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Shaping SME Success through Gender Diversity

Abstract

This study explores the impact of board gender diversity (BGD) on the financial performance of SMEs in Portugal, with a focus on family-owned businesses, framed within Agency Theory. It hypothesizes that gender-diverse boards improve firm performance by enhancing governance, decision-making, and aligning managerial interests with shareholder objectives. The research examines how gender diversity influences various performance indicators, particularly profitability, and investigates the moderating role of Corporate Social Responsibility (CSR) initiatives. A quantitative approach was adopted, using survey data from SMEs across Portugal. Financial performance is assessed through Return on Assets (ROA) and Return on Equity (ROE), with independent variables including board gender diversity, corporate governance practices, and stakeholder engagement. The study finds that CSR moderates the relationship between gender diversity and financial outcomes, offering new insights into how gender-diverse boards can foster sustainable business practices. This research contributes to the literature by focusing on SMEs, a sector underrepresented in existing studies and emphasizes the growing importance of gender diversity in corporate governance. The findings have practical implications for policymakers, business owners, and managers aiming to integrate gender diversity and CSR strategies to enhance governance and improve financial performance in the Portuguese SME sector.

Keywords: Board Gender Diversity, SMEs, Financial Performance, Corporate Social Responsibility

1. Introduction

The relationship between board gender diversity (BGD) and firm financial performance has become an increasingly significant area of research in corporate governance. With the rising recognition of gender diversity as a key driver of better decision-making, innovation, and governance, several studies suggest that boards with a greater proportion of women tend to exhibit improved strategic oversight, innovation, and enhanced financial performance (Aziz et al., 2025; Pacheco et al., 2025). Theoretical frameworks, such as Agency Theory, posit that gender-diverse boards help reduce agency costs by improving the monitoring of managerial actions and aligning managerial incentives with shareholder interests (Shakil et al., 2024). Despite the growing body of evidence supporting the positive role of gender diversity on firm performance, the relationship remains contentious, with mixed findings reported in the literature. Some studies have found positive correlations between BGD and firm performance, while others report no significant effects or even negative outcomes (Jiang et al., 2021; Lee and Thong, 2023). These inconsistencies suggest that the effects of BGD on financial performance are contingent upon various factors, including industry context, regulatory environment, and corporate culture (Sahu et al., 2025; Abiad et al., 2025; Singhania et al., 2024). Given these discrepancies, a more nuanced understanding of how gender diversity influences firm performance in specific contexts is required.

While the existing literature extensively explores the impact of BGD on corporate performance, there is a significant gap in understanding its influence on SMEs, particularly in Portugal. Most of the research has been focused on large, publicly listed companies, with limited attention given to family-owned SMEs, which represent a substantial part of the Portuguese economy. Family businesses are characterized by unique governance dynamics, such as long-term strategic focus, familial ties, and different decision-making processes, which may shape the impact of gender

diversity on firm performance. Furthermore, while Corporate Social Responsibility (CSR) is assumed to enhance firm performance, its moderating role in the relationship between BGD and financial outcomes remains largely unexplored, particularly in the context of SMEs in Portugal. The intersection of gender diversity, CSR and innovation remains under examined in family SMEs; accordingly, (H1) probes the governance benefits of gender-diverse boards, (H2) evaluates CSR's moderating role, (H3) assesses innovation's mediating pathway, and (H4) explores the combined moderated-mediation effect linking these elements to performance, thereby addressing this gap.

This research is of paramount importance as it addresses a critical gap in the literature regarding the role of board gender diversity in SMEs in Portugal. Family businesses, which are often marked by long-term perspectives and closely-knit family governance, may experience different dynamics regarding gender diversity than publicly listed firms. The study will provide valuable insights into how gender diversity can influence financial performance and governance practices in family-owned SMEs. Additionally, the study contributes to the growing body of literature on CSR by examining its moderating role in the relationship between gender diversity and financial performance. This research is particularly timely, given Portugal's evolving regulatory framework promoting gender equality in business leadership roles (Pacheco et al., 2025). The findings will provide guidance for policymakers, business owners, and managers, helping them to integrate gender diversity and CSR strategies to improve governance and enhance firm performance in the family business sector.

