenure has a positive impact on attaining corporate sustainable growth.

CEO nationality

Nationality is often viewed as a proxy to intercultural competence (Gibson 2014, as cited in Sebbas 2017), which has made it increasingly common for boards to hire foreigners to the top management (Sebbas 2017). In this context, however, the legitimate concern is: why do firms hire foreign CEOs? Are there some desirable features that make them special from the rest?

Le and Kroll (2017) argue that foreign CEOs hold more knowledge about international markets and regulations, in particular about foreign customers, competitors, culture, and employees, and can thus help the company face fewer uncertainties and ambiguities when entering the international market. Furthermore, foreign CEOs may have studied the language of that country, which can make contracting and negotiating with potential business partners easier (Patzelt 2010). International CEOs may also have developed a social network in their previous host country, which might aid in the search for foreign business partners (Herrmann and Datta 2005). These various benefits attached to international CEOs can add competitive advantage and facilitate firms to improve their performance (Peng et al. 2015; Carter et al. 2010). This view is in line with prior empirical studies that show that foreign CEOs are associated with positive firm performance (e.g. Badru and Raji 2016; Ujunwa 2012), supporting resource dependence theory and human capital theory.

There are, however, strong contradicting views in the literature, regarding this. Elsharkawy et al. (2018) argue that overseas CEOs may lack the necessary experience to deal with a substantially closed domestic market, and can thus hardly make any contribution to the decision-making process. Supporting this view, Masulis et al. (2012) put forward that foreign CEOs are not well acquainted with the national rules and regulations, and normal indigenous methods of management; as a result, may hurt the firm performance. This view is supported by previous studies that confirm that foreign CEOs are associated with negative firm performance (e.g. Kaur and Singh 2018a; Elsharkawy et al. 2018; García-Meca et al. 2015). On the other hand, Vintilă et al. (2015) did not find any significant linkage between CEO nationality and firm value measured by Tobin's Q.

Based on resource dependence theory and human capital theory, we argue that international CEOs bring in unique resources and human capital, which could help the firm to make better decisions to address complicated problems. Thus, we propose the following:

- H_{7a}: CEO nationality has a positive impact on corporate reputation.
- H_{7b}: CEO nationality has a positive impact on corporate financial performance.
- H_{7c}: CEO nationality has a positive impact on attaining corporate sustainable growth.

CEO busyness

CEO busyness represents a situation whereby the CEO represents the board of other companies (Wu and Bruno 2008). To put it differently, busyness refers to a situation whereby the CEO holds multiple directorships at a time. Mendez et al. (2017) and Tien et al. (2013) argue that CEOs with multiple directorships are expected to help companies towards better performance due to their reputation (Fama and Jensen 1983), expertise and experience (Fich 2005). In addition, their strong outside connections can help an organization to collect necessary resources for the effective running of a business (Booth and Deli 1996). Pandey et al. (2015), on the other hand, argues that firms with better growth opportunities should be managed by less busy CEOs. Busyness causes the CEOs to not have enough time and energy to focus on the main tasks in managing the companies (Harymawan et al. 2019); they often tend to miss more board meetings (Jiraporn et al. 2009). This lack of commitment on their part may hurt the strategic choices and actions of the top management and end up with losing too many potential business opportunities (Ahn et al. 2010; Core et al. 1999). This view is in agreement with existing research on the busy CEO. For example, Harymawan et al. (2019) find those busy CEOs are associated with lower firm performance in Indonesia. Using companies listed in the Bombay Stock Exchange, Pandey et al. (2015) observe that the effect of CEO busyness on corporate performance measured by Tobin's Q is negative. Likewise, Falato et al. (2014) and Cashman et al. (2012) reports very similar results, contradicting resource dependence theory. These arguments shed light on the fact that CEOs with multiple directorships are associated with negative firm performance.

Based on the above facts and figures, we hypothesize the following:

- H_{8a}: CEO busyness has a negative impact on corporate reputation.
- H_{8b}: CEO busyness has a negative impact on corporate financial performance.
- H_{8c}: CEO busyness has a negative impact on attaining corporate sustainable growth.

Research design

Data

Following Mukherjee and Sen (2019a, 2019b), a sample of NSE listed leading 200 companies have been selected from the target population based on their market capitalization. This selection is expected to capture a comprehensive view of the best blue-chip companies along with the mid-cap companies in India. Moreover, this selection minimizes the sectoral biasness to a great extent. Of the selected primary sample, 138 non-financial companies are retained and have been considered as an ultimate sample size based on purposive sampling. In line with other studies (e.g. Garcia-Meca and Palacio 2018; Farag and Mallin 2016), banks and other financial companies have been left out of

the ultimate sample size owing to the divergent nature of the operation and the capital structure. In addition, a few non-financial companies, due to the unavailability of data or unusual financial years, failed to be part of our final sample size. The required data of the selected companies, viz. financial and CEO specific attributes have been collected from the Capitaline and CMIE database over eight years, i.e., from 2010 to 2017. The selection of the said period has been made with a deliberate intent to evade the effects of the 2008–2009 global financial crises (see Mukherjee and Sen 2019a, 2019b). A summary of the sample selection process is shown in Table 1.

Model

Principally, this study applies three regression models. To test the hypotheses, viz. $H_{1a}, H_{2a}, H_{3a}, H_{4a}, H_{5a}, H_{6a}, H_{7a}, and H_{8a}$, model (1) is used. We expect the coefficient on CGEN, CEDU, CTEN, CNAT, and CREM to be positive. While the coefficient on CAGE, CDUA, and CBUS is expected to be negative.

$$\begin{aligned} REP_{it} =& \alpha_1 + \beta_2 \mathrm{CGEN}_{it} + \beta_3 \mathrm{CAGE}_{it} + \beta_4 CEDU_{it} \\ &+ \beta_5 CDUA_{it} + \beta_6 \mathrm{CREM}_{it} + \beta_7 CTEN_{it} \\ &+ \beta_8 CNAT_{it} + \beta_9 CBUS_{it} + \beta_{10} LEV_{it} \\ &+ \beta_{11} FS_{it} + \beta_{12} TAN_{it} + \beta_{13} PROD_{it} + \mu_{it} \quad \text{Model (1)} \end{aligned}$$

The hypotheses $H_{1b}, H_{2b}, H_{3b}, H_{4b}, H_{5b}, H_{6b}, H_{7b}, and H_{8b}$ are tested using model (2). We expect the coefficient on CGEN, CEDU, CTEN, CNAT, and CREM to be positive. While the coefficient on CAGE, CDUA, and CBUS is expected to be negative.

$$CFP_{it} = \alpha_1 + \beta_2 \mathrm{CGEN}_{it} + \beta_3 \mathrm{CAGE}_{it} + \beta_4 CEDU_{it} + \beta_5 CDUA_{it} + \beta_6 \mathrm{CREM}_{it} + \beta_7 CTEN_{it} + \beta_8 CNAT_{it} + \beta_9 CBUS_{it} + \beta_{10} LEV_{it} + \beta_{11} FS_{it} + \beta_{12} TAN_{it} + \beta_{13} PROD_{it} + \mu_{it}$$

Model (2).

To test the hypotheses, viz. $H_{1c}, H_{2c}, H_{3c}, H_{4c}, H_{5c}, H_{6c}, H_{7c}, and H_{8c}$, model (3) is used. We expect the coefficient on CGEN, CEDU, CTEN, CNAT, and CREM to be positive. While the coefficient on CAGE, CDUA, and CBUS is expected to be negative.

$$\begin{aligned} CSG_{it} =& \alpha_1 + \beta_2 \mathrm{CGEN}_{it} + \beta_3 \mathrm{CAGE}_{it} + \beta_4 CEDU_{it} \\ &+ \beta_5 CDUA_{it} + \beta_6 \mathrm{CREM}_{it} + \beta_7 CTEN_{it} + \beta_8 CNAT_{it} \\ &+ \beta_9 CBUS_{it} + \beta_{10} LEV_{it} + \beta_{11} FS_{it} + \beta_{12} TAN_{it} \\ &+ \beta_{13} PROD_{it} + \mu_{it} \quad \text{Model (3)} \end{aligned}$$

The aforementioned equations have been written based on the one-way fixed-effect model. Where REP is corporate reputation; CFP is corporate financial performance; CSG denotes corporate sustainable growth; CGEN is CEO gender; CAGE represents CEO

Table 1 Sample selection. Source: Authors' own tabulation

Particulars	No. of companies
Top NSE listed companies	200
Less: Banks and other financial companies	39
Less: Non-financial companies with missing data or unusual financial year	23
Final Sample	138

138 firms × 8 years = 1,104 firm-year observations

age; CEDU denotes CEO education; CDUA is CEO duality; CREM is CEO remuneration; CTEN is CEO tenure; CNAT represents CEO nationality; CBUS is CEO busyness; LEV is leverage; FS denotes firm size; TAN represents tangibility; PROD is productivity; i (i.e., company) = 1, 2, 3, 4, 5……138; t (i.e., time) = 1, 2, 3……0.8; $\beta_2, \beta_3 \ldots..\beta_9$ represents the coefficient of explanatory variables, and μ is the error term. In the case of the random-effect model, μ will be substituted by ω, other components of the model remain the same. ω represents the composite error term which consists of two components, viz. ε *and* μ; whereε represents the cross-section error component and μ is the combined time series and cross-section error component. While in the case of the pooled-OLS model, the entire equation remains the same except the constant termα_1, which will be substituted byα_0. The definition and measurement of all the variables are provided in Table 2. The models have been examined utilizing STATA package version 13.1 in this study.

