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Unlocking sustainable governance: The role of women at the corporate apex

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Abstract

This study explores the intra-organizational antecedents of sustainable governance by examining the impact of female presence at the corporate apex. Drawing upon the upper echelon theory, we investigate whether women in top positions influence sustainable governance practices. Our research focuses on a sample of companies operating within two distinct market economies: liberal market economies (LMEs) and coordinated market economies (CMEs). The United States, represented by the S&P100, and the United Kingdom, represented by the FTSE100, serve as examples of LMEs. Conversely, Germany (DAX30), France (CAC40), Spain (IBEX35), and Switzerland (SMI) are illustrative of CMEs. Analyzing archival data spanning from 2010 to 2019, we confirm that the presence of a critical mass of women on the board of directors significantly increases the likelihood of establishing a sustainability committee within organizations. This relationship holds true across both LMEs and CMEs, highlighting the universal importance of gender diversity in driving sustainable governance initiatives. Interestingly, we observe that the impact of women with structural power on sustainability committee formation is specific to LMEs, suggesting the context-dependent nature of female leadership in sustainable governance.

KEYWORDS
female chairperson, female directors, sustainability, sustainable governance

1 | INTRODUCTION

Companies are increasingly incorporating societal and environmental concerns into their operations (Carberry et al., 2019; Scherer et al., 2016). This growing commitment to social and environmental responsibility has prompted companies to not only implement sustainability initiatives but also establish dedicated governance bodies responsible for overseeing the company's societal and environmental impact. Consequently, an increasing number of companies have formed sustainability committees (Montagnon, 2016), which are board committees specifically tasked with sustainability-related matters (Endrikat et al., 2021; Gull et al., 2023). These governing bodies primarily focus on overseeing corporate policies aimed at maximizing positive impacts on the natural environment and society while minimizing negative ones. While the presence of a sustainability committee is undoubtedly crucial for corporate accountability regarding the environment and society (Gull et al., 2023; Orazalin, 2020; Radu & Smaili, 2022; Velte, 2022), a significant aspect that remains largely unexplored is the identification of the antecedents that facilitate the establishment of such committees. Recent research has begun to examine the influence of external country-level conditions on the presence of sustainability committees on boards

(Gennari & Salvioni, 2019). However, scholars have yet to consider whether certain cognitive frames within the corporate leadership are key drivers in this context.

This paper aims to address the following research question: what are the intra-organizational antecedents of sustainable governance? By drawing on upper-echelon theory, we argue that the presence of a sustainability committee is likely to vary based on the existence of sustainability-oriented cognitive frames within the organization. We develop theoretical arguments that build upon the premise that the establishment of a sustainability committee is a voluntary and deliberate decision (Endrikat et al., 2021). Moreover, evidence suggests that females possess cognitive frames that are more sustainability-oriented than males (Galbreath, 2018; Wood & Eagly, 2009). We develop theoretical arguments based on the core premise that an increase in the number of females on the board significantly enhances their influence and power. Critical mass is a central concept that underscores the importance of having a sufficient number of individuals with a particular attribute to bring about significant changes and influence within a group or organization. Additionally, aligning with the concept of structural power, we develop theoretical arguments based on the core premise that individuals with structural power are better positioned to negotiate during decision-making processes.

Taking this perspective into account, we employ a cross-national sample to investigate whether the presence of females in top-level corporate positions can substantially enhance the likelihood of establishing a sustainability committee. The study focuses on companies operating within two distinct types of market economies prevalent in capitalist systems. The decision to analyze a dataset comprising companies operating in different institutional settings stems from the need to address limitations observed in previous studies that only focused on one institutional setting, thus limiting the generalizability of their results. As highlighted by Haxhi and Aguilera (2017), countries tend to cluster into distinct institutional settings that define "the rules of the game," making them significant to consider. One influential typology of institutional settings, proposed by Hall and Soskice (2001), distinguishes between liberal market economies (LMEs) and coordinated market economies (CMEs). LMEs, such as the United States and Anglophone countries (e.g., United Kingdom), typically prioritize shareholder interests, while CMEs, including Germany and Western European countries (e.g., Spain, France, and Switzerland), often prioritize the interests of a broader set of stakeholders (Surroca et al., 2020). Given that companies in CMEs tend to focus on stakeholder interests, the likelihood of establishing a sustainability committee may be higher in companies operating in such institutional settings. Additionally, studies have revealed that companies in CMEs generally have a higher proportion of females in top-level positions compared to companies in LMEs (Grosvold & Brammer, 2011; Terjesen et al., 2015).

Our findings reveal that having a critical mass of women on the board of directors significantly enhances the probability of instituting a sustainability committee on board, thereby contributing to sustainable governance. Such relationship holds true across both LMEs and CMEs. Furthermore, the results underscore that the presence of a female chairperson is positively related to the likelihood of establishing a sustainability committee in LMEs, further emphasizing the role of women in driving sustainable governance.

These findings contribute to the literature in several important ways. First, apart from a few notable exceptions (Gennari & Salvioni, 2019), most studies on the establishment of sustainability committees have primarily focused on the outcomes associated with them, neglecting to explore the internal organizational factors that facilitate their formation. To the best of my knowledge, this study represents one of the first attempts to examine the intra-organizational antecedents of the likelihood of establishing a sustainability committee. Second, this study provides a clearer understanding of the outcomes associated with having a critical mass of females in top-level positions and having a female with a powerful role within governance settings. Previous research has primarily focused on the possible relationship between female representation on boards and organizational performance, whether financial or socioenvironmental. More recently, scholars have begun to investigate the potential link between women on boards and sustainability practices (De Masi et al., 2021; Rodríguez-Ariza et al., 2017). The decision to explore an alternative outcome, such as the likelihood of establishing a sustainability committee, is motivated by the fact that individuals in top-level positions have a monitoring role, overseeing managerial decisions and actions within the firm (e.g., approving strategic initiatives, and assessing managerial performance). Accordingly, board characteristics are likely to influence the board's inclination to monitor sustainability-related matters through the implementation of a dedicated monitoring tool, namely the sustainability committee. Thus, this study expands the existing literature by proposing and examining the notion that the presence of females in top-level positions serves as an indicator of a stronger orientation toward sustainability, consequently leading to a greater willingness within the board to monitor sustainability-related issues through the establishment of a sustainability committee. Collectively, this study contributes to the emerging body of research on female representation in top-level positions (Isidro & Sobral, 2015; Terjesen & Singh, 2008) and its role as a catalyst for genuine transformation toward more responsible governance.

The rest of this paper unfolds as follows: First, we review the relevant literature and develop theoretically grounded hypotheses regarding the impact of female representation on the likelihood of establishing a sustainability committee. Next, we outline the methodology employed to test these hypotheses and present the results of the statistical analyses. Finally, we discuss the findings and conclude by highlighting the contributions of this study to the literature, along with suggestions for future research.

