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DO CHARACTERISTICS OF BOARDS AND SUBCOMMITTEES AFFECT CORPORATE SUSTAINABILITY?

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Abstract

Purpose: This paper explores the level of corporate sustainability in large listed companies in India. It also aims to identify the importance of the board and its subcommittees in improving corporate sustainability.
Methodology: This study employs an ordered probit model in a panel data framework.
Findings: The study provides evidence of the importance of independence and gender diversity of the board of directors and its committees in the context of corporate sustainability. It also evaluates whether the insights of key theories in corporate finance (like agency theory and stakeholder theory) are applicable in the context of corporate sustainability. Specific characteristics like the independence and gender diversity of the board, and its subcommittees (namely the audit committee, risk management committee and corporate social responsibility committee) were found to impact corporate sustainability.
Originality: This is the first study to identify the impact of characteristics of various subcommittees on corporate sustainability. This is also the first study to highlight the significance of a risk management committee in maintaining corporate sustainability. This study would be beneficial for researchers, practitioners and policymakers in the area of corporate sustainability.

Keywords: Board of directors; CSR committee; Audit committee; Risk management committee; corporate sustainability; Gender diversity; independence.

1. Introduction

Corporate sustainability has become an important parameter to evaluate a business. This approach aims to create preferred outcomes for the environment, societies, and corporations. It aspires to create value and support growth for all the stakeholders in the ecosystem and has much deeper implications than merely ticking the boxes.

Gone are the days when companies would focus only on their financial performance and still be identified as 'sustainable'. Now there are triple bottom lines—profit, people, and planet—for measuring business success. Organizations all across the world are striving to perform on all of these dimensions to be perceived as sustainable.

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The policymakers are also formulating a framework that guides organizations in developing these areas. The approach of such policies is to identify quantitative measures for promoting organizational sustainability.

India, like many other countries, has been gradually developing a philosophy of responsible business. This was rooted in the initial 'National Voluntary Guidelines on Social, Environmental, and Economic Responsibilities of Business', which was published by the Indian Ministry of Corporate Affairs. Similarly, the top 100 listed companies (based on their market capitalization) submit a Business Responsibility Report detailing the social and environmental impacts of their businesses to the securities market regulator (SEBI). The objective of this mandate is to increase transparency in critical nonfinancial reporting for organizations. The scope of this guideline was later extended to include the top 1000 companies by the year 2022.

A committee on business responsibility reporting was established by the Ministry of Corporate Affairs in 2018. The report of this committee (which was released in 2020) recommended comprehensive reporting guidelines called the 'Business Responsibility and Sustainability Report'. These guidelines would encourage the business to interact more meaningfully with all stakeholders. The objective would be to emphasize the social and environmental impacts of the business, going beyond regulatory and financial compliance.

The responsibility of business leadership has also expanded in scope. In terms of recently emerged global challenges like inequality, climate change, environmental risks, etc., corporations have realized the importance of reengineering the roles of businesses and their leaders. The firms can no longer function as mere economic units generating wealth for their shareholders. Corporate leaders have started to realize the significance of achieving their environmental, social, and governance (ESG) objectives. In India, a similar thought can be perceived in the recently amended Companies Act (2013). This act imposes a fiduciary duty on the directors of the company to align their interests with those of "its employees, shareholders, the community, and for the protection of the environment." It is therefore crucial that corporate sustainability is ingrained in the corporate leadership of modern organizations.

This study fulfills the following objectives: It explores the level of corporate sustainability in large listed companies in India. It also aims to identify the importance of the board and its subcommittees in improving corporate sustainability. This study would contribute in the following ways: The study would provide evidence of the importance of independence and gender diversity on the board of directors and its committees in the context of corporate sustainability. It would also evaluate whether the insights of key theories in corporate finance (like agency theory and stakeholder theory) are applicable in the context of corporate sustainability. This would be the first study to highlight the significance of risk management committee characteristics in improving corporate sustainability. This study would be beneficial for researchers, practitioners, and policymakers in the area of corporate sustainability.

