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REVISTA BRASILEIRA DE GESTÃO E DESENVOLVIMENTO REGIONAL
V.22, N°4, Edição Especial 2026 | Taubaté/SP - Brasil | ISSN 1809-239x

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LIDERANÇA FEMININA E O TETO DE VIDRO: ENTRE O DISCURSO CORPORATIVO E A REALIDADE ORGANIZACIONAL

João Luiz de Oliveira Ferrarezi[1] | Janaina Gabrielle Moreira Campos da Cunha Amarante[2]

Received: 03/29/2026
Accepted: 07/11/2026

[1] Undergraduate student in Administration (UNESPAR).
Campo Mourão – PR, Brazil.
E-mail: joao.oli.vera@outlook.com

[2] PhD in Administration (PUPR).
Professor at UNESPAR. Campo Mourão – PR, Brazil.
E-mail: janaina.amarante@unespar.edu.br

ABSTRACT

This study examines the representation of women in strategic senior leadership positions within companies included in the Corporate Sustainability Index (ISE B3), assessing the consistency between institutional commitments to gender equity and the practices actually implemented by publicly traded companies that claim a commitment to corporate sustainability and social responsibility. The research adopted a quantitative, descriptive, and explanatory cross-sectional design, encompassing 181 companies from diverse industry sectors. Data were collected from sustainability reports, corporate websites, and reference forms, focusing on the proportion of men and women serving on boards of directors and executive management teams. The analysis employed descriptive statistics, group difference tests, correlation analysis, and multiple linear regression, complemented by diagnostic tests to verify model assumptions. The findings reveal a persistent predominance of men on both boards of directors and executive management teams. Multiple regression analysis indicated a positive association between greater female representation on boards and higher levels of female participation in executive management, although this relationship varied across sectors. Overall, the results suggest that women in leadership continue to face invisible barriers, commonly referred to as the glass ceiling, which constrain their advancement to senior leadership positions. Nevertheless, more gender-diverse boards and executive teams strengthen corporate governance, enhance ethical oversight, and contribute to organizational performance. These results underscore the need for consistent affirmative policies and profound cultural transformation to ensure that gender equity evolves from corporate rhetoric into substantive executive practice.

Keywords: Female leadership; Glass ceiling; Corporate governance; Gender equity; Organizational sustainability.

RESUMO

Este estudo tem como objetivo analisar a representatividade feminina em cargos estratégicos de alta liderança nas empresas listadas no Índice de Sustentabilidade Empresarial (ISE B3), verificando a consistência entre o discurso institucional de equidade de gênero e as práticas efetivamente implementadas nas empresas listadas na bolsa de valores que declaram o compromisso com a responsabilidade socioambiental. A pesquisa foi delineada como quantitativa, descritiva e explicativa, com recorte transversal, abrangendo 181 empresas de diferentes setores. Os dados foram coletados em relatórios de sustentabilidade, websites corporativos e formulários de referência, considerando a proporção de homens e mulheres nos conselhos de administração e diretorias executivas. A análise considerou o emprego de testes estatísticos descritivos, testes de diferença, correlação e regressão linear múltipla, complementada por diagnósticos de pressupostos. Os resultados evidenciam predominância masculina sistemática nos conselhos e nas diretorias. A regressão indicou associação positiva entre maior representatividade feminina nos conselhos e aumento da participação nas diretorias, embora com variações setoriais. Os resultados direcionam que a liderança feminina continua enfrentando barreiras invisíveis, como o teto de vidro, que limita sua ascensão. Apesar disso, conselhos e diretorias mais diversos fortalecem a governança corporativa, promovem monitoramento ético e contribuem para o desempenho organizacional, reforçando a necessidade de políticas afirmativas consistentes e transformações culturais profundas para que a equidade de gênero deixe de ser apenas retórica e se materialize em práticas efetivas.

Palavras-chave: Liderança feminina. Teto de vidro. Governança corporativa. Equidade de gênero. Sustentabilidade organizacional.

1. INTRODUCTION

Gender inequality within organizational remains one of the most persistent and deeply rooted challenges facing the contemporary corporate world. Despite advances in diversity and inclusion policies and the growing prominence of Environmental, Social, and Governance (ESG) initiatives, workplace reality continues to reflect the underrepresentation of women in strategic decision-making positions. Women continue to encounter longstanding barriers that constrain their access to and advancement within positions of power, demonstrating that institutional commitments do not always translate into meaningful business practice (Salvagni; Canabarro, 2015; Hryniewicz; Vianna, 2018; Ceribeli; Lopes; Maciel, 2021; Markwei *et al*., 2023).

Among the principal manifestations of this inequality, female leadership continues to be constrained by invisible barriers that impede women's career advancement, even when they possess qualifications equal to or exceeding those of their male counterparts (Kanan, 2010). This phenomenon is widely conceptualized through the notion of the glass ceiling, originally introduced by Lodén (1978), which refers to the symbolic and structural barriers that prevent women from attaining the highest levels of enterprise leadership. These barriers are rarely formalized; instead, they are deeply embedded in corporate culture and reinforced by persistent gender stereotypes (Costa *et al*., 2025).