2 | THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Prior to delving into the examination of the relationship between women on board and sustainable governance, this section serves

as the foundation for our study. Herein, we lay out the theoretical framework that underpins our research, offering a comprehensive understanding of the principles and concepts guiding our investigation.

2.1 | Sustainable governance

Governance of social costs generated by corporations is a multifaceted challenge that demands a holistic and collaborative approach (Johnston et al., 2021). Sustainable governance represents a comprehensive approach to managing organizations, where sustainability principles are seamlessly woven into the very fabric of core governance structures and decision-making processes (Orazalin, 2020; Velte, 2022). It encompasses a paradigm shift toward responsible and ethical leadership that considers the environmental, social, and economic dimensions of organizational activities. Within sustainable governance literature, sustainability committees emerge as drivers of positive change within organizations (Gull et al., 2023; Orazalin, 2020). Such governing bodies are commonly defined as a board committee responsible for addressing sustainability-related matters (Endrikat et al., 2021). These committees may also be referred to as "CSR" committees (Helfaya & Moussa, 2017). Unlike other governing bodies such as the audit and compensation committees, the establishment of a sustainability committee is a voluntary decision (Endrikat et al., 2021) aimed at actively promoting the positive impact of a corporation on the natural environment and society as a whole. It is important to note that, with the exception of certain countries like India (Gatti et al., 2019), the formation of a sustainability committee is not mandatory in most countries worldwide. While research has explored the benefits associated with establishing a sustainability committee, including its positive impact on corporate sustainable performance (Baraibar-Diez & Odriozola, 2019; Burke et al., 2019; Hussain et al., 2018; Orazalin, 2020; Radu & Smaili, 2022) and non-financial disclosure (Adnan et al., 2018; Ben-Amar et al., 2017; Peters & Romi, 2014; Tingbani et al., 2020), the literature on its antecedents is still limited. In this study, the focus is on intra-organizational antecedents that create a favorable environment for establishing a sustainability committee, drawing primarily from upper echelon theory to examine the potential influence of female presence at the corporate apex.

2.2 | Females and sustainability

Various theoretical perspectives have been employed to elucidate the intricate relationship between female representation and sustainability within organizations. Among these perspectives, two stand out as particularly influential and illuminating: the upper-echelon and the socio-feminist perspective.

The upper-echelon perspective posits that organizational outcomes reflect the values and cognitive bases of powerful actors within the organization (Hambrick & Mason, 1984). When considering cognitive frames related to socioenvironmental issues, extensive research indicates that females display a greater concern for sustainability compared to males (Kuzey et al., 2022). For example, scholars have theorized that females possess psychological characteristics that make them more attentive to sustainability concerns (Wood & Eagly, 2009). Females are often associated with communal traits (Eagly et al., 2003), leading them to consider a broader range of corporate stakeholders, in contrast to males who tend to focus primarily on shareholders' interests (Adams et al., 2011; Smith et al., 2001; Zelechowski & Bilimoria, 2006). Additionally, females, due to their more relational orientation, invest greater effort in understanding stakeholders' interests (Galbreath, 2018; Rosener, 1995). Studies have shown that female consumers exhibit more concern for responsible consumption than males (Luchs & Mooradian, 2012), and females also hold their organizations to higher ethical standards compared to males (Pan & Sparks, 2012). More recently, scholars revealed that the inclusion of female directors in corporate boards has a positive impact on fostering ethical disclosure practices within the realm of corporate governance (Areneke et al., 2023). In mobilizing collective action, females may frame a company's responsibilities in terms of stakeholders' interests. Given that females are highly attentive to social and environmental concerns, and their values and beliefs are oriented toward sustainability (Cosma et al., 2021; Glass et al., 2016; Nadeem et al., 2020), it can be expected that they would advocate for a tangible commitment to sustainability within the corporations they work for.

The socio-feminist perspective explores the intricate interplay between gender dynamics, social structures, and organizational behavior (Coleman et al., 2019). This perspective emphasizes that women, as a historically marginalized group, may possess certain characteristics and experiences that influence organizational dynamics and sustainability outcomes. Socio-feminism posits that women often exhibit traits such as empathy, collaboration, and a heightened sense of responsibility toward social and environmental concerns. Female leaders may advocate for more sustainable practices, emphasizing the well-being of diverse stakeholders and the long-term health of the organization.

Collectively, these arguments suggest that female directors are more likely to enhance oversight of sustainability issues. This study builds on the upper echelons' perspective, which emphasizes that females at the corporate apex make decisions based on their personalized interpretation of situations, shaped by their values and biases. However, the likelihood of female directors influencing the establishment of a sustainability committee is low due to their numerical and demographic minority representation on boards.

2.3 | A critical mass of females and the establishment of a sustainability committee

Despite efforts to empower females in leadership positions worldwide, their representation in such roles remains relatively small. In sociology, the concept of critical mass is often used to describe the

point at which a social group reaches a size or level of support that allows it to have a significant impact or influence (Granovetter, 1978; Kanter, 1987). Critical mass in this context implies that there needs to be a sufficient number of female board members to exert a meaningful influence. While there is no universally defined percentage that constitutes a critical mass, it is generally considered to be a level of representation at which women's voices and perspectives become influential rather than isolated or marginalized. Research on group dynamics has demonstrated that a group of at least three individuals has a substantial impact on changing group dynamics compared to a group of two individuals. Building upon these findings, a growing body of research on females in the boardroom suggests that a critical mass of female directors significantly influences board processes and outcomes. For example, according to Konrad et al. (2008), a critical mass of females in the boardroom brings different perspectives, broadens the topics of discussion, raises issues related to multiple stakeholders, addresses critical matters affecting the company's reputation and the community, and enhances board processes through their interpersonal skills (e.g., cooperation, calmness, and willingness to listen). Based on these theoretical foundations, previous studies have examined whether a critical mass of females at the corporate apex can impact organizational-level outcomes such as organizational innovation (Torchia et al., 2011) and organizational performance (Joecks et al., 2013). As female presence serves as a proxy for a stronger sustainability orientation (Galbreath, 2018), increasing the number of females in the boardroom significantly enhances their power (Kanter, 1987). Thus, the presence of a critical mass of females at the corporate apex can be considered a crucial antecedent for the willingness of boards to oversee sustainability-related issues. Specifically, the presence of a critical mass of females within the board of directors is hypothesized to increase the likelihood of establishing a sustainability committee. They may be more likely to challenge the status quo, question traditional norms, and advocate for policies and practices that promote sustainability within the organization. When women attain a critical mass on the board, their presence becomes more than token representation; it becomes a catalyst for change. Therefore, the following hypothesis is proposed:

> **Hypothesis 1.** The presence of a critical mass of females within the board of directors increases the likelihood to establish a sustainability committee within the board.