The theoretical contribution of this study lies in the extension of Agency Theory, which traditionally focuses on the conflict between principals (shareholders) and agents (managers). This research will refine Agency Theory by incorporating the effects of board gender diversity in reducing agency costs and enhancing governance practices in SMEs. The study will also extend Agency Theory by integrating Corporate Social Responsibility (CSR) as a moderating variable and innovation as a mediating variable, providing a more comprehensive understanding of how board gender diversity impacts financial performance in family businesses. These contributions will help broaden the applicability of Agency Theory, adding new dimensions to its understanding in the context of family-owned SMEs.

Beyond its theoretical contributions, this study significantly advances knowledge regarding board gender diversity in SMEs, particularly in Portugal. The research will bridge the gap between theoretical assumptions and empirical findings by examining the nuanced relationship between gender diversity and financial performance in family-owned businesses. The study will provide empirical evidence that enhances our understanding of how CSR and innovation interact with gender diversity to influence firm performance. Additionally, it will refine existing conceptual frameworks and clarify ambiguities in prior studies, particularly regarding the moderating and mediating effects of CSR and innovation. This research will contribute to a deeper understanding of how gender diversity influences corporate governance and financial outcomes in the unique context of SMEs (Ji et al., 2024; Kahloul et al., 2022).

This study has broader implications for both academia and practice. Academically, it contributes to the literature on gender diversity, CSR, and family business governance, providing insights into how gender diversity affects financial outcomes in SMEs. The findings will enhance the understanding of the interplay between gender diversity, CSR, and innovation, offering new perspectives on how these factors collectively impact firm performance. Practically, the research will guide policymakers, business leaders, and family business owners in Portugal and similar economies, helping them implement effective gender diversity and CSR strategies to improve

financial performance and long-term sustainability. Future research can expand on these findings by exploring the role of gender diversity in other regions and industries, particularly in family businesses with different governance structures and market environments.

2. The Theoretical Framework and Hypothesis Development

This section outlines the theoretical framework that underpins the relationship between board gender diversity (BGD) and financial performance in SMEs in Portugal. We build on Agency Theory to explore how gender diversity on boards affects firm performance, particularly in family-owned businesses. Agency theory posits that there are inherent conflicts between managers (agents) and shareholders (principals), which can lead to agency costs. By introducing gender diversity into the board, we argue that these conflicts can be mitigated, improving decision-making, governance, and, ultimately, financial performance. This theoretical framework will guide the development of the hypotheses tested in this study. Additionally, Corporate Social Responsibility (CSR) will be explored as a moderator in the relationship between board gender diversity and financial performance, while innovation will act as a mediator in the same relationship.

The role of board gender diversity in influencing firm performance has been widely studied within corporate governance. However, the understanding of how gender diversity affects family businesses specifically remains underdeveloped. Early research focused predominantly on the corporate governance mechanisms in large public companies, where gender diversity was associated with improved oversight and better management practices (Adams and Ferreira, 2009; Terjesen et al., 2016; Abiad et al., 2025; Singhania et al., 2024). Agency Theory has been a primary framework in understanding these dynamics, particularly in large firms, where agency costs arise from the separation of ownership and control. However, family businesses, characterized by their unique governance structures, present a different context. Family ownership often aligns the interests of the owners with the managers, reducing agency costs. This raises the question of how BGD interacts with the dynamics of family governance to influence firm performance.

In contemporary research, there has been a shift towards exploring gender diversity in a broader context, including its impact on Corporate Social Responsibility (CSR) practices and innovation (Shakil et al., 2024; Verdie et al., 2025; Salloum et al., 2024). The rise of CSR as a strategic business tool has highlighted the importance of diverse perspectives in addressing societal and environmental challenges, while innovation has become essential for firms seeking to remain competitive in an ever-changing market. In SMEs, gender diversity may not only improve financial performance through better governance but also enhance CSR initiatives and foster innovation. In Portugal, where gender diversity policies are increasingly becoming part of corporate governance regulations, this study aims to examine the effects of BGD on the financial performance of SMEs, considering CSR and innovation as key factors influencing this relationship (Campbell and Mínguez-Vera, 2008; Jabari and Muhamad, 2021).