Beyond these organizational barriers, according to Cembranel, Floriano and Cardoso (2021), women face a disproportionate social burden arising from their primary responsibility for domestic work and family caregiving: a phenomenon commonly described as the triple burden. As the authors note, "this circumstance directly affects women's opportunities for professional development, geographic mobility, and availability for strategic leadership positions". Similarly, gender inequality in career opportunities can be understood as the result of an interplay of cultural, institutional, and symbolic factors that perpetuate women's exclusion from positions of powe (Saraiva; Sousa; Oliveira, 2025).

At the organizational level, although many organizations publicly endorse gender equity, institutional practices often continue to reproduce longstanding patterns that associate leadership with masculine characteristics, while women are frequently steered toward supportive or caregiving roles (Costa *et al*., 2025; Kanan, 2010; Almeida *et al*., 2023; Cembranel; Floriano; Cardoso, 2021).

Despite these challenges, a growing body of research suggests that increasing women's participation in leadership positions yields positive company-wide outcomes (Costa *et al*., 2025; Fernandes; Machado, 2023; Salvagni; Canabarro, 2015). Within the corporate governance literature, gender diversity on boards of directors has been shown to strengthen monitoring and oversight mechanisms, while greater female representation has been associated with lower executive variable compensation and enhanced ethical governance practices (Fernandes; Machado, 2023). These findings are grounded in Agency Theory, proposed by Jensen and Meckling (1976), which conceptualizes the board of directors as a fundamental mechanism for mitigating conflicts of interest between managers and shareholders.

From this perspective, more diverse boards broaden the range of knowledge, experience, and perspectives available to decision-makers, thereby fostering more robust, critical, and sustainability-oriented decision-making processes (Azeez *et al*., 2019). Against this backdrop, the present study seeks to examine potential inconsistencies between corporate discourse promoting gender equity and the practices actually observed within internal power structures, thereby contributing to the broader debate on corporate governance, diversity, and corporate social responsibility.

To this end, the study focuses on senior leadership positions in companies recognized for adopting sustainable business practices and included in the ISE B3 of the Brazilian Stock Exchange (B3) in 2025, with particular emphasis on boards of directors and executive management teams.

Beyond their inclusion in the ISE B3 index, the companies examined have publicly committed to the United Nations 2030 Agenda for Sustainable Development, establishing targets aligned with the Sustainable Development Goals (SDGs). Among these, SDG 5 – Gender Equality occupies a strategic position, underscoring that the promotion of diversity and gender equity is also a key indicator of corporate sustainability. In this context, the adoption of affirmative policies and transparent monitoring mechanisms is essential to ensuring that corporate commitments extend beyond institutional rhetoric and are translated into tangible actions capable of advancing the achievement of the global goals by 2030 (Mariano; Molari, 2022).

Accordingly, the primary objective of this study is to examine the relationship between institutional discourse and the practices actually implemented, with particular emphasis on women's representation in strategic decision-making bodies. Specifically, the study assesses the extent to which institutional rhetoric concerning gender equality is reflected in the actual composition of senior leadership positions within corporations.

2. THEORETICAL BACKGROUND

2.1 FEMALE LEADERSHIP AND ITS MAJOR BARRIERS

The discussion surrounding women's representation in leadership and corporate governance positions has intensified over recent decades, paralleling the social and economic transformations that have expanded women's participation in the labor market (Cembranel; Floriano; Cardoso, 2021). Despite these advances, gender inequality remains a significant challenge to achieving equity within organizations (Costa *et al*., 2025). Although women's participation in the workforce has steadily increased, many continue to bear primary responsibility for childcare and domestic duties, resulting in a triple burden that directly affects their career trajectories and limits opportunities for advancement to senior leadership positions (Kanan, 2010; Saraiva; Sousa; Oliveira, 2025; Almeida *et al*., 2023; Salvagni; Canabarro, 2015).

To explain the roots of this structural inequality, the literature on female leadership frequently draws upon the concept of the glass ceiling, introduced in 1978, which refers to the invisible barriers that prevent or hinder women's advancement to the highest organizational positions (Costa *et al*.,

2025). These barriers are manifested through both corporate practices and deeply ingrained gender stereotypes and cultural norms that reinforce male dominance in decision-making roles. Previous studies have shown that organizational structures and corporate cultures continue to reproduce historical patterns associating leadership and authority with masculinity, while linking femininity to caregiving and nurturing responsibilities (Costa *et al*., 2025; Kanan, 2010; Almeida *et al*., 2023; Cembranel; Floriano; Cardoso, 2021).