Table 2 Variable definitions. Source: Authors' own tabulation

Variables	Definitions
1. Dependent Variable:	
Corporate Reputation (REP)	Firm age = Number of completed financial years since the company was incorporated (Sahudin et al., 2011; Padron et al., 2005; Datta et al., 1999)
Firm Performance (CFP)	Firm performance has been quantified by ROA, a widely accepted, accounting-based performance measure (Saidu, 2019; Kaur & Singh, 2018a; Weng & Chen, 2017; Veprauskaite & Adams, 2013; Bhagat & Bolton, 2008; Tosi et al., 2004). Mathematically, consistent with Pandey (2015), Amran et al. (2014), Veprauskaite & Adams (2013), Gibson (2013), ROA is computed as follows: $\text{ROA} = \frac{\text{NetincomebeforeInterestandTaxesduringperiodt}}{\text{Totalassetsattheendofperiodt}}$
Corporate Sustainable Growth (CSG)	Sustainable Growth Rate (SGR) = Profit margin x Retention rate x Asset Turnover Ratio x Asset to Equity (Higgins, R.C., 2013, p. 126)
2. Independent Variable(s):	
CEO Attributes -	
CEO Gender (CGEN)	Coded '1', if the CEO is a female and coded '0', otherwise (Kaur & Singh, 2018a)
CEO Age (CAGE)	Age of CEO at period t (Kokeno & Muturi, 2016)
CEO Education (CEDU)	Coded '1', if the CEO possesses a Postgraduate degree or Professional degree or PhD or any other equivalent degree and '0' otherwise (Saidu, 2019; Kaur & Singh, 2018a; Singla, 2016; Darmadi, 2013; Ujunwa, 2012)
CEO Duality (CDUA)	Coded '1', if the examined individual acts simultaneously as the CEO and the board's chairman at period t and coded '0', otherwise (Mukherjee & Sen, 2019b; Kaur & Singh, 2018a; Singla, 2016)
CEO Remuneration (CREM)	Natural log of CEO's total annual compensation at period t
CEO Tenure (CTEN)	Coded '1', if the examined individual had served the company for more than 5 years as CEO and coded '0', otherwise (Harymawan et al., 2019)
CEO Nationality (CNAT)	Coded '1', if the CEO is from a foreign nation and coded '0', otherwise (Kaur & Singh, 2018a)
CEO Busyness (CBUS)	Coded '1', if the CEO holds more than one directorship at a time and coded '0', otherwise (Fich & Shivdasani, 2006; Ferris et al., 2003; Core et al., 1999)
3. Control Variable(s):	
Leverage (LEV)	Total debt to total equity (Saidu, 2019; Mukherjee & Sen, 2019b)
Firm Size (FS)	Natural log of firm's total assets at period t (Harymawan et al., 2019; Saidu, 2019; Mukherjee & Sen, 2019b; Kaur & Singh, 2018a; Weng & Chen, 2017)
Tangibility (TAN)	Tangible assets to total assets ratio (Arilyn & Beny, 2019)
Productivity (PROD)	Sales to Total Assets Ratio (Basuki & Kusumawardhani, 2012)

The above econometric models are investigated by using the static panel data technique. In investigating the relationship between the attributes of CEO and corporate outcomes, different statistical techniques, for instance, multiple regression (see Saidat et al. 2020; Belenzon et al. 2019; Ayaba 2012; Jalbert et al. 2010), logit regression (see Tran and Pham 2020), quantile regression (see Liu and Jiang 2020), and ordinary least square regression (see Martino et al. 2020; Altuwaijri and Kalyanaraman 2020; Liu and Jiang 2020; Saidu 2019; Elsharkawy et al. 2018; Li and Singal 2017; Gill and Mathur 2011a), among others have been used in prior studies. We relied on the static panel data technique, similar to Kaur and Singh (2020, 2018a), because this technique eradicates the shortcomings of cross-section and time-series, improving the consistency and explanatory power (Petersen 2009). Moreover, the technique, in particular fixed-effects regression model handles the issue of omitted variables, tackling the endogeneity bias to some extent (Arora and Sharma 2016).

To test the alternatives of panel data (i.e., fixed and random effects, respectively) against the pooled regression, the F-test (Baltagi 1995), and the Breusch and Pagan (1980) LM test are performed (Elsayed and Wahba 2016). The results (unreported) are significant for both these tests, which suggest using the panel data model. At this juncture, Hausman's (1978) specification test is carried out to determine whether the fixed effects model or the random effect model should be employed (Baltagi 1995). The estimates (unreported) of the Hausman test point in favour of the fixed effects model; accordingly, the fixed effects model is retained and being employed to test the hypotheses of this study.

Variables

Dependent variable

For the accomplishment of the objective, we employed three dependent variables. Our first dependent variable is corporate reputation. Following previous research (e.g. Sahudin et al. 2011; Padron et al. 2005; Datta et al. 1999), this variable has been proxied by using firm age. According to Kaur and Singh (2018b)—"Stakeholders tend to be more familiar about an old firm and hence such firms are expected to be better known to the public than a newly established organization" (p. 54). Moreover, older firms build up relations with the stakeholders gradually over some time and eventually gain more support from them in all aspects, thereby a good reputation develops for an old firm (Weng and Chen 2017; Loderer et al. 2013). The following formula has been used to measure corporate reputation:

$$\mathrm{FA} = \mathrm{CY} - \mathrm{IY}$$

where, FA = Firm Age, CY = Current Year, IY = Incorporation Year of the Company.

Our next dependent variable is corporate financial performance. We measure corporate financial performance using Return on Assets (ROA), an accounting-based performance measure. As cited by Amran et al. (2014), the use of ROA as a performance measure is more preferable compared to other accounting measures (ROE, EPS) because the operating income used to calculate ROA is not influenced by special charges and is also susceptible to manipulation by managers (Bushman and Smith 2001). Consistent with Pandey (2015), Veprauskaite and Adams (2013), Gibson (2013), Rashid (2010),

Yammeesri et al. (2006), ROA is calculated as the net income before interest and taxes scaled by the book value of total assets.

Corporate sustainable growth is our very last dependent variable. From a core financial standpoint, corporate sustainable growth represents 'an affordable growth that can be sustained profitably for future benefits.' More precisely, corporate sustainable growth can be interpreted as the maximum growth that can be attained without having financial, structural or strategic setbacks (Ali et al. 2014; Jafri et al. 2014; Ismail et al. 2012). Overtimes, different scholars have used different metrics to quantify corporate sustainable growth such as the simple growth model (see Alayemi and Akintoye 2015), Ross, Westerfield, and Jordan's model (see Mukherjee and Sen 2018), and Zakon's model (see Amouzesh et al. 2011), among others. However, amongst those, sustainable growth rate (SGR) models of Higgins and Van Horne are universally accepted and used in several previous empirical pieces of research (e.g. Ocak and Findik 2019; Xu and Wang 2018; Pandit and Tejani 2011; Lockwood and Prombutr 2010; Shui-ying and Ying-yu 2008), including a very recent study by Ain et al. (2021). It's worth noting, however, that there is no significant difference as such between these two models and both of these are evenly suitable for the managers and researchers for their study (Fonseka et al. 2012). Thus, in the present study, Higgins's SGR model has been employed as a measure of corporate sustainable growth. The formula of the sustainable growth rate can be expressed as (see Higgins 2013, p. 126):

$$\mathrm{SGR} = \frac{\mathrm{R} \times \mathrm{Earnings}}{\mathrm{Eq}_0} \tag{1}$$

where SGR represents the sustainable growth rate; R is the firm's retention rate, calculated as 1 minus the dividend payout ratio;Eq_0 denotes beginning-of-period equity.

By rearrangement, Eq. (1) can be expressed as:

$$\mathrm{SGR} = \mathrm{R} \times \mathrm{ROE}_0 \tag{2}$$

where ROE_0 is the firm's return on equity. Finally, we can rewrite Eq. (2) yet again as:

$$\mathrm{SGR} = \mathrm{P} \times \mathrm{R} \times \mathrm{A} \times \hat{\mathrm{T}} \tag{3}$$

where P is the profit margin, calculated as net income scaled by the sales; A is the asset turnover ratio, calculated as sales scaled by the total assets; T is the asset to Equity ratio, measured as total assets scaled by the beginning-of-period equity.

Independent variables

Following previous empirical research (e.g. Harymawan et al. 2019; Saidu 2019; Kaur and Singh 2018a; Chen et al. 2018; Kokeno and Muturi 2016; Amran et al. 2014; Mohamed et al. 2014; Veprauskaite and Adams 2013; Darmadi 2013; Ujunwa 2012; Fich and Shivdasani 2006; Tosi et al. 2004), an array of eight variables that represents CEO traits, is considered in this study as independent variables. *First,* CEO Gender, as measured by dummy variable '0' and '1', i.e., coded '1', if the CEO is a female and coded '0', otherwise. *Second,* CEO Age, as measured by age of CEO at period *t*. *Third,* CEO Education, by dummy variable '0' and '1', i.e., coded '1', if the CEO possesses Postgraduate degree(s)

Table 3 Descriptive Statistics. Source: Authors' own tabulation using STATA software (version 13.1)

Variables	Obs	Mean	Std. Dev	Min	Max
REP	1104	39.663	24.287	2.000	121.000
CFP	1104	0.138	0.122	− 0.840	1.264
CSG	1104	0.166	0.371	− 3.211	8.461
CGEN	1104	0.037	0.189	0.000	1.000
CAGE	1104	55.533	8.399	22.000	96.000
CEDU	1104	0.822	0.383	0.000	1.000
CDUA	1104	0.439	0.497	0.000	1.000
CREM	1104	16.355	3.354	0.000	21.227
CTEN	1104	0.504	0.500	0.000	1.000
CNAT	1104	0.022	0.146	0.000	1.000
CBUS	1104	0.645	0.479	0.000	1.000
LEV	1104	1.257	4.906	− 44.440	114.095
FS	1104	9.173	1.488	0.615	13.333
TAN	1104	0.619	0.211	0.005	0.961
PROD	1104	0.848	0.651	0.001	6.908

This table presents the descriptive statistics for variables employed in this study. The definition and measurement of all the variables are provided in Table 2

or Postgraduate diploma(s) or Professional degree(s) or PhD or any other equivalent degree(s) and '0' otherwise. *Fourth,* CEO Duality, as measured by dummy variable '0' and '1', i.e., coded '1', if the examined individual acts simultaneously as the CEO and the board's chairman at period *t* and coded '0', otherwise. *Fifth,* CEO Remuneration, as measured by the natural log of CEO's total annual compensation at period *t*. *Sixth,* CEO Tenure, as measured by dummy variable '0' and '1', i.e., coded '1', if the CEO has served the company for more than 5 years in the same position and coded '0', otherwise. *Seventh,* CEO Nationality, as measured by dummy variable '0' and '1', i.e., coded '1', if the CEO is from a foreign nation and coded '0', otherwise. *Lastly,* CEO Busyness, as measured by dummy variable '0' and '1', i.e., coded '1', if the CEO holds more than one directorship at a time and coded '0', otherwise. These selected attribute variables portray demographic (gender, age, education level, tenure and nationality) and job-specific factors (duality, remuneration and busyness).