The rest of the article is organized as follows: Section 2 discusses the existing literature and theoretical foundation and presents the formulation of hypotheses. Section 3 presents the data, sample, and empirical estimation. The subsequent section explains the results of the analysis, and Section 5 presents the conclusion and implications of the study.

2. Theory and hypothesis development

Several studies have explored the role of the board of directors in attaining corporate sustainability. Most of the studies in this domain are based on two important theories: agency theory (Jensen and Meckling, 1976) and stakeholder theory (Freeman, 1984). Both of these theories highlight the importance of the board of directors in steering organizational policies. The agency theory identifies the conflict between the objectives of the principal and those of the agent. This conflict may arise because of information asymmetry, opportunistic behavior, or diverse interests between shareholders and managers (Ortas et al., 2015). In these cases, the board of directors is a structure to align the goals of the principal and the agent.

The stakeholder theory identifies the interconnected relationships between various stakeholders of an organization, including its employees, customers, suppliers, investors, etc. It argues that the organization should be able to generate value for all its stakeholders. To be successful, the firm should align its interests with those of its stakeholders. In this context, the duty of the board of directors gains utmost importance in aligning the goals of the organization and formulating such policies.

2.1 Corporate Sustainability

How companies make decisions has undergone a drastic evolution in recent times. They are now required to assume greater responsibility for their actions. The environmental, social, and governance dimensions of business have become dominant aspects of a business. The companies, driven by ethical practices, are required to be proactive and make responsible choices. The Sustainable Development Goals of the United Nations also stress inclusive growth, highlighting the environmental and social aspects of sustainable economic development.

Corporate sustainability may be perceived by an organization’s policy on environmental, social, and governance aspects of business. When an organization develops awareness about the effect of its operations on all its stakeholders, it can become sustainable. In this aspect, the ESG scores of companies can be a suitable measure of sustainability.

Several agencies issue ESG ratings to aid investors in making decisions. There has been a gradual change in investor behavior from active management of assets to more passive asset management (Li & Polychronopoulos, 2020). Business sustainability has also become an important dimension when deciding on investment strategies.

There is extremely limited research on ESG ratings. Most of the existing research discusses the development of ESG rankings and indices and compares the rankings issued by different agencies (Pagano et al., 2018; Dimson et al., 2020; Billio et al., 2021). This study aims to address the following pertinent problem that is relevant for both developing and developed economies: It explores the association between board and committee-level characteristics in improving corporate sustainability.

2.2 Board of Directors

An important structure to check the actions of corporations is the board of directors (Donaldson & Davis, 1991). They have an important duty to align the interests of the organization with those of its stakeholders at large. The directors are also identified as a significant decision-making structure in an organization (Zahra, 1993; García-Sánchez et al., 2019). Many studies have evaluated the significance of the board of directors in numerous contexts. Specific characteristics of the board have been found to increase firm value, report quality, and attract human resources (Peasnell et al., 2000; Cox, 2001; Klein, 2002; Kent et al., 2010; Balasubramanian et al., 2010; Black et al., 2011; Kopaor and Goel, 2017). Analysis of the independence and gender diversity of the board has also been done specifically in contexts of firm performance and earnings quality (Peasnell et al., 2000; Jaggi et al., 2009; Arun et al., 2015; Gull et al., 2018; Goel and Kapoor, 2021). When the boards are composed of independent and female directors, it leads to better outcomes for the organizations in various contexts. Women directors also improve decision-making and business performance and may lower stakeholder-agent conflict.

However, few studies have analyzed the relationship between the characteristics of the board and the corporate sustainability of a firm. It has been documented in the context of the United Kingdom that board gender diversity is associated with the quality of sustainability reporting (Al-Shaer and Zaman, 2016; Chams & García-Blandón, 2019; Crifo et al., 2019; Manning et al., 2019). Similarly, Naciti (2019) also investigated the relationship between board-level characteristics and sustainability. The study finds that an increase in board gender diversity increases corporate sustainability. Velte (2016) evaluated the role of female directors on corporate boards in Germany and Austria. Women’s participation on the board increased sustainability in the sample firms. In a recent study, Anyigbah et al. (2023) also found an association between certain board characteristics and corporate sustainability reporting.