These obstacles are further compounded by the structural burden disproportionately borne by women. According to the Brazilian Institute of Geography and Statistics (IBGE, 2022), women spend an average of 21.3 hours per week on domestic work, compared with 11.7 hours for men. Beyond organizational barriers, women face a substantial social burden arising from their disproportionate responsibility for household tasks and family caregiving: a phenomenon commonly referred to as the triple burden. This concept encompasses the simultaneous accumulation of three spheres of labor: paid employment, domestic work, and caregiving responsibilities. Together, these demands directly constrain women's opportunities for professional development, geographic mobility, and availability for strategic leadership positions. The cumulative demands of professional work, household responsibilities, and family care reduce the time available for training, networking, and participation in strategic projects, thereby limiting career advancement (Cembranel; Floriano; Cardoso, 2021).

Despite these challenges, an expanding body of research demonstrates that women's participation in strategic leadership positions generates positive organizational outcomes (Salvagni; Canabarro, 2015). Organizations with greater gender diversity in leadership tend to achieve stronger organizational performance and greater innovative capacity (Noland; Moran; Kotschwar, 2016). Studies further suggest that characteristics commonly associated with female leadership, including empathy, flexibility, and collaboration, align closely with contemporary organizational demands for teamwork, adaptability, and inclusive management practices (Hryniewicz; Vianna, 2018; Ceribeli; Lopes; Maciel, 2021). Likewise, boards of directors with female representation tend to adopt more analytical and collaborative responses to periods of poor organizational performance, avoiding hasty decisions and prioritizing sustainable long-term strategies (Kim; Stromberg; Yang, 2020).

These benefits also extend to corporate governance. A study examining 199 companies listed on the B3 between 2011 and 2018 found that gender diversity on boards of directors enhances the effectiveness of monitoring functions, influencing areas such as executive compensation, earnings management, and chief executive officer (CEO) turnover (Fernandes; Machado, 2023). The evidence indicated that female board representation is associated with lower total and variable executive compensation and stronger internal control mechanisms, suggesting greater rigor and ethical oversight in organizational decision-making. As Fernandes and Machado (2023, p. 5, author's translation) observed, "gender diversity on the board has a negative effect on executives' total and variable compensation, indicating more effective monitoring".

From a theoretical perspective, this study is grounded in Agency Theory, which posits that boards of directors serve as mechanisms for mitigating conflicts of interest between managers and shareholders (Jensen; Meckling, 1976), and Resource Dependence Theory, according to which more diverse boards gain access to a broader range of information, expertise, and external resources, thereby improving the quality of organizational decision-making (Pfeffer; Salancik, 1978; Azeez *et al*., 2019). In this regard, Carter *et al*. (2003, p. 4, author's translation) argue that "heterogeneity in top management can lead to broader perspectives, a better understanding of environmental complexity, and superior decision-making".

Complementing this perspective, women's participation on boards of directors also exerts a positive influence on long-term organizational dynamics. Boards that include female directors are more likely to adopt analytical and strategic approaches when organizational performance declines, avoiding premature CEO dismissals and instead emphasizing comprehensive investigations into the underlying causes of poor performance (Kim *et al*., 2020; Costa *et al*., 2025; Salvagni; Canabarro, 2015; Hryniewicz; Vianna, 2018; Ceribeli; Lopes; Maciel, 2021). Such practices reinforce a more collaborative governance model oriented toward sustainable organizational development.

Overall, the literature suggests that women's representation in leadership positions and on boards of directors not only advances gender equity but also enhances organizational performance and strengthens corporate governance (Costa *et al*., 2025; Fernandes; Machado, 2023; Salvagni; Canabarro, 2015). Overcoming structural and cultural barriers, such as the glass ceiling and

persistent gender stereotypes, is therefore essential to enabling women to realize their full potential in strategic leadership roles (Cembranel; Floriano; Cardoso, 2021; Kanan, 2010). Furthermore, the diversity of perspectives fostered by women's inclusion enhances decision-making, promotes more ethical and collaborative management practices, and contributes to the long-term sustainability of organizations (Kim *et al*., 2020; Azeez *et al*., 2019). Thus, increasing women's representation in senior leadership should not merely be viewed as a matter of social responsibility, but as a strategic organizational investment capable of generating sustained and meaningful benefits.

2.2 CORPORATE DISCOURSE ON GENDER EQUALITY AND INSUFFICIENT ORGANIZATIONAL PRACTICE

The incorporation of gender equality into corporate discourse and institutional reporting has been underway for many years and is frequently presented as a strategic priority across organizations in diverse industries. Nevertheless, organizational reality continues to reveal a clear disconnect between rhetoric and practice, demonstrating that diversity discourse alone is insufficient to produce structural change or meaningful progress (Salvagni; Canabarro, 2015; Hryniewicz; Vianna, 2018; Ceribeli; Lopes; Maciel, 2021).