2.4 | Structural power at the corporate apex and the establishment of a sustainability committee

The potential negative outcomes associated with being the only female within a group may change if the female possesses power. Power, as defined by Finkelstein (1992), refers to the capacity of individual actors to exert their will. In the context of top management teams, Finkelstein (1992) distinguishes between different forms of power, including structural power, ownership power, expert power, and prestige power. This study focuses specifically on structural power and its relevance in understanding the establishment of a sustainability committee. Structural power, also referred to as hierarchical or legitimate power, is associated with the distribution of formal positions within an organization (Finkelstein, 1992). For instance, the chairperson holds a prominent structural position within the boardroom and plays a critical role in shaping decisions (McNulty et al., 2011). Recent studies (Bezemer et al., 2018) highlight that the chairperson is responsible for organizing and overseeing decision-making processes in the boardroom, ensuring that the board focuses on relevant decision items, possesses necessary information, avoids undue influence from self-interest, and follows up on decisions made. While other board members are involved in strategic decision-making, the chairperson maintains an active role throughout the process. Consequently, a female with structural power is better positioned to negotiate during decision-making processes and exert influence over strategic and governance choices. As suggested by Hambrick (2007), understanding why organizations make certain decisions requires considering their most powerful actors. At the corporate apex, the chairman of the board represents the highest legal authority (Boivie et al., 2016). Based on these theoretical explanations, it is hypothesized that the presence of females in powerful roles creates a conducive environment for establishing a sustainability committee. Specifically, the presence of a female chairperson is expected to increase the likelihood of establishing a sustainability committee within the board. Thus, the following hypothesis is proposed:

> **Hypothesis 2.** The presence of a female chairperson increases the likelihood to establish a sustainability committee within the board.

3 | METHOD

3.1 | Data collection and sample

Prior empirical studies on female representation have primarily focused on single-country datasets, which raises questions about the generalizability of the findings. To address this limitation, we constructed a dataset comprising companies operating in distinct institutional settings: LMEs and CMEs. The United States and the United Kingdom are examples of LMEs (Hall & Soskice, 2001). Therefore, to represent companies in LMEs, we gathered data on the constituents of the S&P100 and FTSE100 stock market indexes. The S&P100 includes a hundred large-cap companies in the United States, while the FTSE100 comprises a hundred large-cap companies in the United Kingdom. Germany, France, Spain, and Switzerland can be categorized as CMEs (Hall & Soskice, 2001). Hence, to represent companies in CMEs, we collected data on the constituents of the IBEX35, DAX30, CAC40, and SMI stock market indexes. The IBEX35 consists of 35 large-cap companies in Spain, the DAX30 includes 30

large-cap companies in Germany, the CAC40 comprises 40 large-cap companies in France, and the SMI represents 20 large-cap companies in Switzerland. In Table 1, we provide a more comprehensive overview of the countries that have been included in our study.

The decision to focus on publicly traded companies was primarily driven by the fact that they are obligated to disclose financial and corporate governance data. The dataset encompasses a 10-year period from 2010 to 2019 to account for the time dimension. Since the establishment of sustainability committees has notably increased over time (Burke et al., 2019; Gennari & Salvioni, 2019), it is essential to consider the temporal aspect as a potentially confounding variable in the model. Selecting the period from 2010 to 2019 aims to exclude turbulent economic periods that significantly affected both LMEs and CMEs, such as the Great Recession between 2007 and 2009 and the COVID-19 outbreak starting in 2020. Governance and organizational data were obtained from Bloomberg to ensure reliable and comprehensive information. A detailed description of sample selection is provided in Appendix 1.

3.2 | Variables

Dependent Variable. The dependent variable in this study is the presence of a sustainability committee within the focal firm's board. Specifically, the variable "sustainability committee" was coded as a dummy variable, where a value of 1 indicates the presence of a sustainability committee within the board of the focal firm.

Independent Variables. The study examines two independent variables: (1) the presence of a critical mass of females on the board, (2) the presence of a female chairperson. Consistent with Konrad et al. (2008), the first variable was coded as "1" if the number of females on the board of directors was three or more. The second variable was coded as "1" if the chairperson was female.

Control Variables. To account for potentially confounding effects on the probability of establishing a sustainability committee, the analysis includes control variables related to organizational-level and governance-level characteristics. Organizational characteristics controlled for include firm size and firm performance. Larger companies may be more likely to establish a sustainability committee, while underperforming companies may do so to improve their public image. Firm size is measured as the natural logarithm of total assets. To ensure robustness, firm size is also controlled for using the natural logarithm of firm sales. Firm performance is measured by return on assets (ROA), and for robustness, additional control variables include return on equity (ROE) and total shareholder return (TSR). The inclusion of these variables does not alter the substantive findings. Board-level characteristics that could potentially influence the likelihood of establishing a sustainability committee are also controlled for. For example, companies with larger boards may have a higher propensity to establish a sustainability committee, and those with a greater proportion of independent directors may be more likely to do so. Board size is measured by the number of directors, while board independence is calculated as the percentage of independent directors on the board. Additionally, control variables for board tenure (measured in years) and board age (average age of all board members) are included. Considering the potential influence of binding quotas, a dummy variable equal to 1 is included for countries and years where there are binding quotas for women on boards. This accounts for the impact of quotas on the presence of females and, consequently, the likelihood of establishing a sustainability committee. Furthermore, to explore the influence of institutional settings, a dummy variable is included in the models. A value of 1 indicates that the company is nested in LMEs, while a value of 0 indicates it is nested in CMEs. It is expected that companies in CMEs, given their stronger focus on stakeholder interests, are more likely to establish a sustainability committee. A detailed description of each variable considered in the analyses is provided in Appendix 2.

TABLE 1 Countries.

Countries	Institutional context	Stock market index
United States	Liberal market economy	S&P100
United Kingdom	Liberal market economy	FTSE100
Germany	Coordinated market economy	DAX30
France	Coordinated market economy	CAC40
Spain	Coordinated market economy	IBEX35
Switzerland	Coordinated market economy	SMI

3.3 | Analytical procedures

Given that the dependent variable is binary (the presence of a sustainability committee), we employed panel data logit and probit regression models to predict the likelihood of a firm establishing a sustainability committee. To ensure robustness, we also employed the nearest-neighbor matching technique to test the effect of female presence on the likelihood of establishing a sustainability committee. In all models, a lag of 1 year was applied to both the independent variables and control variables. To test the hypotheses, we conducted firm-level analyses using panel data with fixed effects. Throughout the regression analyses, we thoroughly examined the presence of multicollinearity using the VIF test. In all cases, the VIF values remained below the maximum acceptable level of 10, as suggested by Kutner et al. (2004).