Control variables

To account for alternative factors that may influence our dependent variables, namely corporate reputation, financial performance, corporate sustainable growth, we controlled for certain firm-specific variables as suggested by previous research (e.g. Musah et al. 2019; Krekel et al. 2019; Kaur and Singh 2018a; Ernestine and Setyaningrum 2018; Arman et al. 2014; Ayaba 2012). To be more specific, we controlled four firm-specific variables, namely leverage, as measured by total debt to equity ratio, firm size, as measured by the natural log of firm's total assets, tangibility, as measured by tangible assets to total assets ratio, and productivity, as measured by sales to total assets ratio.

Table 4 Panel Unit-Root Test. Source: Authors' own tabulation using STATA software (version 13.1)

Variables	No. of Panels	No. of Periods	Test Category	
			First Generation	Second Generation
			Adj. t-statistic	t-bar
REP	138	8	−16.275*	−1.951*
CFP	138	8	−19.122*	−2.373*
CSG	138	8	$-1.5e+02$*	−2.827*
CGEN	138	8	NA	NA
CAGE	138	8	−10.942*	−1.924**
CEDU	138	8	NA	NA
CDUA	138	8	NA	NA
CREM	138	8	$-3.2e+03$*	−2.264*
CTEN	138	8	NA	NA
CNAT	138	8	NA	NA
CBUS	138	8	NA	NA
LEV	138	8	−46.017*	−2.611*
FS	138	8	−12.075*	−1.929**
TAN	138	8	−14.282*	−1.924**
PROD	138	8	−43.789*	−1.873**

This table presents the results of the panel unit-root tests for the studied variables. The definition and measurement of all the variables are provided in Table 2. * and ** indicate statistical significance at the 1% and 5% levels, respectively. 'NA' denotes not applicable

Results

Descriptive statistics

Table 3 reports the descriptive statistics for all dependent, explanatory and control variables used in this study. The number of firm-year observations is 1104 for each variable. The mean value of REP is 39.663 with a maximum of 121.000 and a minimum of 2.000. The mean CFP is just under 0.14 (min = —0.840, max = 1.264), which is higher than that reported in Kaur and Singh (2018a). Considering CSG, the mean value is just under 0.170 (min = —3.211, max = 8.461), which is higher than that reported in Ocak and Findik (2019) and Xu and Wang (2018). The statistics for CEO gender indicate that approximately 4% of firm-year observations have female CEOs. The average age of CEOs is 56 years, and notably, 82% of firm-year observations have highly qualified/well-educated CEOs (possesses Postgraduate degree or Professional degree or PhD or any other equivalent degree). On average, 44% of firm-year cases have dual CEO-Chair roles. This figure is higher than that reported in the Indian corporate sector by Kaur and Singh (2018a). The average remuneration of CEOs is ₹ 53.238 million with a standard deviation of ₹ 111. 87 million (unreported). The statistics for CEO tenure indicate that around 50% of firm-year cases have long-tenured CEOs (served more than 5 years in the company as CEO). Table 3 further shows that in 2% of firm-year cases the CEOs are foreigners. This figure accords with Kaur and Singh (2018a) which cite that 1.9% of firm-year observations have foreign CEOs. The mean CBUS is nearly 0.65 (Std. Dev. = 0.479), indicating that in 65% of firm-year cases the CEOs are busy (holds more than one directorship at a time).

In terms of the firm-specific variables, the statistics for leverage (mean = 1.257) and firm size (mean = 9.173) indicate that the selected companies are well-established and uphold a high-geared capital structure. The mean value of TAN is 0.619 with a maximum of 0.961 and a minimum of 0.005. The statistics for productivity suggest that the selected companies have succeeded to generate nearly, 85% of their sales through the use of the assets.

Panel unit-root test

Table 4 presents the results of the panel unit-root tests for the variables employed in this study. Initially, following previous researches (e.g. Khan et al. 2021; Nyeadi et al. 2018; Paul and Mitra 2018, Zerihun and Breitenbach 2017), we applied Levin–Lin–Chu (2002) test—a conventional approach to examine whether data series are stationary at level. The estimates show that all dependent variables, explanatory variables and selected control variables are stationary at their levels at the 1% level of significance. This indicates the employed dependent, explanatory and control variables have no unit root.

In conjunction, following Koç and Şenol (2020), the Pesaran (2007) test—a second-generation approach to panel unit root testing has been adopted. The first generation of panel unit root tests including the Levin-Lin-Chu (2002) test is based on the cross-sectional independency hypothesis. The assumption of cross-sectional independence is perhaps relatively restrictive and somewhat unrealistic in certain macroeconomic applications (Gengenbach et al. 2009). It is also likely that our data series might have the issue of cross-sectional dependence as the attributes are being studied. In such a case, the underlying premise of the first generation of tests does not hold. The new category of tests to what we call the second generation of panel unit root tests relax the cross-sectional independence assumption and allow for cross-sectional correlations (Burdisso and Sangiácomo 2016; Hurlin and Mignon 2007). The results of the Pesaran (2007) test are reported in Table 4. The results show that all dependent variables, explanatory variables and selected control variables are stationary at their levels either at the 1% level or 5% level of significance, echoing those obtained from Levin-Lin-Chu (2002) test estimates. This reaffirms that the employed variables have no unit root. It's worth noting that the central idea behind testing for unit-root is to check whether the series is mean-reverting. Therefore, testing for unit-root on binary variables, such as CGEN, CEDU, CDUA, CTEN, CNAT and CBUS (as employed in this study) might not be necessary, as these variables are not ordered in time, and as such may not suffer from time-series issues.

Correlation analysis

Table 5 reports the Pearson correlation among variables employed in this study. The correlation coefficient of CEO gender with corporate financial performance is significantly positive. In contrast, CEO age is significantly and negatively correlated with corporate reputation, corporate financial performance, and corporate sustainable growth. The next manifest variable, CEO education is significantly and positively correlated with corporate reputation and corporate financial performance, while CEO duality does seem to be significantly and negatively correlated to corporate financial performance. The

Table 5 Correlation matrix. Source: Authors' own tabulation using STATA software (version 13.1)

	REP	CFP	CSG	CGEN	CAGE	CEDU	CDUA	CREM	CTEN	CNAT	CBUS	LEV	FS	TAN	PROD	VIF
REP	1															
CFP	0.110*	1														
CSG	− 0.010	0.370*	1													
CGEN	− 0.007	0.084*	− 0.007	1												1.082
CAGE	−0.237*	−0.099*	−0.096*	0.005	1											1.159
CEDU	0.106*	0.088*	0.031	0.054	−0.130*	1										1.162
CDUA	0.007	−0.166*	− 0.045	− 0.048	0.263*	− 0.007	1									1.229
CREM	0.188*	0.215*	0.055	−0.168*	− 0.024	0.204*	−0.134*	1								1.169
CTEN	0.124*	− 0.026	0.058**	0.032	0.217*	−0.174*	0.160*	0.072*	1							1.301
CNAT	− 0.121	− 0.054	− 0.030	0.069**	0.026	−0.060**	−0.107*	− 0.009	−0.088*	1						1.068
CBUS	−0.021*	−0.220*	− 0.007	0.086*	0.153*	0.020	0.153*	0.009	0.180*	− 0.032	1					1.150
LEV	− 0.026	−0.112*	0.006	− 0.007	0.012	0.038	0.030	− 0.029	0.072*	− 0.006	0.041	1				1.020
FS	0.248*	0.202*	0.079*	−0.114*	0.094*	0.217*	0.192*	0.112*	−0.264*	0.106*	0.185*	0.031	1			1.493
TAN	− 0.022	−0.227*	−0.096*	0.022	0.080*	− 0.024	− 0.001	− 0.042	− 0.018	0.117*	0.168*	−0.063**	0.244*	1		1.220
PROD	0.110*	0.343*	0.082*	0.048	− 0.028	− 0.010	−0.161*	0.092*	0.010	0.035	− 0.054	0.004	−0.301*	−0.330*	1	1.249

This table reports the Pearson correlation among variables used in the present study. The definition and measurement of all the variables are provided in Table 2. * and ** indicate statistical significance at the 1% and 5% levels, respectively

correlation coefficients of CEO remuneration with corporate reputation and corporate financial performance are significantly and positively correlated. Similarly, the correlation coefficients of CEO tenure with corporate reputation and corporate sustainable growth are significantly and positively correlated. The correlations between the CEO nationality and studied dependent variables, viz. corporate reputation, corporate financial performance, and corporate sustainable growth are in the predicted direction, but insignificant. On the contrary, CEO busyness is significantly and negatively correlated with corporate reputation and corporate financial performance. In terms of the control variables, leverage is significantly and negatively correlated with corporate financial performance. On the other hand, firm size is significantly and positively correlated with corporate reputation, corporate financial performance, and corporate sustainable growth. The correlation coefficients of tangibility with corporate financial performance and corporate sustainable growth are significantly negative. On the contrary, productivity is significantly and positively correlated with corporate reputation, corporate financial performance, and corporate sustainable growth.