This disconnect is particularly concerning given that social and governance criteria constitute fundamental dimensions of ESG performance. Although many companies have adopted robust narratives promoting diversity and inclusion, these commitments often fail to translate into substantive organizational action. Instead, initiatives frequently remain superficial, with women concentrated in operational or support functions rather than occupying strategic leadership positions (Grant Thornton, 2024).

This pattern is also reflected in the global landscape. According to Grant Thornton Brasil (2024), women hold only 33.5% of leadership positions worldwide, while representation in the most influential executive roles remains considerably lower, accounting for just 19% of CEO positions and 9% of board chair positions. These figures reflect the persistence of historical barriers to women's advancement and are consistent with the concept of the glass ceiling, which describes invisible yet deeply entrenched obstacles embedded within organizational culture (Lodén, 1978).

Moreover, corporate practices frequently pressure women to conform to leadership styles historically shaped by masculine norms, thereby constraining authenticity and reducing their visibility within organizations (Sandberg, 2013). Persistent gender stereotypes and cultural expectations continue to reinforce male dominance in decision-making positions, illustrating that public commitments to diversity do not necessarily lead to substantive organizational transformation (Costa *et al*., 2025; Kanan, 2010; Almeida *et al*., 2023; Cembranel; Floriano; Cardoso, 2021).

Despite these barriers, women's participation in strategic leadership positions has consistently been associated with positive organizational outcomes. Within the corporate governance literature, studies indicate that boards with greater female representation exercise more rigorous oversight, reduce total and variable executive compensation, and strengthen ethical governance practices (Fernandes; Machado, 2023).

Collectively, the evidence suggests that corporate commitments to gender equality frequently remain rhetorical rather than operational. Overcoming structural barriers, particularly the glass ceiling and deeply rooted gender stereotypes, requires profound cultural transformation, consistent affirmative policies, and stronger institutional support networks capable of fostering women's advancement into positions of strategic leadership (Costa *et al*., 2025; Saraiva; Sousa; Oliveira, 2025; Almeida *et al*., 2023; Salvagni; Canabarro, 2015).

3. METHODOLOGY

This study adopted a quantitative, descriptive, and explanatory cross-sectional research design to examine female representation in senior leadership positions within companies included in the ISE B3. The sample comprised 181 companies operating across a wide range of industries, classified according to the official sectoral categories of the Brazilian Stock Exchange (B3). This population was selected because these organizations publicly declare commitments to the SDGs and to sustainability and diversity initiatives, thereby providing an appropriate context for assessing the consistency between institutional discourse and organizational practice. Companies that did not disclose complete information regarding the gender composition of their boards of directors and executive management teams were excluded to ensure data consistency and comparability across cases.

The study employed a cross-sectional design, with all variables observed at a single point in time, allowing the analysis to capture the configuration of gender representation on boards of directors and executive management teams during 2025. This temporal scope was selected because comprehensive corporate reporting for the annual disclosure cycle was available and because this period coincided with heightened institutional and societal attention to ESG practices, diversity, and inclusion in Brazil. Consequently, the selected timeframe provides an up-to-date assessment of women's participation in strategic leadership positions within the contemporary corporate governance landscape.

Sectoral classification followed approaches commonly adopted in studies of corporate governance and sustainability (Fernandes; Machado, 2023; Costa *et al*., 2025), grouping firms into sectors such as Energy, Industry and Materials, Consumer Goods and Retail, Agribusiness and Food, Transportation and Logistics, Healthcare, Technology and Telecommunications, Construction and Real Estate, among others. This classification enabled the analysis to control for structural differences across industries and to identify sector-specific patterns of gender inequality.

Data were collected from publicly available corporate sources, including sustainability reports, reference forms, and corporate websites. The analysis focused on the gender composition of boards of directors and executive management teams.

The first stage of the analysis involved descriptive statistics to identify general patterns of gender inequality before proceeding to inferential analyses. To examine the association between female representation on boards of directors and executive management teams, Pearson's correlation coefficient was calculated, complemented by Spearman's rank correlation coefficient, following the methodological recommendations of Kerby (2014), who emphasizes the relevance of nonparametric approaches in correlation analysis. Statistical analyses were further complemented by tests comparing male and female representation on boards and executive management teams using the paired-samples t-test and the Wilcoxon signed-rank test. In addition, multiple linear regression was performed, with the proportion of women serving on executive management teams specified as the dependent variable and the proportion of women on boards of directors as the primary predictor. Industry sector was included as a control variable to account for structural differences across sectors.

The regression model was estimated using Jamovi (Version 2.6), an interface built on the R statistical environment (R Core Team, 2024). To evaluate model adequacy, several diagnostic procedures were conducted. The Durbin-Watson statistic confirmed the independence of residuals, while the Variance Inflation Factor (VIF) indicated the absence of multicollinearity. The Shapiro-Wilk test and Q-Q plots revealed departures from normality, and residual plots suggested evidence of heteroscedasticity. Such characteristics are common in social and organizational research (Fox; Weisberg, 2023) and do not compromise the interpretation of regression coefficients, particularly in studies with relatively large samples. To address these issues, nonparametric tests and robust analytical procedures were incorporated, thereby strengthening the methodological rigor and reliability of the findings.