As suggested by prior studies, both board independence and gender diversity may improve corporate sustainability. Therefore, the following two hypotheses are formulated:

H1: Higher board independence is associated with higher corporate sustainability.

H2: Higher gender diversity on the board is associated with higher corporate sustainability.

2.3 Committees of the Board

Several subcommittees support the board of directors in its oversight and monitoring responsibilities. The structure and composition of these committees also have a crucial role in assisting the board to achieve its desired objectives. Studies have been done to examine how some sub-committees can improve reporting quality and firm performance (Peasnell et al., 2000; Jaggi et al., 2009; Arun et al., 2015; Gull et al., 2018; Goel and Kapoor, 2021). Studies also encourage exploring the role of each dimension of board structure in enhancing corporate sustainability (Naciti, 2021). However, no study has explored the composition of sub-committees of the board and its association with corporate sustainability. In this study, the composition of three important committees of the board (namely the Corporate Social Responsibility Committee, the Audit Committee, and the Risk Management Committee) is explored, and their role in improving corporate sustainability is evaluated.

2.3.1 Corporate Social Responsibility Committee

The creation of a specific committee for corporate social responsibility denotes a strong commitment to this aspect of business practices. The primary responsibility of a CSR committee is to handle opportunities and risks concerning corporate sustainability (Peters & Romi, 2015). Recent studies have found that the creation of a CSR committee increases corporate transparency and improves ESG performance in German, Austrian, and American companies (Velte, 2016; Martínez-Ferrero et al., 2021). Eberhardt-Toth (2017) reported that the independence of the CSR Committee improves corporate social performance. This study conducted a detailed analysis of the composition and structure of the CSR committee. The findings reveal that higher independence of the CSR committee is associated with higher corporate social performance.

Having women directors on the board has been found to be beneficial for firms (Muller-Kahle and Lewellyn, 2011). They should also be able to improve sustainability because they exhibit more ethical and empathic behavior than men (Boulouta, 2013). The same effect might be applicable in the case of sub-committees of the board. A few studies (Velte, 2016; Eberhardt-Toth, 2017; Elmaghrabi, 2021) have evaluated the impact of gender diversity in a similar way. However, the gender diversity of the CSR committee was not found to have any significant association with corporate social performance in any of the studies. As suggested by previous research on the significance of the board of directors and sub-committees, the following two hypotheses are proposed:

H3: Higher independence of the CSR committee is associated with higher corporate sustainability.

H4: Higher gender diversity in the CSR committee is associated with higher corporate sustainability.

2.3.2 Audit Committee

An audit committee's principal responsibility is to supervise the firm's financial reporting process. Their effectiveness as a control mechanism has been evaluated in numerous economies (Klein, 2002; Baxter and Cotter, 2009; Kent et al., 2010; Sharma and Kuang, 2014; Amar, 2014). They also address issues in the domain of financial control and risks. Aspects of corporate sustainability are also an important part of audit committee responsibilities. This is because audit committee members are required to monitor non-financial information along with financial reporting as part of their assurance and control functions (Al-Shaer and Zaman, 2018). Therefore, they might also have a role in improving corporate sustainability.

However, studies evaluating the relationship between audit committee characteristics and corporate sustainability are very sparse. Studies have found that specific audit committee characteristics improve the credibility and sustainability reporting of organizations. Audit committee independence is important in this respect (Al-Shaer and Zaman, 2018). Similarly, the gender diversity of the audit committee has also been evaluated in a similar context. Studies have reported that the gender diversity of the audit committee improves voluntary ESG reporting practices in certain economies (Bravo and Reguera-Alvarado, 2019; Buallay & Al-Ajmi, 2020). Therefore, the following hypotheses are proposed:.

H5: Higher independence of the audit committee is associated with higher corporate sustainability.