In addition, Table 5 shows that correlations between explanatory variables are low, ranging from a minimum of 0.001 to a maximum of 0.330 (below 0.80) (see Gujarati 1995); moreover, the maximum variance inflation factor (VIF) values for the explanatory variables are within the acceptable threshold of 10 (see Hair et al. 1995). These estimates allow us to rule out the potential existence of multicollinearity amid the explanatory variables in the studied models, and its aftermath on the regression analysis.

Hypotheses testing

The hypotheses testing segment is bifurcated into three sections: the first section explores the impact of selected demographic and job-specific attributes of CEO on corporate reputation. The second section explores the impact of selected demographic and job-specific attributes of CEO on corporate financial performance. The third section explores the impact of selected demographic and job-specific attributes of CEO on corporate sustainable growth. After controlling for several firm-specific variables from the regression analyses, Table 6 show evidence of $H_{1a} - H_{8a}$, $H_{1b} - H_{8b}$, and $H_{1c} - H_{8c}$ as in model (1), model (2), and model (3), respectively.

Table 6 presents the fixed-effects regression results for the baseline models, viz. model (1), model (2), and model (3) employed in this study. The estimates of the Hausman (1978) test (unreported) confirmed that the application of a fixed-effect model is preferable compared to the random-effect model. The coefficient on CEO gender in model (1) is insignificant ($\beta = -0.202$; S.E. $= 0.546$), suggesting that CEO gender has no measurable impact on stakeholder perception of firm reputation. Thus, hypothesis 1(a) is not supported. Likewise, CEO age has proven not to be significantly associated with a corporate reputation ($\beta = -0.311$; S.E. $= 0.191$); accordingly, we find no support for hypothesis 2(a). The next manifest variable, CEO education also demonstrates no notable association with the corporate reputation ($\beta = -0.187$; S.E. $= 0.468$), indicating that CEOs advanced education (possessing a Postgraduate degree or Professional degree or PhD or any other equivalent degree) does not affect stakeholder perception of firm reputation. Thus, we fail to find support for hypothesis 3(a). While the result

Table 6 Estimation results for baseline models. Source: Authors' own tabulation using STATA software (version 13.1)

Variable	Corporate Reputation	Corporate Financial Performance	Corporate Sustainable Growth
	Model (1)	Model (2)	Model (3)
Constant	−1.877* (0.068)	0.183** (0.080)	0.414* (0.128)
CGEN	− 0.202 (0.546)	0.042** (0.022)	−0.054 (0.115)
CAGE	− 0.311 (0.191)	− 0.000 (0.003)	−0.006* (0.002)
CEDU	-0.187 (0.468)	0.033 (0.019)	0.028 (0.034)
CDUA	−0.506** (0.092)	0.006 (0.010)	0.018 (0.061)
CREM	0.370* (0.059)	0.007* (0.002)	0.012 (0.003)
CTEN	0.037* (0.014)	0.008 (0.007)	0.052** (0.026)
CNAT	-0.669 (0.789)	−0.013 (0.032)	− 0.025 (0.084)
CBUS	−0.600* (0.029)	−0.019* (0.009)	−0.013 (0.026)
LEV	0.018 (0.012)	−0.001** (0.004)	−0.006* (0.003)
FS	4.220* (0.057)	0.013* (0.006)	0.082* (0.032)
TAN	3.110* (0.087)	−0.122* (0.029)	−0.383* (0.046)
PROD	3.211* (0.099)	0.046* (0.012)	0.021 (0.063)
R^2(within)	0.512	0.111	0.086
R^2(between)	0.103	0.241	0.063
R^2(overall)	0.106	0.199	0.058
F-Statistic	86.020*	99.890*	77.460*
N	1104	1104	1104

This table presents the fixed-effects regression results on the impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth after controlling the effects of corporate-level specific variables. The definition and measurement of all the variables are provided in Table 2. * and ** indicate statistical significance at the 1% and 5% levels, respectively. Standard errors are reported in parentheses

for CEO duality exhibit a significant and negative association with a corporate reputation ($\beta = -0.506$; S.E. $= 0.092$), suggesting that the companies with CEOs playing a dual role in conjunction decrease stakeholder perception of firm reputation. This result is consistent with hypothesis 4(a). The coefficient estimate on CEO remuneration is 0.370 (S.E. = 0.059) and is significant at the 1% level. This indicates that CEOs remuneration increases stakeholder perception of firm reputation. The evidence thus provides strong support for hypothesis 5(a). Similarly, the coefficient estimate on CEO tenure is significant and positive ($\beta = 0.037$; $p < 0.01$), suggesting that long-tenured CEOs are more competent in enhancing the firm's reputation. The result thus lends strong support to our hypothesis 6(a). The next manifest variable, CEO nationality appears to have no significant association with the corporate reputation ($\beta = -0.669$; S.E. $= 0.789$);

accordingly, we find no support for hypothesis 7(a). On the contrary, the result for CEO busyness exhibits a significant and negative association with a corporate reputation ($\beta = -0.600$; S.E. $= 0.029$). This result is consistent with hypothesis 8(a) and indicates that CEOs busyness decreases stakeholder perception of firm reputation. In terms of the control variables, the coefficient estimates on firm size, tangibility, and productivity are 4.220, 3.110, and 3.211, respectively and are statistically significant at the 1% level. This indicates that the size, tangibility, and productivity of the company do influence stakeholder perception of firm reputation. On the other hand, leverage does not seem to be significantly associated with a corporate reputation ($\beta = 0.018$; S.E. $= 0.012$).

The coefficient on CEO gender in model (2) is significant and positive ($\beta = 0.042$; $p < 0.05$), suggesting that female CEOs do have a favourable influence over corporate financial performance. This result is consistent with hypothesis 1(b). On the other hand, the coefficient on CEO age is insignificant ($\beta = -0.000$; S.E. $= 0.003$), indicating that CEO age has no measurable impact on corporate financial performance. Thus, hypothesis 2(b) is not supported. The result for CEO education demonstrates no notable association with corporate financial performance ($\beta = 0.033$; S.E. $= 0.019$); accordingly, we find no support for hypothesis 3(b). Likewise, the result for CEO duality shows an insignificant association with corporate financial performance ($\beta = 0.006$; S.E. $= 0.010$), suggesting that combining the leadership does not affect the financial performance of the firm. Thus, hypothesis 4(b) is not supported. The coefficient estimate on CEO remuneration is 0.007 (S.E. $= 0.002$) and is significant at the 1% level. This indicates corporate performance gets improved with an increase in CEOs pay. The evidence thus provides strong support for hypothesis 5(b). The next manifest variable, CEO tenure appears to have no significant association with corporate financial performance ($\beta = 0.008$; S.E. $= 0.007$); accordingly, we find no support for hypothesis 6(b). Likewise, the result for CEO nationality exhibits an insignificant association with corporate financial performance ($\beta = -0.013$; S.E. $= 0.032$). Thus, hypothesis 7(b) is not supported. The coefficient on CEO busyness is significant and negative ($\beta = -0.019$; $p < 0.01$), indicating that corporate financial performance deteriorates when the CEO of a firm do hold multiple directorships concurrently. This result is consistent with hypothesis 8(b). The estimates for the control variables firm size and productivity exhibit significant positive associations with corporate financial performance. This suggests larger companies and companies with higher productivity outperform other companies in terms of financial performance measured by ROA. In contrast, the results for leverage and tangibility demonstrate significant and negative relationships with corporate financial performance.

In model (3), the first manifest variable, CEO gender demonstrates no notable association with corporate sustainable growth ($\beta = -0.054$; S.E. $= 0.115$), indicating that female CEOs do not influence corporate sustainable growth. Thus, hypothesis 1(c) is not supported. In contrast, the result for CEO age exhibit a significant and negative association with corporate sustainable growth ($\beta = -0.006$; S.E. $= 0.002$), indicating that aged CEOs are less competent in yielding corporate sustainable growth. This result is in line with our hypothesis 2(c). The next manifest variable, CEDU appears to have no significant effect on corporate sustainable growth ($\beta = 0.028$; S.E. $= 0.034$), contradicting our

hypothesis 3(c). This indicates that CEOs advanced education (possessing a Postgraduate degree or Professional degree or PhD or any other equivalent degree) does not affect corporate sustainable growth. Similarly, CEO duality exhibits an insignificant linkage with corporate sustainable growth ($\beta = 0.018$; S.E. $= 0.061$), suggesting that dual CEO-Chair roles do not affect corporate sustainable growth. Thus, we fail to find support for our hypothesis 4(c). Likewise, CEO remuneration has proven not to be significantly associated with corporate sustainable growth ($\beta = 0.012$; S.E. $= 0.003$); consequently, hypothesis 5(c) is not supported. The coefficient estimate on CEO tenure is 0.052 (S.E. $= 0.026$) and is significant at the 5% level. This indicates that long-tenured CEOs are more competent in yielding corporate sustainable growth. The evidence thus provides support for hypothesis 6(c). On the contrary, the result for CEO nationality shows an insignificant relationship with corporate sustainable growth ($\beta = -0.025$; S.E. $= 0.084$); consequently, hypothesis 7(c) is not supported. Similarly, the coefficient on CEO busyness is insignificant ($\beta = -0.013$; S.E. $= 0.026$), indicating that CEO busyness does not affect corporate sustainable growth. Thus, we find no support for hypothesis 8(c). In terms of the control variables, the result for firm size exhibits a significant positive association with corporate sustainable growth ($\beta = 0.082$; S.E. $= 0.032$). This suggests that larger and resourceful firms are more competent in yielding sustainable growth than smaller and mid-cap firms. In contrast, the results for leverage and tangibility demonstrate significant and negative relationships with corporate sustainable growth. This indicates highly-levered firms and those firms with relatively high asset tangibility are less competent than others in yielding sustainable growth. Interestingly, productivity does not seem to be significantly associated with corporate sustainable growth.