4 | RESULTS

This section presents the descriptive statistics, correlation analysis, and regression results. Prior to conducting the analyses, an assessment was made to identify any potential outliers in the dataset. Cook's distance was calculated, and no observations exceeded the suggested cutoff point as recommended by Bollen and Jackman (1985). Descriptive statistics for the entire dataset are provided in Table 2, while Tables 3 and 4 present descriptive statistics

TABLE 2 Descriptive statistics.

Variables	Mean	Std. dev.	25th percentile	50th percentile	75th percentile
Sustainability committee	.373	.484	0	0	1
CM female directors	.52	.5	0	1	1
CM female executives	.172	.377	0	0	0
Female chairperson	.033	.179	0	0	0
Firm size	24.224	1.887	22.974	24.277	25.46
Firm performance	6.46	12.823	1.6	4.72	8.84
Board size	12.063	3.224	10	12	14
Board independence	71.368	18.707	57.14	73.33	88.89
Board tenure	1.789	1.231	1	1	3
Board age	60.52	3.858	58.11	60.67	63.1
Binding quota	.157	.364	0	0	0
Institutional setting	.614	.487	0	1	1

TABLE 3 Descriptive statistics—LMEs.

Variables	Mean	Std. dev.	25th percentile	50th percentile	75th percentile
Sustainability committee	.439	.496	0	0	1
CM female directors	.48	.5	0	0	1
CM female executives	.203	.402	0	0	0
Female chairperson	.035	.183	0	0	0
Firm size	24.23	1.937	22.939	24.316	25.51
Firm performance	7.873	15.7	2.11	5.875	10.38
Board size	11.238	2.368	10	11	13
Board independence	76.187	14.351	66.67	78.57	90
Board tenure	1.216	.625	1	1	1
Board age	60.985	4.059	58.56	61.4	63.75
Binding quota	0	0	0	0	0
Institutional setting	1	0	1	1	1

specifically for LMEs and CMEs, respectively. Notably, the percentage of companies with a sustainability committee is higher in LMEs (43.94%) compared to CMEs (26.39%). Conversely, the percentage of companies with a female chairperson is relatively similar between LMEs (3.47%) and CMEs (3.00%). The correlation matrix in Table 5 reveals important associations. It shows a positive and significant correlation between the presence of a critical mass of female directors and the likelihood of establishing a sustainability committee (p-correlation = .21, p-value <.05). Similarly, the presence of a critical mass of female executive directors is positively and significantly correlated with the likelihood of establishing a sustainability committee (p-correlation = .19, p-value <.05). However, the correlation analysis indicates that the presence of a female chairperson is not significantly correlated with the likelihood of establishing a sustainability committee.

Table 6 presents the results of hierarchical regression analysis, testing the hypotheses using both logit and probit regression models. These models are commonly used to examine binary outcome variables. Models 1 to 3 utilize a logit model to test the hypotheses, while models 4 to 6 use a probit model. In the first step, the first hypothesis was tested. The coefficient is positive and significant ($b = 0.95$, p-value <.01), confirming that the presence of a critical mass of female directors increases the likelihood of establishing a sustainability committee. Additionally, the results indicate that certain control variables significantly impact the likelihood of establishing a sustainability committee. For instance, firm size has a positive and significant coefficient ($b = 0.29$, p-value <.01), aligning with the expectation that larger companies are more likely to establish a sustainability committee. Similarly, firm performance has a negative and significant coefficient ($b = -0.02$, p-value <.01), suggesting that poorly performing companies are more inclined to establish a sustainability committee to enhance their public legitimacy. The coefficients of board independence and board tenure are both negative and significant ($b = -0.02$, p-value <.01; $b = -0.26$, p-value <.01), indicating that companies with higher board independence and shorter board tenure are more likely to establish a sustainability committee. Additionally, the coefficients of binding quotas and institutional settings are both positive and significant ($b = 0.62$, p-value

TABLE 4 Descriptive statistics—CMEs.

Variables	Mean	Std. dev.	25th percentile	50th percentile	75th percentile
Sustainability committee	.264	.441	0	0	1
CM female directors	.585	.493	0	1	1
CM female executives	.12	.325	0	0	0
Female chairperson	.03	.171	0	0	0
Firm size	24.214	1.803	23.027	24.196	25.37
Firm performance	4.185	4.909	1.04	3.61	6.5
Board size	13.394	3.907	11	13	16
Board independence	61.908	22.315	45.45	58.33	78.57
Board tenure	3.16	1.24	3	3	4
Board age	59.595	3.231	57.61	59.725	61.56
Binding quota	.408	.492	0	0	1
Institutional setting	0	0	0	0	0

TABLE 5 Correlation matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Sustainability committee	1.00											
(2) CM female directors	.21*	1.00										
(3) CM female executive	.19*	.21*	1.00									
(4) Female chairperson	.03	.09*	.12*	1.00								
(5) Firm size	.22*	.27*	.09*	.04*	1.00							
(6) Firm performance	−.07*	−.02	−.01	.01	−.22*	1.00						
(7) Board size	.07*	.39*	.03	.00	.46*	−.16*	1.00					
(8) Board independence	.07*	.14*	.08*	.07*	.32*	.04*	−.06*	1.00				
(9) Board tenure	−.08*	.07*	−.03	−.02	−.07*	−.12*	.25*	−.51*	1.00			
(10) Board age	.13*	.01	.05*	.06*	.33*	.04	.11*	.37*	−.20*	1.00		
(11) Binding quota	−.03	.31*	−.04*	−.01	.07*	−.08*	.31*	−.20*	.58*	−.15*	1.00	
(12) Institutional setting	.18*	−.10*	.11*	.01	.00	.14*	−.33*	.36*	−.72*	.17*	−.55*	1.00

*$p < .5$.

<.01; $b = 0.69$, p-value <.01), suggesting that countries with binding quotas and companies nested in CMEs have a higher likelihood of establishing a sustainability committee. In the second step, the initial hypothesis was reevaluated, this time focusing exclusively on the count of women in executive director roles on the board. The coefficient is positive and significant ($b = 0.64$, p-value <.01), supporting the hypothesis that the presence of a critical mass of female executives increases the likelihood of establishing a sustainability committee. In the third step, the second hypothesis was tested. The coefficient is positive but not significant, indicating that there is no significant link between the presence of a female chairperson and the establishment of a sustainability committee. In the fourth step, the first hypothesis was tested again using a probit model. The coefficient remains positive and significant ($b = 0.59$, p-value <.01), confirming the validity of the first hypothesis. In the fifth step, the first hypothesis was tested again using a probit model but focusing exclusively on the count of women in executive director roles on the board. The coefficient remains positive and significant ($b = 0.40$, p-value <.01), supporting the first hypothesis. In the sixth step, the second hypothesis was tested again using a probit model. The coefficient remains positive but not significant, indicating that the second hypothesis is still not verified. It is noteworthy that although the Pseudo R^2 values are not particularly high, the models with the highest coefficients are the first and the fourth, suggesting that the presence of a critical mass of female directors better explains the likelihood of establishing a sustainability committee. Furthermore, the first model has the highest beta coefficient, indicating that the critical mass of female directors has the most substantial influence on the outcome variable.