Overall, the methodological framework integrates descriptive statistics, difference tests, and multiple linear regression, supported by comprehensive diagnostic procedures. This analytical strategy enables not only the identification of gender inequality in senior leadership positions but also the examination of factors associated with female representation, highlighting the role of boards of directors and the influence of sector-specific characteristics.

4. DISCUSSION AND ANALYSIS OF RESULTS

The results provide a comprehensive overview of gender representation in senior leadership positions within companies included in the ISE B3 in 2025. Based on the descriptive statistics (Table 1), clear structural patterns of gender inequality emerge, with disparities evident in both boards of directors and executive management teams. These results illuminate not only the quantitative distribution of men and women across senior leadership positions but also the persistence of male dominance within organizational decision-making bodies. Consequently, the findings underscore the gap between institutional commitments to gender equity and the practices actually implemented within corporate governance structures.

Table 1 | Descriptive Statistics

	% Men (Board)	% Women (Board)	% Men (Executive Management)	% Women (Executive Management)
N	181	181	181	181
Missing	0	0	0	0
Mean	0.829	0.171	0.871	0.129
Median	0.833	0.167	0.889	0.111
Standard Deviation	0.121	0.121	0.138	0.138
Minimum	0.429	0.000	0.500	0.000
Maximum	1.000	0.571	1.000	0.500

Source: Research data (2026).

The descriptive analysis of the gender composition of boards of directors among companies included in the ISE B3 reveals a systematic predominance of men. On average, men occupied 82.9% of board seats, with a median of 83.3% and a standard deviation of 0.121, indicating that most companies exhibited very similar levels of male representation. By contrast, women accounted for an average of only 17.1% of board positions, with a median of 16.7% and the same standard deviation, demonstrating that women's underrepresentation is a consistent pattern across the sample. The observed minimum and maximum values further underscore this disparity: some companies had entirely male boards (0% women), whereas only a small number approached gender balance, with a maximum female representation of 57.1%. These findings confirm the persistence of structural and cultural barriers that restrict women's access to strategic leadership positions, consistent with the concept of the glass ceiling (Lodén, 1978; Costa *et al*., 2025).

A similar pattern emerges in the analysis of executive management teams, although the gender imbalance is even more pronounced. Men occupied, on average, 87.1% of executive positions, with a median of 88.9%, whereas women's participation averaged only 12.9%, with a median of 11.1%. The standard deviation of 0.138 for both groups indicates that this pattern was similarly consistent across the companies analyzed. The minimum and maximum values reveal the existence of entirely male executive teams and only a few organizations with greater gender diversity, where women represented up to 50% of executive positions. Taken together, these findings suggest that, in addition to the barriers affecting access to board membership, women encounter further obstacles to advancement into executive leadership roles. This interpretation is consistent with the literature on the triple burden and the disproportionate social responsibilities borne by women, which constrain their availability for positions involving greater

organizational responsibility (Cembranel; Floriano; Cardoso, 2021).

A comparison between boards of directors and executive management teams indicates that both governance structures remain overwhelmingly male-dominated, although the disparity is even greater at the executive level. This pattern reinforces the contradiction between corporate discourse and organizational practice: despite publicly declaring commitments to diversity and inclusion, companies included in the ISE B3 continue to exhibit a substantial predominance of men in senior leadership positions. From a theoretical perspective, limited gender diversity weakens both the monitoring mechanisms proposed by Agency Theory (Jensen; Meckling, 1976) and the broader range of perspectives emphasized by Resource Dependence Theory (Pfeffer; Salancik, 1978). Consequently, the descriptive findings demonstrate that female representation in senior leadership remains insufficient, highlighting the need for consistent affirmative policies and profound cultural transformation to convert institutional commitments into meaningful organizational practice.

Following the presentation of the descriptive results, which demonstrate the predominance of men on both boards of directors and executive management teams, it was necessary to determine whether the observed gender differences were statistically significant. To this end, a paired-samples t-test was conducted (Table 2), allowing comparisons between the means of related variables within the same sample and providing a more robust inferential assessment. This methodological progression ensures that these outcomes extend beyond descriptive observations and are supported by inferential evidence confirming the consistency and statistical significance of gender inequality in senior leadership positions.