Robustness test

In this section, we perform a three-fold analysis to evaluate the robustness of our results.

Endogeneity: alternative model specifications

The present study applied the static panel data technique to investigate the impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth. In particular, the fixed-effects regression (static) has been employed (as suggested by the Hausman test) as the main estimator. As a robustness check, at the outset, we re-estimate the baseline models using three alternative model specifications, namely the 2SLS method (see Zellner and Theil 1992), 3SLS method (see Zellner and Theil 1992), and two-stage dynamic sys-GMM method (see Blundell and Bond 1998; Arellano and Bover 1995).

Often, empirical corporate finance research, explaining the causes and effects of financial decisions, suffers from serious endogeneity issues (Wintoki et al. 2012). Technically speaking, endogeneity exists when regressors in a regression model are correlated with the error term in the model (Kong et al. 2020; Arora and Sharma 2016; Lynch and Brown 2011). It is also likely that our baseline model(s) faces the potential problem of endogeneity in parameter estimation. Although we utilize the fixed-effects estimator to control for the issue of omitted variables (see Arora and Sharma 2016), this could still be affected by other potential factors of endogeneity. For instance, in our empirical estimation, there might be a reverse causality between corporate reputation and CEO attributes. Also,

a reverse causality might endure between corporate financial performance and CEO attributes. Moreover, there might be a reverse causality between corporate sustainable growth and CEO attributes. This, as argued by Roberts and Whited (2013) and Wintoki et al. (2012), leads to biased and inconsistent parameter estimates, making reliable inference quite impossible. Earlier empirical research (Barros et al. 2020; Arora and Sharma 2016; Roberts and Whited 2013; Wintoki et al. 2012) acknowledge that the endogeneity problem arises at least from three potential sources: omitted variable, simultaneity, and measurement error. Furthermore, endogeneity can occur from the possibility that current values of the explanatory variables are a function of past values of the dependent variable. "Neglecting this source can have serious consequences for inference" (Wintoki et al. 2012). Therefore, to respond to these endogeneity issues, in line with prior empirical research, a set of alternative model specifications, viz. 2SLS model (see Ain et al. 2021; Malik et al. 2021; Andries et al. 2020; Smirnova and Zavertiaeva 2017; Bhatt and Bhattacharya 2015), 3SLS model (Shi et al. 2021; Ataünal and Aybars 2017; Lee et al. 2016; Bhatt and Bhattacharya 2015; Franken and Cook 2013; Black et al. 2006), and two-stage dynamic system-GMM model (see Kong et al. 2020; Arora and Sharma 2016; Farag and Mallin 2016; Wintoki et al. 2012; Schultz et al. 2010) have been adopted. These models, as argued, allow finer control over the instrumental variables and can yield more efficient estimators (Lee et al. 2016; Schultz et al. 2010; Roodman 2009).

However, the choice of instruments is extremely critical for model estimation. The presence of weak instruments in the system will produce bias and inaccurate estimates (Raithatha and Haldar 2021; Lee et al. 2016; Wintoki et al. 2012). A straightforward approach to identify the presence of weak instruments in the 2SLS and dynamic sys-GMM models is to look at the R^2 or F-statistic of first-stage regression (see Wintoki et al. 2012). As a rule of thumb, the first-stage F-statistic must be large, generally exceeding 10, for inference of 2SLS and dynamic sys-GMM estimations to be reliable and valid (Stock et al. 2002; Staiger and Stock 1997, as cited in Lee et al. 2016).

In the present study, six of the selected CEOs attributes, including gender, age, education, tenure, nationality, and busyness, are assumed to be exogenous variables (see Shi et al. 2021; Galiën 2020; Ghardallou et al. 2020; Flabbi et al. 2016; Farag and Mallin 2016). While the target variables (by default), viz. corporate reputation, financial performance, and corporate sustainable growth, the other two CEO attributes, viz. duality (see Chen et al. 2008) and remuneration (see Shi et al. 2021; Quigley and Hambrick 2015), and all of the control variables, viz. leverage, firm size, tangibility, and productivity (see Ghardallou et al. 2020) have been assumed to be endogenous variables and instrumented by lagged variables no more than three periods. Simply speaking, we use three lags of each exogenous variable as instruments in the equation.

The choice of instruments is motivated by prior empirical research (e.g. Farag and Mallin 2016; Lee et al. 2016), and verified by the weak instrument test. More distinctively, there are twenty-one equations in the system, including a set of seven equations for each target variable; each equation contains the remaining six endogenous variables as explanatory variables along with the aforementioned exogenous and instrumental variables. For all equations, we control for time-fixed effects and estimate using the robust standard error option. To assess whether the selected instruments are weak, we regress each endogenous variable on all exogenous variables in the system (first-stage

Table 7 Estimation results for alternative model specifications. Source: Authors' own tabulation using STATA software (version 13.1)

Variable	Panel A: 2SLS			Panel B: 3SLS			Panel C: SYS-GMM		
	Corporate reputation	Corporate financial performance	Corporate sustainable growth	Corporate reputation	Corporate financial performance	Corporate sustainable growth	Corporate reputation	Corporate Financial Performance	Corporate Sustainable Growth
	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)
CGEN	-0.246 (0.073)	0.088** (0.042)	−0.055 (0.057)	-0.336 (0.060)	0.049* (0.013)	−0.053 (0.023)	-0.310 (0.013)	0.048* (0.017)	−0.057 (0.046)
CAGE	−0.038** (3.039)	-0.001 (0.001)	−0.007* (0.001)	-0.732 (0.149)	-0.001 (0.000)	−0.005* (0.001)	-0.001 (0.001)	-0.001 (0.001)	−0.004* (0.001)
CEDU	-0.477 (0.160)	0.036 (0.009)	0.029 (0.027)	-0.493 (0.840)	0.038 (0.006)	0.032 (0.025)	-0.376 (0.042)	0.041 (0.010)	0.034 (0.036)
CDUA	−0.514* (0.502)	-0.013 (0.008)	-0.034 (0.022)	−0.512** (0.128)	-0.008 (0.005)	-0.031 (0.020)	−0.581* (0.088)	-0.009 (0.008)	-0.035 (0.020)
CREM	0.379* (0.178)	0.007* (0.002)	0.022 (0.003)	0.383* (0.209)	0.009* (0.000)	0.019 (0.003)	0.380* (0.061)	0.012* (0.005)	0.021 (0.002)
CTEN	0.047* (0.125)	-0.011 (0.009)	0.072* (0.026)	0.038* (0.083)	0.010 (0.005)	0.066* (0.021)	0.044* (0.013)	0.012 (0.001)	0.044* (0.010)
CNAT	0.668 (0.395)	−0.072** (1.025)	-0.048 (0.071)	0.673 (4.633)	-0.025 (0.016)	-0.038 (0.063)	0.633 (0.051)	-0.018 (0.023)	-0.074 (0.106)
CBUS	−0.657* (0.029)	−0.053* (0.010)	0.017 (0.024)	−0.699* (1.471)	−0.026* (0.005)	0.015 (0.020)	−0.612* (0.008)	−0.038* (0.004)	-0.019 (0.011)
LEV	-0.027 (0.085)	−0.002* (0.000)	−0.011* (0.002)	-0.044 (0.135)	−0.002* (0.001)	−0.014** (0.001)	-0.030 (0.003)	−0.004* (0.001)	−0.017* (0.001)
FS	4.631* (0.527)	0.017** (0.004)	0.005** (0.008)	4.788* (0.538)	0.015** (0.001)	0.002** (0.008)	4.614* (0.005)	0.017** (0.002)	0.129* (0.011)
TAN	3.202* (0.163)	−0.140** (0.018)	−0.387** (0.047)	3.191* (0.414)	−0.124** (0.012)	−0.385** (0.057)	3.117** (0.009)	−0.134** (0.029)	−0.388* (0.042)
PROD	3.718* (0.322)	0.057* (0.007)	0.045 (0.016)	3.690* (0.111)	0.050* (0.004)	0.046 (0.016)	3.639* (0.007)	0.067* (0.019)	0.066 (0.023)
Year Dummy	YES	YES	YES	YES	YES	YES	YES	YES	YES
Industry Dummy	NO	NO	NO	NO	NO	NO	NO	NO	NO

Table 7 (continued)

Variable	Panel A: 2SLS			Panel B: 3SLS			Panel C: SYS-GMM		
	Corporate reputation	Corporate financial performance	Corporate sustainable growth	Corporate reputation	Corporate financial performance	Corporate sustainable growth	Corporate reputation	Corporate Financial Performance	Corporate Sustainable Growth
	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)
R^2	0.191	0.293	0.059	0.205	0.316	0.062			
Chi2(x^2)				715.990*	1579.880*	357.610*			
Wald Chi 2 (x^2)	518.230*	745.950*	55.660*				487.707*	1940.830*	1641.830*
AR(1) test (p-value)							(0.837)	(0.111)	(0.238)
AR(2) test (p-value)							(0.482)	(0.257)	(0.359)
Hansen test (p-value)							(0.399)	(0.314)	(0.347)
N	690	690	690	690	690	690	690	690	690

This table presents the estimates of the robustness test with alternative model specifications. The endogenous variables in the corporate reputation regressions are *REP (by default), CDUA, CREM, LEV, FS, TAN, and PROD* and instrumented by lagged variables no more than three periods. The exogenous variables in the corporate reputation regressions are *CGEN, CAGE, CEDU, CTEN, CNAT, and CBUS*. Three lags of each exogenous variable have been used as instruments in the equation. The endogenous variables in the corporate financial performance regressions are *CFP (by default), CDUA, CREM, LEV, FS, TAN, and PROD* and instrumented by lagged variables no more than three periods. The exogenous variables in the corporate financial performance regressions are *CGEN, CAGE, CEDU, CTEN, CNAT, and CBUS*. Three lags of each exogenous variable have been used as instruments in the equation. The endogenous variables in the corporate sustainable growth regressions are *CSG (by default), CDUA, CREM, LEV, FS, TAN, and PROD* and instrumented by lagged variables no more than three periods. The exogenous variables in the corporate sustainable growth regressions are *CGEN, CAGE, CEDU, CTEN, CNAT, and CBUS*. Three lags of each exogenous variable have been used as instruments in the equation. The regressions are estimated after controlling for time-fixed effects and using the robust standard error option. The definition and measurement of all the variables are provided in Table 2. * and ** indicate statistical significance at the 1% and 5% levels, respectively. Robust standard errors are reported in parentheses

regression). The values of R^2 (unreported) and F-statistics (unreported) for the regressions under each set are largely in conformity to the rules of thumb, suggesting that the chosen instruments are sufficiently strong.