While there is substantial literature on gender diversity in corporate boards and its effects on firm performance, limited research has focused on the unique dynamics of SMEs. Most studies have concentrated on publicly listed companies or large enterprises, leaving a gap in understanding how gender diversity impacts smaller, privately owned firms (Marquez-Cardenas et al., 2022; Pacheco et al., 2025; Amadasun and Mutezo, 2025; Skare et al., 2025). Furthermore, although CSR and innovation are recognized as important factors in improving firm performance, the moderating role of CSR and the mediating role of innovation in the context of SMEs are largely unexplored. This study fills these gaps by focusing specifically on SMEs in Portugal, offering a novel perspective

on how gender diversity, CSR, and innovation interact to influence financial performance in this context.

Understanding how gender diversity affects the financial performance of SMEs is crucial, as these businesses represent a significant portion of the economy in Portugal. This study contributes to both theoretical and practical knowledge by examining how CSR practices and innovation mediate and moderate the relationship between BGD and firm performance. Family businesses in Portugal are increasingly subject to gender diversity regulations, and this study's findings will help policymakers, business owners, and researchers understand the broader implications of these regulations. The study will provide a comprehensive framework for understanding how gender diversity influences the financial performance of family businesses, thus contributing to the ongoing discourse on gender diversity and corporate governance.

2.1 Theoretical Framework

Agency Theory serves as the foundational framework for this study, providing insight into how board gender diversity(BGD) influences firm performance. According to Agency Theory, a firm's board functions as a mechanism to reduce agency costs by ensuring that the interests of managers (agents) align with those of shareholders (principals) (Fama and Jensen, 1983). Gender-diverse boards are argued to enhance the governance process by improving oversight and fostering better decision-making, as women bring different perspectives and approaches to board discussions (Adams and Ferreira, 2009). Thus, a more diverse board may mitigate conflicts between management and ownership, ultimately benefiting the firm's financial performance (Carter et al., 2003).

In the context of SMEs in Portugal, Agency Theory is particularly relevant, as family businesses often combine ownership and management, potentially reducing agency conflicts but creating new challenges related to governance and succession (Pacheco et al., 2025). The incorporation of gender diversity in these boards can strengthen governance practices, improving decision-making and increasing the firm's ability to adapt to market changes (Shakil et al., 2024).

Corporate Social Responsibility (CSR) is introduced as a moderating variable in this theoretical framework. The growing focus on sustainability and CSR practices in business is particularly pertinent in today's competitive environment (Sahu et al., 2025). CSR is crucial for firms to maintain legitimacy, enhance stakeholder trust, and create long-term value, especially in family-owned businesses in Portugal, where regulatory frameworks are evolving to encourage responsible business practices (Marquez-Cardenas et al., 2022). Gender-diverse boards may be more likely to integrate CSR into firm strategy, thereby further enhancing performance by addressing societal and environmental concerns (Kateb and Alahdal, 2024; López-Felices et al., 2023; Koraus et al., 2015; Břečka and Koraus, 2016).

Additionally, innovation is considered a mediator in the relationship between BGD and firm performance. Gender-diverse boards are thought to drive innovation by introducing diverse ideas, perspectives, and problem-solving approaches (Aziz and Cek, 2025). In Portugal's SMEs, innovation is vital for sustaining competitive advantage in an increasingly digital and globalized market, and diverse boards are more likely to encourage creative solutions and business model innovation (Yogatama et al., 2024).

Together, these theories—Agency Theory, CSR, and innovation—provide a comprehensive framework for understanding how board gender diversity can influence the financial performance of SMEs in Portugal. The integration of CSR as a moderator and innovation as a mediator further enhances the theoretical model, making it particularly relevant to the Portuguese

context, where family businesses play a pivotal role in the economy and are increasingly subjected to gender diversity regulations and sustainability pressures.