H6: Higher gender diversity on the audit committee is associated with higher corporate sustainability.

2.3.3 Risk Management Committee

Risk management committees are considered one of the prominent governance mechanisms that evaluate the risk activities in an organization (Hines and Peters, 2015). Existing research mainly focuses on the formulation of RMC and its significance for the firm (Yatim, 2010, Ng et al., 2013, Jia & Bradbury, 2020). It finds the risk management committee to be an important governance structure, and its formulation is beneficial for the firm. Studies have also indicated that specific characteristics of the firm may increase firm value. Jia& Bradbury (2020) have found that the size, independence, and human capital of the risk management committee play a crucial role in improving the performance of the firm. Similarly, the independence of the risk management committee is found to be related to reducing underwriting risk in the Malaysian context (Ng et al., 2013). Gender diversity in risk management committees has been hardly explored. In the case of the board and subcommittees, gender diversity has been found to be an important trait as a governance mechanism. Therefore, it can be argued that the gender diversity of the risk management committee is beneficial for the firm. It has already been found to limit the chance of financial distress in the Australian context (Jia, 2019). As indicated by the aforementioned studies, the following two hypotheses are formulated:.

H7: Higher independence of the risk management committee is associated with higher corporate sustainability.

H8: Higher gender diversity in the risk management committee is associated with higher corporate sustainability.

3. Methodology

This study explores the association between specific board and committee-level characteristics and the corporate sustainability of large listed firms in India. To test the hypotheses formulated in the earlier sections, the following model is proposed:.

Corporate sustainability = f (board and committee characteristics, board-level control variables, financial control variables)

The board and its sub-committees are complementary mechanisms for managing organizations. Therefore, separate regression models were used to test the role of each of these committees in promoting sustainability practices in the firms. There might be a delay in the implementation of policies formulated by the directors leading toward corporate sustainability. The real impact of a quality board might be experienced after some time. Therefore, the board and committee-level data at time t-1 is used to assess its impact on corporate sustainability at time t. If you delay the independent and other control variables by one period, it might help with any endogeneity problems that come up when you look at corporate sustainability and board-level variables at the same time.

A sample of the top 100 companies listed on the Bombay Stock Exchange was obtained. Companies with incomplete data were removed, and the final sample comprised 62 firms. The period of the data is 2016–21. Three different categories of data were required for the analysis: (1) financial data; (2) data on boards and

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committees; and (3) data on corporate sustainability. Each of these categories was taken from a different source. Data for board- and committee-level variables were taken from the annual reports of the respective companies. The Center for Monitoring the Indian Economy (CMIE) sourced financial data from the Prowess database. The data on ESG ratings was taken from the website of Morgan Stanley Capital International (MSCI). MSCI collects and publishes a large amount of corporate data, including ESG ratings and key ESG issues for more than 2900 companies. Many earlier studies have used MSCI data (Chakrabarti et al., 2005; Giese et al., 2019; Sherwood & Pollard, 2018; Tripathi & Kaur, 2020). Table 1 outlines the categories of the ESG ratings given by MSCI. MSCI issues seven different ESG ratings to companies based on 35 key issues in the context of the environment, social, and governance pillars. The final ESG category is arrived at by normalizing the weighted average of the respective key issue scores.

Table 1
ESG Rating Categories

ESG Rating	Original Category	No of Observations	Final Category
AAA	7	-	3 Leader
AA	6	26	3 Leader
A	5	48	3 Leader
BBB	4	70	2 Average
BB	3	63	2 Average
B	2	74	1 Laggard
CCC	1	29	1 Laggard

Out of the initial 7 rating categories issued by MSCI, AAA is not assigned to any firms in the current sample. Similarly, the rating of CCC is assigned to very few firms. Therefore, the ratings were redefined to obtain a three-level classification, as presented in Table 1. This reduced classification is taken as a proxy measure for corporate sustainability. Thus, the dependent variable is an ordered categorical variable having three categories. In such a case, an ordered regression model can be used for estimation (Gujarati, 2011).