4.1 | Robustness checks

To ensure the robustness of the findings, we conducted additional analyses, the results of which are presented in Tables 7 and 8. These analyses aimed to assess whether the results hold across different

TABLE 6 Female presence at the corporate apex and likelihood to establish a sustainability committee.

	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Probit	Probit	Probit
Firm size	0.29**	0.28**	0.29**	0.18**	0.18**	0.18**
	(0.04)	(0.04)	(0.04)	(0.02)	(0.02)	(0.02)
Firm performance	−0.02*	−0.01+	−0.01+	−0.01*	−0.01+	−0.01+
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board size	0.01	0.05*	0.06**	0.01	0.03*	0.04**
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Board independence	−0.02**	−0.01**	−0.01*	−0.01**	−0.01**	−0.01*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Board tenure	−0.26**	−0.28**	−0.27**	−0.16**	−0.17**	−0.16**
	(0.07)	(0.07)	(0.07)	(0.04)	(0.04)	(0.04)
Board age	0.01	−0.00	−0.01	0.00	0.00	−0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Binding quota	0.62**	0.95**	1.01**	0.37**	0.56**	0.59**
	(0.22)	(0.22)	(0.22)	(0.13)	(0.13)	(0.13)
Institutional setting	0.69**	0.56**	0.66**	0.42**	0.34**	0.40**
	(0.20)	(0.20)	(0.20)	(0.12)	(0.12)	(0.12)
CM female directors	0.95**			0.59**		
	(0.11)			(0.07)		
CM female executives		0.64**			0.40**	
		(0.12)			(0.07)	
Female chairperson			0.37			0.23
			(0.25)			(0.16)
Constant	−7.17**	−7.11**	−7.15**	−4.43**	−4.41**	−4.42**
	(1.04)	(1.02)	(1.02)	(0.63)	(0.62)	(0.62)
Pseudo R^2	.10	.08	.07	.10	.08	.07

Note: Standard errors are in parentheses.

**$p < .01$; *$p < .05$;

+$p < .1$.

sampling windows. In Table 7, we reran all regression models using data from the period 2010 to 2014. In Table 8, we reran the regression models using data from the period 2015 to 2019. The decision to split the sample into two timeframes (2010–2014 and 2015–2019) was based on the fact that in 2015, the countries of the United Nations signed the 2030 Agenda, which includes objectives related to gender equality. The commitment made by these countries may have led to an increased presence of women in management and governance roles. The data from 2015 onwards could therefore be influenced by the "Agenda 2030 effect." Thus, we divided the sample into a period unaffected by this effect and a period influenced by it. Regarding the period 2010–2014, the coefficient related to a critical mass of female directors remains positive and significant in both the logit model ($b = 0.68$, p-value <.01) and the probit model, confirming the verification of the first hypothesis. Similarly, the coefficient related to a critical mass of female executives is positive and significant in both the logit model ($b = 0.46$, p-value <.01) and the probit model, supporting the first hypothesis. However, the coefficient related to the presence of a female chairperson remains insignificant in both the logit and probit models, indicating that the second hypothesis is not verified. Moving to the period 2015–2019, the coefficient related to a critical mass of female directors remains positive and significant in both the logit model ($b = 0.76$, p-value <.01) and the probit model, validating the first hypothesis. Similarly, the coefficient related to a critical mass of female executives is positive and significant in both the logit model ($b = 0.51$, p-value <.01) and the probit model, confirming the first hypothesis. However, the coefficient related to the presence of a female chairperson remains insignificant, although the p-value is very close to .05, suggesting limited support for the second hypothesis. In Table 7, the pseudo-R^2 values are not particularly high across all models, with the highest score observed in the model with a critical mass of female directors as the explanatory variable (.11). Additionally, the model with the highest beta coefficient is the first model, indicating that, consistent with previous findings, the critical mass of female directors has the most significant influence

TABLE 7 Female presence and likelihood to establish a sustainability committee—(2010–2014).

	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Probit	Probit	Probit
Firm size	0.38**	0.38**	0.38**	0.23**	0.23**	0.23**
	(0.06)	(0.06)	(0.06)	(0.04)	(0.04)	(0.03)
Firm performance	−0.00	0.00	0.00	−0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Board size	0.02	0.05	0.06+	0.01	0.03	0.03+
	(0.04)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
Board independence	−0.02**	−0.02**	−0.02**	−0.01**	−0.01**	−0.01**
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board tenure	−0.04	−0.05	−0.03	−0.03	−0.03	−0.02
	(0.11)	(0.10)	(0.10)	(0.06)	(0.06)	(0.06)
Board age	0.01	−0.00	−0.01	0.00	−0.00	−0.00
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Binding quota	0.61	0.96**	0.94**	0.31	0.49*	0.49*
	(0.38)	(0.37)	(0.36)	(0.21)	(0.21)	(0.20)
Institutional setting	1.70**	1.69**	1.74**	0.97**	0.93**	0.97**
	(0.39)	(0.40)	(0.39)	(0.22)	(0.22)	(0.21)
CM female directors	0.68**			0.43**		
	(0.17)			(0.10)		
CM female executives		0.46*			0.29*	
		(0.20)			(0.13)	
Female chairperson			0.05			0.04
			(0.42)			(0.26)
Constant	−10.58**	−10.60**	−10.69**	−6.38**	−6.34**	−6.43**
	(1.61)	(1.61)	(1.59)	(0.95)	(0.95)	(0.94)
Pseudo R^2	.11	.10	.10	.11	.10	.10

Note: Standard errors are in parentheses.

**$p < .01$; *$p < .05$;

+$p < .1$.

on the outcome variable. Turning to Table 8, the pseudo-R^2 values are even lower compared to Table 7. Similarly, the model with the highest score is the one with a critical mass of female directors as the explanatory variable (.07). Once again, the model with the highest beta coefficient is the first model. These supplemental analyses provide further support for the influence of a critical mass of female directors and female executives on the likelihood of establishing a sustainability committee, while the presence of a female chairperson does not exhibit a significant association with the establishment of such committees across different sampling windows.