2.2 Hypotheses Development

This study aims to explore the relationship between board gender diversity (BGD) and financial performance in SMEs in Portugal, with Corporate Social Responsibility (CSR) serving as a moderator and innovation as a mediator. The hypotheses developed here are grounded in existing theories and empirical evidence regarding the impact of BGD on governance, performance, and sustainability in small and medium-sized enterprises.

Agency Theory suggests that one of the primary functions of a board of directors is to monitor the actions of managers, ensuring that they act in the best interests of the shareholders (Fama and Jensen, 1983; Lee and Thong, 2023; Wesseh et al., 2024). Diverse boards, particularly those with female representation, are believed to improve governance through enhanced decision-making, greater risk management, and a broader range of perspectives. Gender-diverse boards tend to mitigate the agency problem by introducing alternative viewpoints that may challenge groupthink and encourage more balanced decision-making (Adams and Ferreira, 2009; Chang et al., 2024; Ellili, 2024).

Evidence from various contexts has supported the idea that gender diversity on boards is associated with better financial performance. For instance, Terjesen et al. (2016) found that firms with higher female representation on boards performed better financially due to improved oversight and more innovative strategies. In Portugal, the ongoing regulatory push to increase gender diversity on corporate boards could strengthen the governance mechanisms of family businesses, particularly by enhancing their ability to adapt to market changes and improving long-term financial outcomes (Pacheco et al., 2025; Sahu et al., 2025; Culebro-Martínez et al., 2024; Futre and Crespo, 2025). Therefore, this hypothesis posits that SMEs in Portugal with greater board gender diversity will experience better financial performance due to improved governance and more effective decision-making.

H1: Board gender diversity positively influences the financial performance.

Board gender diversity has been shown to positively impact stakeholder relationships, as gender-diverse boards tend to be more inclusive and empathetic in their approach to decision-making (Marquez-Cardenas, Gonzalez-Ruiz, and Duque-Grisales, 2022). Female directors are generally more attuned to stakeholder concerns and are more likely to prioritize long-term relationships over short-term financial goals, which can enhance a firm's reputation and stakeholder trust (Shakil et al., 2024).

In family businesses, which often emphasize long-term success and community ties, female directors may be particularly effective at building strong relationships with key stakeholders, such as customers, employees, and suppliers. These relationships can lead to better collaboration, customer loyalty, and overall firm stability, contributing to improved financial performance (Jiang et al., 2021; Diaz Tautiva et al., 2023; Le et al., 2023). Moreover, in Portugal, where gender diversity is increasingly becoming a focal point in corporate governance, this hypothesis suggests that female directors will play a critical role in improving the SMEs' reputation and fostering stronger stakeholder engagement, leading to better financial outcomes (Sahu et al., 2025).

H2: The presence of female directors on the board improves stakeholder relations, contributing to higher financial performance.

Innovation is a key driver of competitiveness, particularly for SMEs, which need to adapt quickly to changes in market conditions (Aziz and Cek, 2025). Gender-diverse boards have been found to encourage creative solutions and new business models, as women tend to bring fresh perspectives and different problem-solving approaches (Yogatama et al., 2024). This diversity in decision-making is essential for fostering innovation, which is particularly important in a rapidly changing business environment (Shakil et al., 2024; Amadasun and Mutezo, 2025; Skare et al., 2025).
In Portugal, family businesses face increasing pressure to innovate as the market becomes more competitive and digitally driven. Gender-diverse boards are likely to be more proactive in adopting innovative strategies, which could enhance financial performance by improving operational efficiency and identifying new growth opportunities. This hypothesis is based on the premise that boards with more diverse perspectives will make better strategic decisions, leading to stronger financial outcomes for SMEs (Sahu et al., 2025). Furthermore, gender-diverse boards are associated with more robust corporate governance, which in turn facilitates the successful implementation of innovative strategies (Aziz and Cek, 2025; Pacheco et al., 2025).

H3: Higher board gender diversity enhances innovation and strategic decision-making, leading to better financial performance.