The independent variables are measured as follows: Board independence is calculated as the percentage of independent directors on the board. Board gender diversity is calculated as the percentage of female directors on the board. The definitions of independence and gender diversity remain the same for the subcommittees of the board.

A few control variables were also part of the model to identify their probable effects on corporate sustainability. They can be classified as board- and committee-level variables and financial variables. The size of the board has been linked with sustainability (Said et al., 2009; Cucari et al., 2018). Therefore, the size of the board and its respective committees were included as board-level control variables in the analysis. Studies have also identified that firm size might be a determinant of corporate sustainability (Ghazali, 2007; Rao & Tilt, 2016; Cucari et al., 2018). Therefore, three different measures for the size of the firm were included in the analysis: the log of total assets, the log of market capitalization, and the log of the number of employees. In the Indian context, the profitability of the firm and sustainability have been found to be related (Sharma et al., 2020). Therefore, the analysis additionally included them as control variables.

4. Results

4.1 Descriptive results

The categories for measuring corporate sustainability are presented in Table 1. The maximum number of observations is reported for category B of the ESG rating, while the lowest is for category AAA, where there are no observations in the sample. This indicates some cause for concern because the companies are still required to strengthen their commitments toward creating a sustainable organization. Only 24% of the observations were found to be in the 'leader' category for corporate sustainability, 43% were in the 'average' category, and a remarkable 33% of the observations were in the category 'laggard' in sustainability.

The descriptive statistics of the important variables of the analysis are presented in Table 2. Board independence has a mean (median) of 51.13% (50%). This indicates that independent directors constitute almost half of the board of directors in our sample. The maximum value of board independence is found to be 88.89%. The gender diversity of the board has a mean (median) of 14.77% (12.5%). For the CSR committee, the mean values of independence and gender diversity are 44.36% and 17.36%, respectively. The gender diversity of 17.36% is the highest level of women's participation among all committees in the current sample. In the context of the Audit Committee, the mean values of independence and gender diversity are 84.09% and 13.32%, respectively. The independence of the audit committees is much greater than that of any other committee in the current sample. In the case of the risk management committee, the mean values of independence and gender diversity are found to be 38.78% and 8.98%, respectively. Board size has a median value of 11. The smallest board in the sample comprises 4 directors, while the largest is 21 directors. The median values of the three committees (namely CSR, audit, and risk management) are 4, 4, and 5, respectively.

Table 2
Descriptive Statistics

	Mean	Median	Std. Dev.	Min.	Max.	
Board Ind	51.13	50	12.2409	0	88.89	
Board GD	14.77	12.5	8.0968	0	44.44	
CSRC Ind	44.36	40	20.2180	0	100	
CSRC GD	17.36	16.67	17.3903	0	75	
AC Ind	84.09	80	16.4160	0	100	
AC GD	13.32	0	16.7526	0	75	
RMC Ind	38.78	33.33	34.5798	0	100	
RMC GD	8.98	0	14.0163	0	66.66	
Board Size	11.42	11	2.7482	4	21	
CSRC Size	4.28	4	1.2865	2	9	
AC Size	4.28	4	1.1243	1	7	
RMC Size	4.54	5	1.4867	2	11	

The cross-correlation statistics of the important variables are presented in Table 3. There is no significant correlation between any of the variable pairs. A correlation of more than 0.5 is found among a few variables. There is a 0.51 correlation between the independence of the board and the CSR committee. Similarly, the correlation between gender diversity on the board and CSR and audit committees is 0.50 and 0.54, respectively, suggesting similarities between the structure of the board and the abovementioned committees. However, these are considered complementary mechanisms, and their respective impacts were evaluated through separate regression models. Therefore, there is no issue of multicollinearity in the present analysis.