Table 2 | Paired Samples T-Test

								95% Confidence Interval			
			Statistic	**df**	**p**	**Mean Difference**	**Standard Error of Difference**	**Lower Lim.**	**Upper Lim.**	**Effect Size**	
% Men on Board	**% Women on Board**	Student's t	36.5	180	< .001	0.658	0.0180	0.622	0.693	Cohen's d	2.72
		Wilcoxon W	16286[a]		< .001	0.667	0.0180	0.633	0.708	Rank-biserial correlation	1.000
% Men C-Suite	**% Women C-Suite**	Student's t	36.1	180	< .001	0.742	0.0205	0.701	0.782	Cohen's d	2.69
		Wilcoxon W	15931[b]		< .001	0.778	0.0205	0.722	0.805	Rank-biserial correlation	1.000

Note. H_a: $\mu_{Measure\ 1 - Measure\ 2} \neq 0$

[a] 1 pair of tied values

[b] 3 pairs of tied values

Source: Research data (2026).

The results of the paired-samples t-test revealed highly significant differences in both organizational decision-making bodies. For boards of directors, the test yielded $t(180) = 36.5$, $p < .001$, with a mean difference of 0.658 and a 95% confidence interval [0.622, 0.693], indicating that the observed disparity between male and female representation is highly unlikely to have occurred by chance. Similarly, for executive management teams, the analysis produced $t(180) = 36.1$, $p < .001$, with a mean difference of 0.742 and a 95% confidence interval [0.701, 0.782], confirming that male predominance at the executive level is likewise systematic. The p-values below .001 indicate an extremely low probability that these differences resulted from random variation, thereby providing strong statistical support for the analysis. Moreover, the estimated effect sizes (Cohen's $d = 2.72$ for boards of directors and $d = 2.69$ for executive management teams) indicate exceptionally large effects, far exceeding the conventional threshold for a large effect ($d \geq 0.80$).

The robustness of these findings was further confirmed by the nonparametric Wilcoxon signed-rank test, which also produced $p < .001$ for both comparisons, demonstrating that the results do not depend on the assumption of normally distributed data. This convergence of evidence from both parametric and nonparametric tests strengthens the conclusion that gender inequality within the decision-making bodies of the companies analyzed is structural, consistent, and substantial. Consequently, the paired-samples t-test not only corroborates the descriptive evidence of gender disparity but also demonstrates that these differences are both statistically and substantively significant, reinforcing the conclusion that the persistent predominance of men in senior leadership positions warrants continued scholarly attention and practical intervention.

The statistical confirmation of gender inequality further reinforces the theoretical discussion surrounding invisible barriers to women's advancement and aligns with studies emphasizing the importance of greater gender diversity for improving organizational performance. Lefley, Vychová and Trnková (2024), for example, examine perceptions of gender quotas and conclude that, despite existing resistance, such measures are widely regarded as necessary instruments for accelerating structural change. This perspective is consistent with the present findings, which reveal significant gender disparities and suggest that institutional interventions may be essential for altering the current organizational landscape.

Similarly, Amo-Navas, Garcia-Lopez and Hamoudi (2025) identified an optimal threshold of gender diversity on boards of directors capable of maximizing corporate sustainability performance. Given that the average levels of female representation observed among ISE B3 companies fall well below this threshold, the present findings suggest that limited female participation not only undermines gender equity but also constrains organizations' competitive and sustainability potential. Furthermore, classic institutional theory, particularly the work of Meyer and Rowan (1977), remains highly relevant in arguing that organizations frequently adopt diversity discourse as a form of symbolic legitimacy without translating these commitments into substantive organizational practice.

Having established the statistical significance of gender inequality through the paired-samples t-test, the next step is to examine whether a relationship exists between the two principal governance bodies. Specifically, it is important to determine whether companies with greater gender diversity on their boards of directors also tend to exhibit higher levels of female representation within their executive management teams. To address this question, a correlation analysis was conducted (Table 3), enabling the assessment of both the strength and direction of the association between these two continuous variables. This stage extends the inferential analysis beyond comparisons of group means by investigating the structural relationship between different levels of organizational leadership.

Table 3 | Correlation test (% Women on Board × % Women C-Suite)

Metric	Value
Pearson's r	0.194
df	179
p-value	0.009
95% CI upper limit	0.331
95% CI lower limit	0.050
Spearman's rho	0.194
df	179
p-value	0.009

Source: Research data (2026).

The results indicate that the Pearson correlation coefficient was r = 0.194, with 179 degrees of freedom and p = 0.009, and a 95% confidence interval of [0.050, 0.331]. The Spearman rank correlation produced the same coefficient (ρ = 0.194; p = 0.009), confirming the robustness of the results regardless of the normality assumption. These results reveal a positive and statistically significant, albeit weak, association between the representation of women on corporate boards and executive management teams. In practical terms, companies with greater gender diversity on their boards also tend to exhibit greater female representation in executive management; however, this relationship is limited and not sufficiently strong to indicate a consolidated structural pattern.