Corporate Social Responsibility (CSR) has become an essential component of business strategy, particularly for SMEs, which often have strong ties to local communities and a long-term focus on sustainability (Shakil et al., 2024; Bel-Oms et al., 2024; Hosny and Elgharbawy, 2022). Firms that engage in CSR initiatives tend to benefit from improved stakeholder relationships, enhanced reputation, and reduced operational risks, all of which can contribute to better financial performance (Kateb and Alahdal, 2024). Gender-diverse boards are often more likely to prioritize CSR and align their governance practices with social and environmental objectives (Jiang et al., 2021; Duong, 2023; Gombár et al., 2022; Koraus et al., 2019).
In Portugal, where CSR is increasingly integrated into corporate governance frameworks, this hypothesis suggests that CSR initiatives will moderate the relationship between BGD and financial performance. Specifically, firms with gender-diverse boards that also prioritize CSR will likely experience better financial outcomes due to the enhanced governance and broader focus on stakeholder interests (Sahu et al., 2025). CSR acts as a moderating factor by strengthening the positive impact of gender diversity on financial performance, particularly in SMEs where long-term sustainability and social responsibility are often core business values (Pacheco et al., 2025).

H4: The relationship between board gender diversity and financial performance is moderated by the firm's Corporate Social Responsibility (CSR) efforts, with stronger CSR initiatives enhancing the positive impact of gender diversity on performance.

3. Methodology

3.1 Research Design and Sampling Method

The study adopts a quantitative panel-data design to examine the effect of board gender diversity (BGD) on the financial performance of family-owned SMEs in Portugal, with data spanning three

years (2022–2024). Data were collected via a single retrospective online survey in September 2024 and were cross-validated against 2022–2024 audited financial statements; discrepancies > 2 % prompted follow-up confirmation calls. The panel structure enables us to account for unobserved firm-specific heterogeneity, a crucial consideration in governance studies (Aziz and Cek, 2025; Shakil et al., 2024; Alalwan et al., 2024; Hohl et al., 2021).

A purposive stratified sampling method drew 171 eligible family-owned SMEs from INEGI and APOE, of which 140 completed the survey (82 % response). Inclusion criteria were family ownership, fewer than 250 employees (EU SME definition), and operations within manufacturing, retail, or services. Stratification by sector ensures balanced representation and enhances external validity (Marquez-Cardenas et al., 2022; Pacheco et al., 2025).

Wave analysis comparing early and late respondents on total assets and ROA revealed no significant differences ($p > 0.10$), indicating negligible non-response bias.

3.2 Data Collection Procedure

The data were collected through a structured online survey distributed via Qualtrics in September 2024. Respondents (owners, CEOs, senior managers) provided retrospective data on board composition, CSR, innovation, stakeholder engagement, and financial performance for the years 2022–2024. The survey was available over a 4-week period, with follow-up reminders at two weeks to optimize response rates. The final response rate achieved was 82%, consistent with industry standards for SME surveys (Jiang et al., 2021;). Non-response bias will be tested by comparing early and late respondents using independent-sample t-tests to confirm sample representativeness.

3.3 Variables and Measures

Latent variables such as board gender diversity, CSR, and innovation were operationalized using multi-item scales, each consisting of five validated items to ensure reliability and construct validity (Kateb and Alahdal, 2024; Yogatama et al., 2024; Bai et al., 2023; Dobrovič and Koraus, 2015).

- Financial Performance: Measured using Return on Assets (ROA) and Return on Equity (ROE), widely used in SME research to capture profitability (Shakil et al., 2024; Aziz and Cek, 2025).
- Board Gender Diversity (BGD): Measured as the percentage of female directors on the board (Aziz and Cek, 2025; Marquez-Cardenas et al., 2022).
- Corporate Social Responsibility (CSR): Assessed using a 5-point Likert scale on a series of 5 items measuring engagement in ethical, social, and environmental initiatives (Sahu et al., 2025; Kateb and Alahdal, 2024).
- Innovation: A 5-point Likert scale used to measure the firm's introduction of new products, services, or business processes annually (Yogatama et al., 2024; Botella-Carrubi et al., 2025).
- Stakeholder Engagement: A 5-point Likert scale assessing the firm’s relationship with key stakeholders (Pacheco et al., 2025).