Table 7 presents the results of the robustness test with alternative model specifications, namely 2SLS, 3SLS, and two-stage dynamic sys-GMM as in Panel A, Panel B, and Panel C, respectively. Largely, the results presented in Panel A are similar to those obtained from fixed-effects estimates of a static model reported in Table 6. However, the coefficient on CEO age, in the model (4), is statistically significant for the corporate reputation measure ($\beta = -6.018$; $p < 0.05$) using a 2LS estimator. This is in sharp contrast to the estimate from the static fixed-effects model in which the coefficient on CEO age is insignificant ($\beta = -0.311$; S.E. $= 0.191$). Interestingly, when we move to 3SLS and the dynamic sys-GMM model, this result disappeared. We witness a similar scenario in model (5) about the CEO nationality. The static fixed-effects estimate suggests an insignificant linkage between CEO nationality and corporate financial performance ($\beta = -0.013$; S.E. $= 0.032$). Interestingly, when we estimate this in a 2SLS model, the coefficient on CEO nationality is found to be statistically significant for corporate financial performance measure ($\beta = -3.072$; $p < 0.05$). However, in the other two models, viz. 3SLS and dynamic sys-GMM model, the relation between the above two constructs is insignificant ($\beta = -0.025$; S.E. $= 0.016$ and $\beta = -0.008$; S.E. $= 0.023$, respectively). The intuition behind these dramatic significance flips is an interesting one and demonstrates there is some unobservable heterogeneity that is not captured by past corporate reputation and corporate financial performance in model (4) and model (5), respectively under Panel A.

The results presented in Panel B and Panel C echo those obtained from fixed-effect estimates of a static model reported in Table 6. Except for a minor change in the magnitude of the estimated coefficients on the variables of interest, viz. CEO traits and control variables, the results presented in the aforementioned panels corroborate our main findings (both in sign and significance) and remain robust.

Table 7 also report the results of post-estimation tests − the AR(2) second-order serial correlation test and the Hansen test of over-identifying restrictions for the sys-GMM model (outlined in Panel C). The AR(2) test yields p-values − 0.482, 0.257, and 0.358 for models 10, 11, and 12, respectively, indicating that the null hypothesis of no second-order serial correlation cannot be rejected. The results in Table 7 also show the Hansen test-statistic with the p-values of 0.399, 0.314, and 0.347 for models 10, 11, and 12, respectively. This suggests the null hypothesis that the instruments are valid, cannot be rejected.

In summary, the results of alternative model specifications show that even after controlling for endogeneity issues such as omitted variable bias, simultaneity bias, measurement error bias, and the potential effect of past values of the dependent variable(s) on current values of the explanatory variables − results are similar to those obtained from fixed-effects estimates of a static model (baseline model) and remain robust.

Table 8 Estimation results for other robustness tests. Source: Authors' own tabulation using STATA software (version 13.1)

Variable	Corporate reputation		Corporate financial performance		Corporate sustainable growth	
	Model (13)	Model (14)	Model (15)	Model (16)	Model (17)	Model (18)
Constant	−1.781* (0.114)	−1.775 (1.709)	1.141 (0.778)	0.179** (0.085)	−1.338 (0.341)	0.661 (0.435)
CGEN	-0.138 (0.453)	-1.078 (0.456)	0.209* (0.015)	0.040** (0.023)	0.060 (0.113)	-0.058 (0.003)
CAGE	-0.002 (0.009)	-0.022 (0.012)	-0.022 (0.019)	-0.000 (0.001)	0.293* (0.005)	−0.006* (0.025)
CEDU	0.395 (0.299)	0.484 (0.388)	0.726 (0.624)	0.033 (0.019)	−0.032 (0.034)	0.037 (0.034)
CDUA	−0.180** (0.002)	−0.496** (0.043)	0.711 (0.388)	0.008 (0.012)	-0.007 (0.027)	0.013 (0.062)
CREM	0.045** (0.059)	0.282* (0.049)	0.069** (0.078)	0.007* (0.002)	-0.009 (0.004)	0.014 (0.012)
CTEN	0.209** (0.014)	0.194** (0.058)	0.172 (0.237)	0.008 (0.007)	−0.060** (0.025)	0.032** (0.040)
CNAT	-0.193 (0.438)	0.074 (0.663)	-0.046 (0.311)	-0.004 (0.033)	0.025 (0.084)	-0.021 (0.083)
CBUS	−0.221* (0.031)	−0.201* (0.092)	−0.936* (0.006)	−0.013** (0.010)	0.012 (0.017)	-0.003 (0.048)
LEV	0.012 (0.008)	0.005 (0.010)	-0.006 (0.005)	−0.001* (0.001)	0.005** (0.003)	−0.006* (0.003)
FS	1.788* (0.100)	3.120* (0.041)	0.151* (0.062)	0.013** (0.007)	−0.008* (0.010)	0.004** (0.036)
TAN	1.477* (0.145)	1.918* (0.080)	−0.611* (0.075)	−0.124* (0.029)	0.122* (0.062)	−0.385* (0.148)
PROD	0.644* (0.191)	2.179* (0.053)	0.329* (0.118)	0.046* (0.013)	-0.205 (0.026)	0.021 (0.020)
BS		-0.026 (0.030)		-0.000 (0.001)		-0.004 (0.004)
BD		3.582* (0.078)		-0.007 (0.039)		-0.143 (0.150)
BIND		2.966* (0.090)		-0.015 (0.019)		-0.011 (0.099)
FBM		0.173* (0.045)		0.004** (0.002)		0.005 (0.011)
PFAMA		0.053 (0.341)		-0.030 (0.017)		0.076* (0.027)
R^2(within)	0.456	0.674	0.127	0.118	0.081	0.051
R^2(between)	0.085	0.091	0.205	0.224	0.079	0.206
R^2(overall)	0.089	0.094	0.176	0.189	0.068	0.043
F-Statistic	68.130*	115.47*	77.510*	77.480*	72.820*	71.220**
N	1104	1104	1104	1104	1104	1104

This table presents the estimates of robustness tests with alternative measures and controlling for corporate governance variables. The definition and measurement of all the variables are provided in Table 2. * and ** indicate statistical significance at the 1% and 5% levels, respectively. Standard errors are reported in parentheses

Other robustness tests

Alternative measures In this section, we replicate our main analysis by considering alternative measures to our predicted variables, viz. corporate reputation, corporate financial performance, and corporate sustainable growth. The natural logarithm of market capital-

ization is used as an alternative measure for corporate reputation (see Nanda et al. 1996; Shefrin and Statman 1995, as cited in Kaur and Singh 2018b), and the net profit margin (see Mulyadi and Sihabudin 2020; Cengiz 2016) and deviation (see Mukherjee and Sen 2019b; Li et al. 2015; Amouzesh et al. 2011) have been employed to measure corporate financial performance and corporate sustainable growth, respectively. It's worth noting, however, the deviation indicates "how close or far the firm is to attain sustainable growth; the lesser the deviation, the closer the firm is to attain sustainable growth and vice-versa" (Mukherjee and Sen 2019b, p. 175). As such, the coefficient signs of predictor variables using this alternative are expected to be in the reverse direction to those obtained with the SGR measure in model (3) of Table 6. Using the fixed-effect regression model (as suggested by the Hausman test), we re-run the models (1), (2) and (3) of Table 6 by considering the aforementioned alternative measures. Models (13), (15) and (17) in Table 8 report the results of this analysis. The results for model (13) show that CEO remuneration and CEO tenure positively affects the firm's reputation, while the effects of CEO duality and CEO busyness on corporate reputation are significant and negative at conventional levels. This affirms the results obtained in model (1) of Table 6 remain robust at levels. Model (15) in Table 8 exhibits CEO gender and CEO remuneration positively affects the firm's financial performance, while the effect of CEO busyness on corporate reputation is significant and negative. This confirms the results obtained in model (2) of Table 6 remain robust at levels. Similarly, the estimates for model (17) show that the results obtained in model (3) of Table 6 remain robust at levels, affirming that the CEO age and CEO tenure affects corporate sustainable growth significantly.