To further explore the hypotheses, we conducted analyses on two subsamples: companies nested in LMEs and companies nested in CMEs. The results are presented in Tables 9 and 10, respectively. For LMEs, the coefficient related to a critical mass of female directors remains positive and significant in both the logit model ($b = 0.77$, p-value <.01) and the probit model, confirming the verification of the first hypothesis. Similarly, the coefficient related to a critical mass of female executives is positive and significant in both the logit model ($b = 0.41$, p-value <.01) and the probit model, supporting the first hypothesis. Additionally, the coefficient related to the presence of a female chairperson is positive and significant in both the logit model ($b = 0.67$, p-value <.05) and the probit model, verifying the second hypothesis for LMEs. Turning to CMEs, the coefficient related to a critical mass of female directors remains positive and significant in both the logit model ($b = 1.92$, p-value <.01) and the probit model, confirming the first hypothesis. Similarly, the coefficient related to a critical mass of female executives is positive and significant in both the logit model ($b = 1.39$, p-value <.01) and the probit model, supporting the first hypothesis. However, the coefficient related to the presence of a female chairperson is positive but not significant, indicating that the second hypothesis is not verified for CMEs. Looking at Table 9, the pseudo-R^2 values are not particularly high across all models, with the highest score observed in the model with a critical mass of female directors as the explanatory variable (.10). In Table 10, the pseudo-R^2 values are higher compared to Table 9, with the highest score once again observed in the model

TABLE 8 Female presence and likelihood to establish a sustainability committee—(2015–2019).

	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Probit	Probit	Probit
Firm size	0.24**	0.23**	0.23**	0.15**	0.14**	0.14**
	(0.05)	(0.05)	(0.05)	(0.03)	(0.03)	(0.03)
Firm performance	−0.02*	−0.02*	−0.02*	−0.01*	−0.01*	−0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Board size	0.04	0.07*	0.08**	0.02	0.04*	0.05**
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
Board independence	−0.01+	−0.01	−0.01	−0.01+	−0.00	−0.00
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board tenure	−0.28*	−0.26*	−0.25*	−0.17*	−0.16*	−0.15*
	(0.11)	(0.11)	(0.11)	(0.07)	(0.07)	(0.07)
Board age	−0.01	−0.02	−0.03	−0.01	−0.01	−0.02
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Binding quota	0.81*	0.95**	1.02**	0.51**	0.59**	0.63**
	(0.32)	(0.32)	(0.32)	(0.19)	(0.19)	(0.19)
Institutional setting	0.49+	0.41+	0.51*	0.31*	0.26+	0.33*
	(0.25)	(0.25)	(0.24)	(0.15)	(0.15)	(0.15)
CM female directors	0.76**			0.47**		
	(0.17)			(0.10)		
CM female executives		0.51**			0.32**	
		(0.16)			(0.10)	
Female chairperson			0.58+			0.36+
			(0.34)			(0.21)
Constant	−4.95**	−4.71**	−4.54**	−3.05**	−2.94**	−2.83**
	(1.48)	(1.46)	(1.46)	(0.90)	(0.90)	(0.90)
Pseudo R^2	.07	.06	.06	.07	.06	.06

Note: Standard errors are in parentheses.

**$p < .01$; *$p < .05$;

+$p < .1$.

with a critical mass of female directors as the explanatory variable (.18). Additionally, in both Tables 9 and 10, the model with the highest beta coefficient is the first model, suggesting that, as found previously, the critical mass of female directors has the most significant influence on the outcome variable. These analyses conducted on LMEs and CMEs provide further support for the influence of a critical mass of female directors and female executives on the likelihood of establishing a sustainability committee, with some variations observed between the two market economies.

To mitigate potential sources of endogeneity, as discussed in the methodology section, we included several control variables in the model to account for omitted variable bias. However, it is important to consider the possibility of reverse causality as another potential cause of endogeneity. Specifically, it could be argued that corporations with a sustainability committee may be more inclined to appoint females to top positions as a means to break the glass ceiling. To address this concern and approach a more causal estimation of the effect of female presence at the corporate apex on the likelihood of establishing a sustainability committee, we employed quasi-experimental methods and accounted for issues of reverse causality and unobserved heterogeneity. To achieve a closer approximation of the causal effect, we utilized the nearest-neighbor matching technique. This method assumes that treatment assignment is random once all observed characteristics have been taken into account (Morgan & Winship, 2015). If this assumption holds, the estimated treatment effect is consistent. We employed this technique, and the results are presented in Table 11. As shown in Table 11, the first hypothesis is verified for both LMEs ($b = 0.151$, p-value $< .01$) and CMEs ($b = 0.169$, p-value $< .01$). However, the second hypothesis is verified for LMEs ($b = 0.133$, p-value $< .05$) but not for CMEs. These findings, obtained through the application of the nearest-neighbor matching technique, provide further support for the first and second hypotheses, indicating that the presence of a critical mass of female directors and female executives increases the likelihood of establishing a sustainability committee. Nevertheless, the second hypothesis is only supported in the context of LMEs.

TABLE 9 Female presence and likelihood to establish a sustainability committee—LMEs.

	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Probit	Probit	Probit
Firm size	0.30**	0.29**	0.29**	0.18**	0.18**	0.18**
	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)
Firm performance	−0.02*	−0.02*	−0.02*	−0.01*	−0.01*	−0.01*
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board size	0.02	0.06*	0.07*	0.01	0.04*	0.04*
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
Board independence	−0.01*	−0.01	−0.01	−0.01*	−0.00	−0.00
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board tenure	−0.22*	−0.23*	−0.23*	−0.13*	−0.14*	−0.14*
	(0.10)	(0.10)	(0.10)	(0.06)	(0.06)	(0.06)
Board age	0.04*	0.03+	0.02	0.02*	0.02+	0.02
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
CM female directors	0.77**			0.48**		
	(0.12)			(0.07)		
CM female executives		0.41**			0.26**	
		(0.14)			(0.08)	
Female chairperson			0.67*			0.42*
			(0.29)			(0.18)
Constant	−9.03**	−8.91**	−8.82**	−5.55**	−5.51**	−5.45**
	(1.14)	(1.12)	(1.12)	(0.68)	(0.67)	(0.67)
Pseudo R^2	.10	.08	.08	.10	.08	.08

Note: Standard errors are in parentheses.

**$p < .01$; *$p < .05$;

+$p < .1$.

5 | DISCUSSION

Examining the potential association between female presence at the corporate apex and the likelihood of establishing a sustainability committee offers valuable theoretical insights into how demographic characteristics at the highest level of organizations shape various organizational outcomes (Kyaw et al., 2022; Mumu et al., 2022; Wu et al., 2022). By exploring whether and why female representation at the corporate apex contributes to sustainability integration within governance structures, this study contributes to advancing our understanding of the topic. In this study, we conducted a comprehensive analysis to investigate the impact of female presence at the corporate apex on a firm's likelihood to establish a sustainability committee. The findings reveal that the presence of a critical mass of females on the board of directors significantly increases the likelihood of establishing a sustainability committee, regardless of the institutional context—both in LMEs and CMEs. In expanding our understanding of these dynamics, we can draw insights from institutional scholars, which posit that organizations are influenced by the prevailing institutional environment. In the context of sustainable governance, institutionalists suggest that organizational practices and structures are shaped by broader societal norms, values, and regulations. In this light, our findings underscore the robustness of the positive relationship between female presence on boards and the establishment of sustainability committees, irrespective of the distinct institutional frameworks characterizing LMEs and CMEs. Furthermore, the analysis demonstrates that having a critical mass of female executives also positively influences the likelihood of establishing a sustainability committee, a relationship that holds true in both LMEs and CMEs. This suggests that female representation at executive levels contributes to driving sustainability initiatives within organizations across different institutional settings.