Beyond statistical significance, the magnitude of the correlation coefficient warrants consideration. The value of r = 0.194 indicates a positive but weak association between the proportion of women on boards and in executive management. Methodologically, this suggests that although companies with more gender-diverse boards tend to have more gender-diverse executive teams, board diversity explains only a small proportion of the observed variation. The confidence interval [0.050, 0.331] reinforces this interpretation, as even its upper bound does not approach a moderate or strong association. Hence, the analysis confirms the existence of a statistically significant relationship while simultaneously demonstrating that its practical strength remains limited.

Another noteworthy finding concerns the robustness of the results. The fact that the Spearman coefficient yielded the same estimate (ρ = 0.194; p = 0.009) indicates that the observed association is not contingent upon the assumption of normally distributed data, thereby strengthening the credibility of the analysis. This convergence between Pearson's and Spearman's coefficients is methodologically important because it demonstrates that the relationship remains consistent across different statistical approaches. Nevertheless, the small magnitude of the coefficient suggests that factors beyond board diversity also influence the composition of executive management teams. From a practical perspective, these findings indicate that increasing women's representation on corporate boards may constitute an important initial step toward greater gender diversity, but it is insufficient on its own to produce structural changes in executive leadership. Broader institutional policies and organizational interventions addressing barriers to executive appointments remain necessary.

Taken as a whole, these findings suggest that board diversity exerts a limited spillover effect on executive management composition. The weak correlation indicates that increasing female participation on corporate boards does not automatically translate into greater female participation in executive positions, implying that distinct barriers operate at different hierarchical levels. This finding is consistent with recent studies emphasizing that broader institutional policies are required for diversity in strategic governance positions to translate into substantive gender equity within executive leadership (Lefley *et al*., 2024; Amo-Navas *et al*., 2025). Therefore, the correlation analysis reinforces the conclusion that, although female representation on corporate boards is an important factor, it is not sufficient by itself to drive structural changes in executive management, highlighting the need for affirmative policies and deeper organizational and cultural transformation.

Linear regression analysis was subsequently conducted to examine whether gender diversity on corporate boards influences the composition of executive management while controlling for industry sector. The overall regression model was statistically significant ($F = 2.07$; $p = 0.018$), indicating that at least one independent variable contributed significantly to explaining the proportion of women in executive management. The coefficient of determination ($R^2 = 0.139$; adjusted $R^2 = 0.072$) indicates that the model explains approximately 7% of the observed variance. Although modest, this explanatory power is consistent with expectations for organizational and social research, given the multifactorial nature of gender inequality. These findings reinforce the conclusion that, while board diversity is an important predictor, institutional and cultural factors also play a decisive role.

The variable Percentage of Women on Boards exhibited a positive and statistically significant coefficient ($\beta = 0.207$; $p = 0.016$), confirming that more gender-diverse boards are associated with greater female representation in executive management. This result is consistent with international evidence linking board gender diversity to improved organizational outcomes and with Fernandes and Machado (2023), who demonstrated that more diverse boards strengthen corporate oversight and reduce excessive executive compensation. Therefore, the results support the proposition that board diversity generates positive spillover effects within executive leadership structures.

Industry sectors such as Transportation and Logistics ($\beta = -0.109$; $p = 0.015$), Industry and Materials ($\beta = -0.087$; $p = 0.024$), and Agribusiness and Food ($\beta = -0.120$; $p = 0.018$) exhibited negative and

statistically significant coefficients relative to the reference category (Energy). These findings indicate that female representation in executive management is significantly lower in these industries, even after controlling for board diversity. This pattern is consistent with previous research suggesting stronger cultural resistance within traditionally male-dominated sectors, such as heavy industry and agribusiness, where gender stereotypes and structural barriers remain deeply entrenched (Cembranel; Floriano; Cardoso, 2021; Costa *et al*., 2025).

Other sectors, including Consumer Goods and Retail, Financial Services, Healthcare, and Technology, did not differ significantly from the Energy sector. Such evidence suggests that although gender inequality remains present within these industries, its magnitude does not differ statistically from that observed in the reference sector. One possible interpretation is that more recent diversity initiatives within service-oriented and technology sectors, while insufficient to eliminate gender disparities, may have contributed to reducing differences relative to more traditional industries.

Diagnostic tests indicated no evidence of multicollinearity and confirmed the independence of residuals. However, heteroscedasticity and departures from normality were detected. Although these issues may affect the reliability of statistical significance tests, they do not invalidate the estimated coefficients. Given the relatively large sample size (N = 181), their practical impact is likely to be limited. Nevertheless, future analyses should employ robust estimation procedures, such as heteroscedasticity-consistent standard errors (HC3 or HC4) or bootstrap methods, to confirm the stability of the evidence. Acknowledging these limitations strengthens both the methodological transparency and the overall credibility of the study.