Table 3
Cross-correlation Matrix

		1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**	**12.**
1.	Board Ind	1.00											
2.	Board GD	0.22	1.00										
3.	CSRC Ind	0.51	0.22	1.00									
4.	CSRC GD	0.21	0.50	0.12	1.00								
5.	AC Ind	0.43	0.09	0.25	0.18	1.00							
6.	AC GD	0.12	0.54	0.15	0.26	0.11	1.00						
7.	RMC Ind	0.46	0.07	0.41	0.24	0.26	0.13	1.00					
8.	RMC GD	0.31	0.36	0.18	0.31	0.06	0.42	0.30	1.00				
9.	Board Size	-0.05	-0.29	-0.13	-0.25	0.13	-0.18	-0.06	-0.13	1.00			
10.	CSRC Size	-0.16	-0.15	-0.14	-0.11	0.04	-0.18	-0.18	-0.11	0.23	1.00		
11.	AC Size	0.25	-0.04	0.11	0.01	-0.08	0.05	0.18	0.09	0.20	0.11	1.00	
12.	RMC Size	0.01	-0.16	0.00	-0.07	-0.03	-0.16	0.04	-0.04	0.22	0.33	0.36	1.00

4.2 Estimation Results

The model proposed in previous sections is analyzed employing an ordered probit regression model because the dependent variable is ordinal (Gujarati, 2011). Four separate models were tested to evaluate the significance of the board of directors and subcommittees in maintaining corporate sustainability. The results of the regression analysis are presented in Table 4. The overall significance of the regression model in the case of an ordered probit model is the likelihood ratio test (LR chi2), which in the present analysis indicates the fitness of all the models. Such a study may suffer from heteroscedasticity. Therefore, the white test was performed, which ruled out the presence of heteroscedasticity in the sample data.

Table 4
Regression Results

	Sign	Model 1a	Model 1b	Model 2	Model 3	Model 4
Board Ind	+	0.0262*	0.0259*			
Board GD	+	0.0129				
Crit Mas	+		0.6088*			
CSRC Ind	+			0.0017		
CSRC GD	+			0.0115*		
AC Ind	+				0.0096**	
AC GD	+				0.0016	
RMC Ind	+					0.0040**
RMC GD	+					0.0125**
Board Size	-	0.0374	0.0462***	0.0425	0.0606**	0.0434***
CSRC Size	+			0.0834		
AC Size	-				0.0091	
RMC Size	-					0.0027
Profit	+	0.1300*	0.1354*	0.0786	0.0668	0.0790
Firm Size	-	0.3482**	0.3334**	0.6100*	0.6445*	0.5284*
Mkt Cap	+	1.0897*	1.0620*	1.3582*	1.3267*	1.3867*
No. Emp	+	0.0675	0.0846	0.0861	0.0861	0.0355
Prob>Chi^2		0.00	0.00	0.00	0.00	0.00
Pseudo R^2		0.110	0.120	0.084	0.084	0.095

*, **, ***denote significance at the 1%, 5% and 10% levels respectively. Values in parentheses denote z-statistics.

Model 1 evaluates the impact of the independence and gender diversity of the board of directors on corporate sustainability. The variable of board independence has a positive association with corporate sustainability and is significant at a 1% level of significance. This suggests that an increase in the independence of the board increases the probability of improved corporate sustainability. The variable of board gender diversity also has a positive association but is not found to be significant statistically. A probable argument to support this result is critical mass theory. Literature suggests that the inclusion of women directors on a board cannot achieve its purpose if they are a minority, present only as a token. For a board to have an impact, at least three of its directors should be women (Torchia et al., 2010). Therefore, another variable for gender diversity measuring a critical mass was included in Model 1b. The variable

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critical mass is a binary variable denoting whether the number of women directors is at least 3 or otherwise.

In Model 1b, the association and significance of board independence remain the same as in Model 1a. The variable for critical mass, which is another measure of the participation of women directors on the board, is positive and significant at a 1% level of significance. This shows that only when there are three or more female directors on the board can an organization's corporate sustainability be improved.

The next model explores the impact of CSR committee characteristics of independence and gender diversity on corporate sustainability. In Model 2, the association between independence and the CSR committee is not significant statistically. However, the association of gender diversity in the CSR committee is positive and significant at a 1% level of significance. This suggests that an increase in the gender diversity of the CSR committee increases the probability of improved corporate sustainability. A dummy variable representing the critical mass of women could not be tested in this case because very few companies had three or more women directors on the CSR committee.