However, the analysis reveals a nuanced finding regarding the role of a female chairperson in establishing a sustainability committee. While a female chairperson significantly increases the likelihood of establishing a sustainability committee in LMEs, this relationship does not hold in CMEs. Institutional scholars further elucidate how the prevailing societal norms, values, and regulations impact organizational practices and structures. Our findings highlight the importance of considering the institutional context (Jackson & Deeg, 2019) in understanding how female structural power translates into tangible changes in governance structures. The results collectively indicate that a critical mass of females at the board level can drive significant changes in governance structures by facilitating the establishment of sustainability committees, irrespective of the institutional context. On the other hand, conferring structural power to a female alone does not guarantee her ability

TABLE 10 Female presence and likelihood to establish a sustainability committee—CMEs.

	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Logit	Logit	Probit	Probit	Probit
Firm size	0.05	0.11	0.14+	0.04	0.07	0.09+
	(0.08)	(0.08)	(0.08)	(0.05)	(0.05)	(0.05)
Firm performance	−0.06*	−0.05*	−0.06*	−0.04*	−0.03*	−0.03*
	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
Board size	−0.00	0.03	0.02	−0.00	0.02	0.02
	(0.05)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)
Board independence	−0.02**	−0.02**	−0.03**	−0.01**	−0.01**	−0.02**
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board tenure	−0.40**	−0.35**	−0.29**	−0.24**	−0.21**	−0.18**
	(0.12)	(0.11)	(0.11)	(0.07)	(0.07)	(0.07)
Board age	−0.17**	−0.17**	−0.18**	−0.10**	−0.10**	−0.11**
	(0.04)	(0.04)	(0.03)	(0.02)	(0.02)	(0.02)
CM female directors	1.92**			1.14**		
	(0.30)			(0.17)		
CM female executives		1.39**			0.86**	
		(0.28)			(0.17)	
Female chairperson			1.13			0.70+
			(0.70)			(0.41)
Constant	9.91**	9.09**	9.30**	5.96**	5.59**	5.61**
	(2.98)	(2.84)	(2.81)	(1.74)	(1.71)	(1.69)
Pseudo R^2	.18	.14	.11	.18	.15	.11

Note: Standard errors are in parentheses.
**$p < .01$; *$p < .05$;
+$p < .1$.

TABLE 11 Female presence and likelihood to establish a sustainability committee - Nearest-neighbor matching.

	LMEs			CMEs		
	(1)	(2)	(3)	(4)	(5)	(6)
CM female directors	.151**			.169**		
	(.027)			(.056)		
CM female executives		.142**			.330**	
		(.034)			(.062)	
Female chairperson			.133*			.251
			(.053)			(.068)
Control variables	Included	Included	Included	Included	Included	Included

Note: Standard errors are in parentheses.
**$p < .01$; *$p < .05$;
+$p < .1$.

to drive such changes. The likelihood of a female with structural power influencing boardroom decisions is contingent upon the specific institutional setting. This underscores the need for a more comprehensive understanding of the relationship between female representation at the corporate apex and organizational outcomes, accounting for variations in institutional contexts. Previous research focusing predominantly on specific institutional settings has not provided a complete or accurate picture, leading to inconsistent findings (Bannò et al., 2023; Gurol & Lagasio, 2022). Therefore, it becomes crucial to explore and understand the differences among various institutional contexts to unravel the underlying mechanisms. One potential explanation for the variation in female influence within the boardroom lies in the features of the institutional context where they operate, such as the level of assertiveness within a society. Institutional settings characterized by high assertiveness foster confidence, decisiveness, and forcefulness in relationships with others. It is plausible that females in LMEs, nested within assertive

societies, exhibit higher levels of assertiveness compared to their counterparts in CMEs. These assertive characteristics may enhance their ability to effectively communicate ideas, suggestions, and opinions, ultimately strengthening their negotiation power during decision-making processes (Bannur, 2023). Although this aspect has been largely overlooked in prior research, it presents a promising avenue for future investigation. By considering the influence of assertiveness and other contextual factors, future studies can shed more light on the intricate dynamics between female representation, institutional settings, and organizational outcomes. Understanding these complex relationships will contribute to a more comprehensive and accurate understanding of the implications of female presence at the corporate apex, facilitating more informed decision-making processes and policies aimed at achieving gender equality and sustainable corporate practices.

5.1 | Theoretical contributions and practical implications

In terms of theoretical contributions, this study sheds light on the nuanced interactions within the upper echelons of corporate decision-making bodies (De Masi et al., 2022; Kirsch, 2018; Post & Byron, 2015; Zahid et al., 2023) by providing empirical evidence that the presence of female directors increases the likelihood of establishing a sustainability committee. While prior studies have explored the positive effects of female presence on firm outcomes, such as organizational performance (Galbreath, 2018; Loy & Rupertus, 2022), social responsibility (Post et al., 2011; Setó-Pamies, 2015), philanthropy (Jia & Zhang, 2013; Wu et al., 2019), innovativeness (Torchia et al., 2011), and political spending disclosure (Ali et al., 2023), this study expands upon this research by specifically focusing on the establishment of a sustainability committee. Our study allows to uncover the nuanced ways in which women's presence at the board level influence corporate sustainability efforts, potentially providing valuable guidance for more effective sustainability governance. This study extends beyond prior research (Abdullah et al., 2016; Joecks et al., 2013) by emphasizing the distinctive contribution of women at the corporate apex in catalyzing the establishment of sustainability committees.

Moreover, this study demonstrates that the presence of a female with structural power can increase the likelihood of establishing a sustainability committee in specific institutional contexts. This finding adds depth to our understanding of the interplay between female representation, institutional settings, and sustainability governance. The role of women with structural power, often holding positions of influence and authority within the organization, cannot be underestimated. Their ability to drive change, mobilize resources, and shape the corporate agenda is pivotal. In the context of sustainability governance, their presence can serve as a catalyst for the formalization of sustainability committees, which in turn act as dedicated bodies focused on steering the organization toward social and environmental responsibility.