In light of these findings, synthesizing the empirical evidence provides readers with a comprehensive understanding of the analytical results. Presenting descriptive statistics, gender comparison tests, linear regression estimates, and model diagnostics within a unified framework enhances methodological transparency and scientific rigor. Such a summary enables readers to understand the extent of gender inequality in corporate boards and executive management, assess the statistical significance of the observed relationships, and identify the principal factors associated with female representation, including board diversity and industry-specific differences. At the same time, incorporating diagnostic information reinforces confidence in the analysis despite its acknowledged methodological limitations.

Box 1 | Results and statistical tests included in the study

Stage of Analysis	Table/Figure	Purpose	Main Findings
Descriptive statistics	Table of gender composition (boards of directors and executive management teams)	Provide an initial overview of gender inequality	Boards of directors: 82.9% men vs. 17.1% women; Executive management teams: 87.1% men vs. 12.9% women
Tests of mean differences	Paired-samples t-test and Wilcoxon signed-rank test	Statistically confirm gender differences	Highly significant differences ($p < .001$), with very large effect sizes (Cohen's $d > 2.6$)
Multiple linear regression	Regression coefficients table	Examine the effect of board diversity and sectoral differences	Percentage of women on boards was a significant positive predictor ($\beta = 0.207$; $p = .016$); Transportation and Logistics, Industry and Materials, and Agribusiness and Food exhibited significant negative coefficients
Model diagnostics	Durbin–Watson, VIF, Shapiro–Wilk, and residual plots	Assess methodological robustness and model assumptions	No evidence of multicollinearity or autocorrelation; evidence of heteroscedasticity and non-normality of residuals

Source: Research data (2026).

5. CONCLUSION

This study examined female representation in strategic leadership positions within companies included in the ISE B3. The results confirm the predominance of men on both boards of directors and executive management teams, demonstrating that gender inequality remains a structural characteristic of senior leadership and highlighting the persistence of barriers that constrain women's advancement. These results align closely with the concept of the *glass ceiling* (Lodén, 1978), reinforcing the need for institutional measures capable of addressing enduring gender disparities.

More specifically, the descriptive analysis revealed substantial male predominance across both governance bodies, with women occupying, on average, only 17.1% of board positions and 12.9% of executive management positions. These findings corroborate earlier research by Salvagni and Canabarro (2015) and Hryniewicz and Vianna (2018), which argues that women's limited representation in strategic leadership positions is rooted in longstanding historical and cultural barriers.

Furthermore, the regression analysis provided additional explanatory insights by demonstrating that greater gender diversity on boards of directors is positively associated with higher levels of female representation within executive management teams. This pattern supports the proposition that more

diverse boards can promote broader gender diversity throughout corporate leadership structures, consistent with the predictions of Agency Theory and Resource Dependence Theory. Moreover, the analysis identified significant sectoral differences: the Industry and Materials, Transportation and Logistics, and Agribusiness and Food sectors exhibited negative coefficients, indicating greater resistance to women's inclusion in executive leadership. These findings further underscore the persistence of the glass ceiling and the structural burdens disproportionately experienced by women.

Beyond documenting gender disparities, the findings also have important practical implications. Organizations seeking to translate their public commitments to diversity into meaningful action should adopt consistent affirmative policies, including structured mentoring programs, gender diversity targets for boards of directors, and initiatives that facilitate the reconciliation of professional responsibilities with caregiving obligations.

Although the regression model exhibited only moderate explanatory power, its findings are consistent with both national and international literature identifying gender diversity as an important factor associated with stronger corporate governance and improved organizational performance. The analysis also demonstrated that gender inequality is more pronounced in certain industries, suggesting that diversity and inclusion strategies should be tailored to the specific characteristics of individual sectors. In this respect, the study contributes to the ongoing debate concerning the gap between corporate discourse and institutional practice by demonstrating that, despite publicly stated commitments to diversity, male dominance continues to characterize positions of managerial power.

From a methodological perspective, it is important to acknowledge that the regression analyses presented certain limitations that are commonly encountered in organizational and social research. Nevertheless, the consistency of the evidence across multiple statistical procedures enhances the credibility of the results. Transparently reporting these methodological considerations strengthens the academic rigor of the study while identifying opportunities for future refinement without undermining the validity of its principal conclusions. It should also be noted that the analysis is limited to companies included in the ISE B3, which may restrict the generalizability of the findings to other administrative contexts.

Future research should broaden the range of explanatory variables by incorporating additional indicators of corporate governance, formally adopted diversity policies, and organizational characteristics such as firm size and market value. Longitudinal studies would also provide a more comprehensive understanding of changes in women's representation over time. Furthermore, comparative analyses across countries or sustainability indices could deepen understanding of how different institutional environments shape gender equity in corporate leadership.

In conclusion, this study contributes to the literature by demonstrating that gender diversity on boards of directors is an important determinant of female participation within executive management teams, while also showing that gender inequality varies across industries and remains a persistent structural challenge. Promoting women's representation in senior leadership should therefore be viewed not merely as a matter of social responsibility, but as a corporate governance strategy capable of generating sustained directorial, ethical, and societal benefits.

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