The subsequent model evaluated the effect of independence and gender diversity of audit committees on improving corporate sustainability. In Model 3, the association of audit committee independence with corporate sustainability is positive and significant at a 5% level of significance. This suggests that an increase in the independence of the audit committee increases the probability of improved corporate sustainability. This finding supports earlier research that has reported a similar relationship between the independence of audit committees and sustainability reporting (Al-Shaer and Zaman, 2018). However, variable audit committee gender diversity was not significant statistically. A dummy variable representing the critical mass of women directors could not be tested in this case either because of the reasons mentioned above.

The next model tested the effect of independence and gender diversity in risk management committees on corporate sustainability. In Model 4, the coefficients of both the variables independence and gender diversity of the risk management committee were positive and statistically significant at a 5% significance level. An increase in either independence or gender diversity of the risk management committee increases the probability of enhanced corporate sustainability. This finding suggests that the risk management committee is a crucial governance structure, specifically in the context of corporate sustainability. It is in congruence with earlier studies on the role of the risk management committee (Yatim, 2010; Ng et al., 2013; Jia and Bradbury, 2020).

The model also had some control variables because of their probable effect on corporate sustainability. Among the board and committee-level control variables, the association of board size with corporate sustainability was negative. It was significant in Model 1b, Model 3, and Model 4. The other variables of the size of the CSR committee, audit committee, and risk management committee were not significant statistically. The remaining control variables, total assets and market capitalization, had significant associations with corporate sustainability, while the variable for the number of employees was not found to be significant in any of the models. The association between profitability and the firm was significant only in the case of Model 1.

5. Conclusion and Implications

This article evaluates the importance of corporate boards and committees in maintaining corporate sustainability. The study is based on 310 firm-year observations of large listed companies in India. The findings reveal significant associations between specific board and committee-level characteristics and corporate sustainability. The article makes many important contributions to the literature. Firstly, it suggests evidence for suboptimal levels of sustainability among corporations in the sample. Only 24% of the observations can be attributed to leaders in corporate sustainability. This is surely a cause for concern for all stakeholders. Secondly, the study reports the importance of the independence of the board, audit committee, and risk management committee in achieving corporate sustainability. This finding supports the agency theory, which highlights the role of independent directors in matching the objectives of the managers with those of the shareholders. Thirdly, this is the first study to report the importance of gender diversity in CSR and risk management committees in improving corporate sustainability. This inference follows stakeholder theory and supports the relevance of the diversity of boards. Fourthly, this is the first study to specifically highlight the significance of the risk management committee in the context of corporate sustainability. Both independence and gender diversity on the risk management committee have a role in enhancing sustainability. A risk management committee is a governance mechanism that evaluates the risk activities in an organization. Therefore, it may be considered to have a futuristic orientation and fundamentally support corporate sustainability. Lastly, the study finds support for the critical mass theory. There is a significant association between the dummy variable for critical mass on the board of directors and corporate sustainability, but not so for overall gender diversity.

These findings are beneficial for managers and shareholders who are interested in improving the sustainability of their organization. This is also relevant for policymakers, who gain insight into the respective dimensions of the board and its committees that might improve corporate sustainability. This aspect assumes greater importance as India is also striving to achieve the United Nations' Sustainable Development Goals (SDGs). In India, the regulatory structure mandates the independence of the board and audit committee and the inclusion of a woman director on the board. The policymakers might be motivated to widen the scope of recommending independence and gender diversity in CSR and risk management committees.

Future research may include other dimensions of corporate governance, like CEO duality, the busyness of directors, the participation of directors in board meetings, etc., to increase the scope of research. Individual aspects of the environment, society, and governance can be further explored to understand their respective relationships. Further, this study is based on 100 large listed firms in India. Future studies based on a larger sample may overcome this limitation and increase the generalizability of the research.

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