Controlling for corporate governance Here, we replicate our main analysis after controlling for corporate governance. Prior researches provide evidence that the quality of a firm's governance relates to its reputation (e.g. Bravo et al. 2015; Gündoğdu 2015), financial performance (e.g. Almoneef and Samontaray 2019; Kuntluru 2019; Dash and Raithatha 2019; Arora and Bodhanwala 2018) and sustainable growth (e.g. Mukherjee and Sen 2019b). Thus, to attenuate potential omitted variable bias, we re-estimate the baseline models after controlling for the firm's governance structure. More distinctively, in addition to the set of control variables employed in the analysis, we control for five more variables, representing corporate governance structure, namely board size (BS), as measured by total number of directors on the board at period t (see Che and Langli 2015), board diversity (BD), as measured by number of women directors on the board at period t scaled by the total number of directors on the board at period t (see Akpan and Amran 2014), board independence (BIND), as measured by number of independent directors on the board at period t scaled by the total number of directors on the board at period t (see Liu et al. 2015), frequency of board meetings (FBM), as measured by number of board meetings held during period t (see Vo and Phan 2013) and family affiliation on board, as measured by dummy variable '0' and '1', i.e., Coded '1', if more than one family member on the board during period t and Coded '0', otherwise (see Rutherford et al. 2006) in all the baseline models (1), (2) and (3) of Table 6 and re-run the regression. The estimates of the Hausman test (unreported) confirmed that the application of a fixed-effect model is preferable to the random-effect model. Models (14), (16) and (18) in Table 8 report the results of this analysis. The results for model (14) demonstrate that CEO remuneration and CEO

Table 9 Hypotheses remarks. Source: Authors' own tabulation

Hypotheses	Remarks
H_{1a} : CEO Gender has a positive impact on corporate reputation	Rejected
H_{1b} : CEO Gender has a positive impact on corporate financial performance	Accepted
H_{1c} : CEO Gender has a positive impact on attaining corporate sustainable growth	Rejected
H_{2a} : CEO Age has a negative impact on corporate reputation	Rejected
H_{2b} : CEO Age has a negative impact on corporate financial performance	Rejected
H_{2c} : CEO Age has a negative impact on attaining corporate sustainable growth	Accepted
H_{3a} : CEO Education has a positive impact on corporate reputation	Rejected
H_{3b} : CEO Education has a positive impact on corporate financial performance	Rejected
H_{3c} : CEO Education has a positive impact on attaining corporate sustainable growth	Rejected
H_{4a} : CEO Duality has a negative impact on corporate reputation	Accepted
H_{4b} : CEO Duality has a negative impact on corporate financial performance	Rejected
H_{4c} : CEO Duality has a negative impact on attaining corporate sustainable growth	Rejected
H_{5a} : CEO Remuneration has a positive impact on corporate reputation	Accepted
H_{5b} : CEO Remuneration has a positive impact on corporate financial performance	Accepted
H_{5c} : CEO Remuneration has a positive impact on attaining corporate sustainable growth	Rejected
H_{6a} : CEO Tenure has a positive impact on corporate reputation	Accepted
H_{6b} : CEO Tenure has a positive impact on corporate financial performance	Rejected
H_{6c} : CEO Tenure has a positive impact on attaining corporate sustainable growth	Accepted
H_{7a} : CEO Nationality has a positive impact on corporate reputation	Rejected
H_{7b} : CEO Nationality has a positive impact on corporate financial performance	Rejected
H_{7c} : CEO Nationality has a positive impact on attaining corporate sustainable growth	Rejected
H_{8a} : CEO Busyness has a negative impact on corporate reputation	Accepted
H_{8b} : CEO Busyness has a negative impact on corporate financial performance	Accepted
H_{8c} : CEO Busyness has a negative impact on attaining corporate sustainable growth	Rejected

tenure positively affects the firm's reputation, while the effects of CEO duality and CEO busyness on corporate reputation are significant and negative. This reaffirms the results obtained in model (1) of Table 6 remain robust at levels. Model (16) in Table 8 exhibits CEO gender and CEO remuneration positively affects the firm's financial performance, while the effect of CEO busyness on corporate reputation is significant and negative. This re-confirms the results obtained in model (2) of Table 6 remain robust at levels. Likewise, the estimates for model (18) show that the results obtained in model (3) of Table 6 remain robust at levels, reaffirming that the CEO age and CEO tenure affects corporate sustainable growth significantly.

Overall, the results of other robustness tests show that apart from a slight variation in the magnitude of the estimated coefficients, results corroborate our main findings and remain robust at levels. Hypotheses remarks have been reported in Table 9.

Discussion

Key findings

This study investigates the impact of CEO attributes (demographic and job-specific both) on corporate reputation, financial performance, and corporate sustainable growth in India. Our analysis is based on the sample of 138 NSE listed top non-financial Indian companies for the period from 2010 to 2017. We find that the companies with CEOs

playing a dual role in conjunction decrease stakeholder perception of firm reputation. This result supports the perspective of agency theory and research by Caiffa et al. (2021), who noted stakeholders' do not appreciate the concentration of power in a single individual who serves the same company with more than one role. Conceivably, stakeholders' or investors do hold the notion that CEO duality can weaken the protection sought by shareholders and may incentivize CEO entrenchment by diminishing board monitoring effectiveness. For this reason, CEOs dual role in conjunction, not generally favourably perceived by the market. Similar to Schulz and Flickinger (2018), we find that CEOs remuneration increases stakeholder perception of firm reputation. The likely explanation for this phenomenon is that premium remuneration is interpreted by stakeholders' as a signal for managerial skills. More distinctively, stakeholders' perhaps do hold the notion that higher-paid CEOs are better, smarter and quite efficient than the ones who were paid reasonable remuneration. For this reason, CEOs remuneration, generally favourably perceived by the market. As expected, we find that long-tenured CEOs are more competent in enhancing the firm's reputation. This evidence is consistent with the findings of Conte (2018) and Schulz and Flickinger (2018) that noted stakeholders' do appreciate it when a company is controlled and managed by long-tenured CEOs. The logical explanation for this phenomenon is that stakeholders' perhaps do hold the notion that long-tenured CEOs are more pro-active and efficient than the short-tenured CEOs. More specifically, stakeholders' perhaps do believe long-tenured CEOs gain familiarity with the organizational culture and resources, over the tenure, and thereby they develop a major commitment to the organization. For this reason, long-tenured CEOs are generally favourably perceived by the market. Further, we find evidence that CEOs busyness decreases stakeholder perception of firm reputation. This result is in line with the findings of Ratri et al. (2021), who observed CEO's busyness provide a negative signal for investors or stakeholders'. Conceivably, stakeholders' or investors do hold the notion that if the CEO remains too busy, the CEO will not have enough energy and time to stay focused on their principal task, and thereby CEOs efficacy in managing the company and devising strategy might get impaired. For this reason, CEOs busyness, not generally favourably perceived by the market. On contrary to our expectations, we find insignificant associations between CEO gender, CEO age, CEO education, CEO nationality and corporate reputation. The moderating roles of third variables may have explained the results of such insignificant relationships.

Our empirical results also confirm those female CEOs do have a favourable influence over corporate financial performance. This result accords with the findings of Faccio et al. (2016) and Francoeur et al. (2008) yet contradicts the research by Kaur and Singh (2018a) that noted an insignificant relationship between CEO gender and corporate financial performance. The likely explanation for this phenomenon is that female CEO is more effective in coordinating, controlling, and supervising the management, as they are more risk-averse (Croson and Gneezy 2009; Weber et al. 2002), and are accustomed to multitasking (Ruderman et al. 2002) compared to male CEOs, which in turn lead to improved firm performance. On contrary to our expectations, we find that CEO age has no measurable impact on corporate financial performance. This result is in line with the findings of Lindeman (2019) and Educardo and Poole (2016) that noted no linkage between the CEO's age and corporate performance.

Consistent with the findings of Kaur and Singh (2018a) and Morresi (2017), we find that CEOs advanced education (possessing a Postgraduate degree or Professional degree or PhD or any other equivalent degree) does not affect corporate financial performance. Likewise, we find no significant association between CEO duality and corporate financial performance. This result supports the research by Kaur and Singh (2018a) and Vintilă et al. (2015) yet contradicts the research by Lindeman (2019) and Azeez (2015) that noted a significant association between CEO duality and corporate financial performance. As expected, we find clear evidence that corporate performance gets improved with an increase in CEOs pay. This result supports the perspective of agency theory and findings of Kaur and Singh (2018a) and Matousek and Tzeremes (2016) that observed CEO remuneration is associated with positive corporate performance. As stated earlier, both the shareholder and the manager, according to agency theory, are utility maximizers with different interests (Capitalism 2009). A conflict of interest arises between the owners and the managers once the control and ownership get separated (Fama and Jensen 1983; Holmstrom 1979); aligning their interests comes at a cost (Berk and Demarzo 2016). Many academics have argued attractive remuneration to CEO is an effective governance mechanism that mitigates this conflict of interest, improves CEOs involvement in achieving the shareholders objective, and consequently improves the financial performance of companies (Raithatha and Haldar 2021; Al-Shammari 2021; Zoghlami 2021; Smirnova and Zavertiaeva 2017; Kazan 2016). Drawing on the expectancy theory of motivation, we further argue that remuneration act as a good stimulus, and as a result, motivates the CEO to work in the favour of shareholders and capitulate superior corporate performance (Jekins et al. 1998; Vroom 1964). Another reason for this phenomenon might be cognitive. More specifically, well-paid CEOs feel being paid more attention by their top-level management, work more sincerely and harder, and consequently improve corporate financial performance (Shi et al. 2021). Similar to Tien et al. (2013), we find that CEO tenure does not affect corporate financial performance. Likewise, our results suggest that CEO nationality does not affect corporate financial performance. This result contradicts the research by Kaur and Singh (2018a) and Badru and Raji (2016) that observed a significant association between CEO nationality and corporate financial performance. Further, our results reveal that corporate financial performance deteriorates when the CEO of a firm do hold multiple directorships concurrently. This result is in line with the findings of Harymawan et al. (2019) and Falato et al. (2014) yet contradicts the research by Mendez et al. (2017) and Tien et al. (2013), who argued CEOs with multiple directorships expedite companies to attain better performance. The logical explanation behind this phenomenon is that if the CEO remains too busy, the CEO will not have enough energy and time to stay focused on their principal task of managing and formulating company strategies, and thereby the firm activity gets disrupted and firm performance tends to deteriorate (Harymawan et al. 2019; Falato et al. 2014; Cashman et al. 2012).