Additionally, this study contributes to the literature on sustainable governance (Johnston et al., 2021; Velte, 2022) by addressing a research gap that has received limited attention: the factors influencing the establishment of sustainability committees. While the importance of such committees is increasingly recognized, prior research has predominantly focused on examining the consequences and effectiveness of sustainability committees once they are in place. By identifying a new antecedent to the birth of sustainability committees—the critical mass of females at the corporate apex—this study fills a significant void in the literature and provides valuable insights into the conditions under which firms are more likely to formalize their commitment to sustainability through the creation of dedicated committees.

Lastly, our study contributes to a more nuanced comprehension of the CG-CSR interface. In this realm, a recent systematic literature review (Zaman et al., 2022) underscores the imperative to expand the purview of CG-CSR research beyond the confines of LMEs. Scholars advocate for delving into less-explored contexts, such as CMEs, emerging economies, and socialist economies, to enrich the understanding of these dynamics. Aligning with this call, our research addresses this void by examining the intricate interplay between CG and CSR within both LMEs and CMEs. Such approach ensures a more comprehensive and globally relevant exploration of the CG-CSR interface.

The managerial implications of this study are also noteworthy. Despite ongoing efforts to promote gender diversity in governance settings, females continue to be underrepresented in many companies globally. The findings of this study offer insights into how the presence of a critical mass of females can contribute to the formalization of corporations' sustainability commitment through the establishment of sustainability committees. Policymakers responsible for setting standards of good practice for responsible corporate governance can leverage these findings to advocate for increased gender diversity and to encourage companies to prioritize the creation of sustainability committees as a means of advancing their sustainability agendas.

Overall, this study makes significant theoretical contributions by expanding our understanding of the relationship between female representation, sustainability governance, and institutional contexts. Moreover, it provides valuable insights for managers, policymakers, and organizations seeking to foster gender diversity and strengthen their sustainability practices through the establishment of dedicated sustainability committees.

5.2 | Limitations and future research

This study, like any research endeavor, has certain limitations that open avenues for future research. First, the focus of this study is on female presence within governance settings and its relationship to the likelihood of establishing a sustainability committee. However, the analysis is based on a dataset spanning a 10-year period from 2010 to 2019, thereby leaving unexplored whether these findings hold true before 2010. Investigating the historical trends and examining earlier periods could provide valuable insights into the long-term impact of female representation on sustainability governance. Secondly, while efforts were made to enhance generalizability by analyzing a sample of companies operating in both LMEs and CMEs, the study is confined to developed countries. Consequently, the influence of female presence

on the likelihood of establishing a sustainability committee in developing countries remains unexplored. Future research should explore whether the current findings extend to non-developed countries, as it would deepen our understanding of the impact of female representation at the corporate apex on governance outcomes across diverse institutional contexts. Additionally, despite including numerous control variables in the empirical models, the analysis does not consider the potential influence exerted by investors. The establishment of a sustainability committee may be driven by the pressure exerted by sustainable investors. Exploring the role of investor dynamics and their impact on sustainability committee formation could provide valuable insights into the broader governance landscape. Moreover, further research is needed to investigate the intra-organizational antecedents of sustainability committee formation. For example, other characteristics of the chairperson may serve as predictors of the likelihood of establishing a sustainability committee. Exploring the influence of various chairperson attributes could shed light on the broader factors shaping sustainability governance structures. Future research should also delve into the factors that hinder the likelihood of establishing a sustainability committee. This emerging area of research needs to explore the boundary conditions under which cultural constructs have a stronger or weaker impact on sustainability committee formation. For instance, investigating whether the relationship between female presence at the corporate apex and the likelihood of establishing a sustainability committee is stronger in companies with inclusive business cultures, and weaker in companies characterized by toxic work environments, would contribute to a deeper understanding of the contextual factors influencing sustainability governance. Lastly, while the results of this study align with existing literature on female attitudes toward sustainability, it is important to acknowledge that demographic indicators may not capture the true cognitive frames that drive human behavior. Directly measuring the pro-sustainability attitudes of female chairpersons, directors, and executives would provide a more nuanced understanding of the underlying motivations and cognitive processes that influence decision-making at the corporate apex. Future research should aim to explore this "black box" and develop sophisticated measurement methods to assess the sustainability attitudes of individuals occupying influential positions within organizations.

6 | CONCLUSIONS

In conclusion, this study underscores the significant role that females play in shaping corporate governance structures and their impact on sustainability initiatives. The theoretical framework developed in this research provides valuable insights into the relationship between female representation and the establishment of a sustainability committee. The empirical findings robustly support the theorized hypotheses, demonstrating that the presence of a critical mass of females within the board of directors is associated with an increased likelihood of establishing a sustainability committee. Furthermore, the analysis reveals that the presence of a female chairperson can also influence the likelihood of establishing a sustainability committee, albeit in specific institutional contexts. These findings highlight the nuanced nature of gender dynamics at the corporate apex and shed light on the factors that contribute to the integration of sustainability considerations within governance structures. By expanding the understanding of the impact of female representation on sustainability governance, this study makes notable contributions to both the literature on gender diversity in governance settings (Kyaw et al., 2022; Mumu et al., 2022) and the emerging field of sustainable governance.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX 1

NUMBER OF MISSING AND NON-MISSING VALUES

N.	Variable type	Variable name	Missing values	Non-missing values	Total
1	Dependent	Sustainability Committee	167	3103	3270
2	Independent	CM Female directors	169	3101	3270
3	Independent	CM Female executives	179	3091	3270
4	Independent	Female chairperson	173	3097	3270
5	Control	Firm size	106	3164	3270
6	Control	Firm performance	106	3164	3270
7	Control	Board size	139	3131	3270
8	Control	Board independence	356	2914	3270
9	Control	Board tenure	547	2723	3270
10	Control	Board age	944	2326	3270
11	Control	Binding quota	0	3270	3270
12	Control	Institutional setting	0	3270	3270

APPENDIX 2

VARIABLES DESCRIPTION

N.	Variable type	Variable name	Description
1	Dependent	Sustainability Committee	Dummy variable with 1 if within the focal firm, there is a sustainability committee
2	Independent	CM Female directors	Dummy variable with 1 if within the board of directors, there are three or more females
3	Independent	CM Female executives	Dummy variable with 1 if within the board of directors, there are three or more female executives
4	Independent	Female chairperson	Dummy variable with 1 if the board chair is a female
5	Control	Firm size	Natural logarithm of total assets
6	Control	Firm performance	Return on assets
7	Control	Board size	Total number of directors on the board
8	Control	Board independence	Percentage of independent directors within the board
9	Control	Board tenure	Number of years the board of directors is in office
10	Control	Board age	The average age of all members of the board of directors
11	Control	Binding quota	Dummy variable with 1 if a binding quota for women on boards is in place
12	Control	Institutional setting	Dummy variable with 1 if the institutional setting is a liberal market economy

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