Further, our results reveal those female CEOs do not influence corporate sustainable growth. A possible explanation is that very few Indian firms have had female CEOs, and hence panel evaluations of this relationship are determined with a vast statistical uncertainty (Kaur and Singh 2018a). Our results also show that aged CEOs are less competent

in yielding corporate sustainable growth. We argue that as CEOs get older they are less likely to bring up new ideas because they are more conservative; this, in turn, deteriorates the corporate performance and affects the ability to attain sustainable growth adversely. On contrary to our expectations, we find that CEOs advanced education (possessing a Postgraduate degree or Professional degree or PhD or any other equivalent degree) does not affect corporate sustainable growth. The logical reasoning behind this phenomenon is that the time gap between the point the CEO completes the studies and the point he/she attains the position of CEO is quite lengthy, in general; in consequence, the benefits which may accrue to a firm or CEO from gaining from the quality or area of his/her educational background severely gets eroded (Gottesman and Morey 2010). Our empirical results also suggest that CEO-Chair roles do not affect corporate sustainable growth. The likely explanation behind this phenomenon is that there may be the presence of other variables that mediate the effect of dual CEO-Chair roles on corporate sustainable growth, in the Indian context. Similarly, the results indicate that CEO remuneration does not affect corporate sustainable growth. On the other hand, as expected, we find that long-tenured CEOs are more competent in yielding corporate sustainable growth. The logical explanation behind this phenomenon is that long-tenured CEOs are very familiar with the firm's resources and methods of operation, thereby provide more informed direction and guidance which helps the firms to perform better and attain sustainable growth. Interestingly, the empirical results reveal that neither CEO nationality nor CEO busyness has a significant impact on corporate sustainable growth. As mentioned, the moderating roles of third variables may have explained the results of such insignificant relationships.

Theoretical implications

The present study has some important theoretical contributions. In contrast to the conventional wisdom that organizational outcomes are heavily constrained and driven by organizational structure and institutional forces, the present study supports the view that organizational outcomes are reflections of the values and cognitive bases of top executives. In particular, this study is in line with the upper echelons theory that offers clear evidence that experiences, values, and personalities of CEOs proxied by their demographic and job-specific attributes exercise noticeable influence in explaining corporate outcomes. Prior research has demonstrated very similar results to this that the traits of upper echelons do influence corporate outcomes. However, those studies have mainly focused on the company's short-term orientation, in particular the financial performance. Unfortunately, very little or no emphasis has been placed on the company's long-term perspective. This study extends the upper echelons theory demonstrating how top executives' values or preferences affect both short-term and long-term orientations of the firms by evidencing the impact of CEO attributes on corporate reputation, financial performance, and corporate sustainable growth. Further, to the best of our knowledge, this study is the first to examine the effects of CEO traits on three diverse corporate dimensions under one roof in the context of the Indian market. Notably, the job-specific attributes of CEO, viz. CEO remuneration, CEO duality, and CEO busyness, among others, are considered critical components of the corporate governance system. The majority of the earlier studies have either focused on the CEO's demographic

characteristics or job-specific traits. Unlike prior studies, this study by exploring the influences of both the demographic and job-specific attributes of the CEO jointly on corporate reputation, financial performance, and corporate sustainable growth contributes significantly to the corporate governance literature. Finally, the results support the contention that diversity in top management brings to the organization unique human capital, which is important for gaining a competitive advantage. More specifically, this study is in line with the human capital theory and resource dependence theory that provides strong evidence that female participation in top management improves corporate performance. As such, the findings of the study also contributes to the gender diversity literature and is relevant to redefining women's roles in society, especially in India, society is dominated by male power till-date.

Managerial implications

Besides the aforementioned theoretical implications, the findings of this study propose several managerial implications for scholars, non-financial companies, governments, and policymakers, among others who are interested in firms' short-run and long-run performances through a proper alignment amongst CEO experience, values, and personalities and governance structures. First, this research provides a basis for the shareholders and policymakers to identify areas of consideration when appointing CEOs and determining their roles and responsibilities in India. Generally, the shareholders and policymakers seek to recruit the most competent CEOs with the necessary set of skills and educational qualifications to meet shareholders' goals and achieve long-term success. We argue that given an equivalent set of skills and qualifications, policymakers and shareholders should consider other observable attributes, namely age, gender, and tenure while recruiting CEOs. More distinctively, if the goal of the firm is to achieve superior long-run performance, the search committee should consider younger and longer-tenured CEO candidates, since they are more likely to assist a firm to attain sustainable growth. On the other hand, if the goal of the firm is to achieve a better short-run performance, the search committee should consider female CEO candidates, as they seem to function well in this capacity. Diversity in top management, especially in terms of gender is highly recommended to improve corporate financial performance in India. Interestingly, our sample indicates that the proportion of female executives is severely lagging. Hence, we recommend policymakers and boards take more and more initiatives and set policies to support for greater participation of female CEOs. Second, our empirical results provide suggestive evidence for the board of directors to fix CEO remuneration levels efficiently and to justify relatively high-level CEO pay. Corporate reputation is an important strategic asset and vital for firm long-run sustainability (Schulz and Flickinger 2018). At the same time, corporate financial performance is equally vital for firms to create value and achieve short-run growth plans. Through inducing a proper remuneration structure in favour of executives (i.e., a high-level CEO pay package) a perfect balance can be maintained between executives' goals and short-run and long-run organizational goals. Third, it should be noted that the separation of management and ownership (non-duality) is crucially important in current business (Wijethilake and Ekanayake 2019). Further, holding limited directorships at a time by CEOs is equally crucial for organizations to perform better and establish a good reputation in today's competitive business world. In

this context, we strongly recommend that policymakers adopt appropriate policies on corporate governance and other codes of best practice. Finally, this research can be an essential source of information for investors and corporate managers when it comes to formulating and implementing investment policy.

Limitations and scope for further research

Despite this study providing several theoretical and managerial implications, some caveats could pave the way for further research and expand this domain. First, the present study is conducted in the context of the Indian market. The academicians, research scholars, and corporate managers, among others, could extend this study to other countries for comparison. Second, the research sample consists of NSE listed top non-financial Indian companies. Further research in this domain could be conducted by employing an increased number of observations including both the financial and non-financial Indian companies, or researchers could even explore the same relationships in the context of small-scale enterprises in India. Third, research scholars could extend the present study by integrating the alternative corporate sustainable growth models, viz. simple growth model (see Alayemi and Akintoye 2015), Van Horne's model (see Van Horne and Wachowicz 2015, p. 190–192), and Zakon's model (see Amouzesh et al. 2011), among others or by using the other measures for quantifying corporate reputation and financial performance or by taking into consideration the other CEO attributes, such as facial traits and psychological traits, among others. Fourth, this study did not address the moderating role of a few potential components in explaining the nexus between the studied variables of interest. Thus, we call on future studies to assess the moderating role of corporate governance, organizational culture, political environment, psychological environment, and socio-cultural environment, among others in explaining the relationship between CEO traits and corporate reputation, financial performance, and corporate sustainable growth. Furthermore, it's likely that our three response variables, viz. corporate reputation, financial performance, and corporate sustainable growth, could be related to each other. As such, it would be interesting to see the simultaneous influence among corporate reputation, financial performance, and corporate sustainable growth in explaining the impact of CEO traits on each corporate aspect. Finally, we encourage further CEO attributes studies to evaluate its effects on the quality of CSR disclosure and earnings management.

Conclusion

This study investigates the impact of CEO attributes (demographic and job-specific both) on corporate reputation, financial performance, and corporate sustainable growth in India. Using a sample of 138 NSE listed top non-financial Indian companies for the period from 2010 to 2017, the static panel data analysis shows that CEO remuneration and tenure maintains significant positive associations with corporate reputation, while duality and CEO busyness are found to be associated with corporate reputation negatively. However, we find no significant associations between CEO gender, age, education, nationality and corporate reputation. The results also show that female CEOs and CEO remuneration are associated with corporate financial performance positively, whereas CEO busyness, as expected, maintains a significant negative association with corporate

financial performance. Interestingly, no significant relationships could be found between CEO age, education, duality, tenure, nationality and corporate financial performance. Moreover, the results demonstrate that CEO age is associated with corporate sustainable growth negatively, while tenure appears to have a significant and positive association with corporate sustainable growth. However, we fail to find any significant associations between CEO gender, education, duality, remuneration, nationality, busyness and corporate sustainable growth. The results hold to a battery of robustness tests, including controlling for endogeneity issues.

Overall, the empirical results confirm our theoretical contentions, partially. The results provide clear evidence that in the Indian context, CEO attributes (demographic and job-specific both) exercise noticeable influence in explaining corporate reputation, financial performance, and corporate sustainable growth. These findings are in line with previous studies that noted the attributes of CEO do matter for corporate outcomes and its sustainability, supporting the upper echelons theory and resource dependence theory.

Acknowledgements
We are highly indebted to all four anonymous reviewers for providing their precious time and tremendous effort in going through our entire research work minutely. Their insightful remarks, recommendations and guidance in framing this manuscript are greatly appreciated. We would also like to express our sincere gratitude to the editor(s) and editorial team of Financial Innovation for extending their co-operation, guidance and regular encouragement in completing this research on time.

Authors' contributions
TM conceived of the study, and performed the statistical analysis and helped to draft the manuscript. SSS participated in the sequence alignment and assisted in its design. All authors read and approved the final manuscript.

Funding
Not applicable.

Availability of data and materials
The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Competing interests
The authors declare that they have no competing interests.

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Received: 14 June 2021 Accepted: 3 March 2022
Published online: 25 April 2022

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