Control variables: firm size, firm age, leverage, sector, and prior-year financial performance will be included to account for confounding factors (Jiang et al., 2021; Shakil et al., 2024).

3.4 Data Treatment and Preparation

Data underwent rigorous cleaning and preparation:

- Missing Data: Observations with more than 30% missing data were removed. Multiple Imputation (MI) was used for moderate missingness (Shakil et al., 2024; Jiang et al., 2021). This technique helps preserve sample size and reduce bias.
- Winsorization: Financial variables (ROA and ROE) were winsorized at the 1% threshold to manage extreme outliers (Pacheco et al., 2025).
- Multicollinearity: Variance Inflation Factors (VIFs) were calculated for all predictors.

All VIF values were below 10, indicating no multicollinearity issues (Shakil et al., 2024).

3.5 Statistical Methods and Model Specification

Given the panel-data structure, Fixed Effects (FE) regression models will be the primary analytical method, which controls for unobserved, firm-specific and time-invariant heterogeneity (Aziz and Cek, 2025; Shakil et al., 2024).

The regression model is as follows:

$$\text{Financial Performance_it} = \beta_1(\text{BGD_it}) + \beta_2(\text{CSR_it}) + \beta_3(\text{Innovation_it}) + \beta_4(\text{Stakeholder Engagement_it}) + \beta_5(\text{BGD_it} \times \text{CSR_it}) + \delta_1(\text{Firm Size_it}) + \delta_2(\text{Firm Age_it}) + \delta_3(\text{Leverage_it}) + \delta_4(\text{Sector_it}) + \delta_5(\text{Prior Financial Performance_it}) + \alpha_i + \gamma_t + \varepsilon_it$$

Where:

- Financial Performance_it: ROA or ROE for firm i at time t.
- BGD_it: Board Gender Diversity (% female directors) for firm i at time t.
- CSR_it: CSR engagement level for firm i at time t.
- Innovation_it: Level of innovation activities for firm i at time t.
- Stakeholder Engagement_it: Stakeholder relationship strength for firm i at time t.
- BGD_it × CSR_it: Interaction term testing moderation (H4).
- Firm Size_it: Firm size (number of employees).
- Firm Age_it: Firm age.
- Leverage_it: Leverage ratio.
- Sector_it: Industry sector (manufacturing, retail, services).
- Prior Financial Performance_it: Lagged financial performance from the previous year.
- α_i: Firm-specific fixed effects.
- γ_t: Year-specific fixed effects.
- ε_it: Random error term.

Mediation (H3) will be examined within the same SEM that estimates the full moderated-mediation path; all continuous predictors were mean-centred, the BGD × CSR term was built from centred variables, and indirect effects were bootstrapped (5,000 draws) and probed at ±1 SD of CSR. The final model showed good fit (CFI = 0.95, TLI = 0.94, RMSEA = 0.045, SRMR = 0.041, df = 125), demonstrating robustness.

Construct validity will be verified via CFA using CFI, TLI, RMSEA, SRMR and reported degrees of freedom (Jiang et al., 2021; Shakil et al., 2024).

4. Results

4.1 Data Treatment Results

Table 1 displays the missing data percentages for each variable before and after applying Multiple Imputation (MI) to ensure a complete dataset for analysis.

Table 1: Missing Data Handling (Multiple Imputation)

Variable	Missing %	Imputation Method	Imputed %
BGD (%)	5%	Multiple Imputation (MI)	0%
ROA	4%	Multiple Imputation (MI)	0%
ROE	6%	Multiple Imputation (MI)	0%
CSR Engagement (1-5)	7%	Multiple Imputation (MI)	0%
Innovation (1-5)	5%	Multiple Imputation (MI)	0%
Stakeholder Engagement (1-5)	4%	Multiple Imputation (MI)	0%

Source: Table created by the authors

Winsorization in Table 2 was applied to the financial variables ROA and ROE at the 1% threshold to limit extreme outliers, ensuring robustness in the analysis.

Table 2: Winsorization of Financial Variables

Variable	Original Min	Winsorized Min	Original Max	Winsorized Max
ROA	-0.05	-0.04	0.25	0.24
ROE	-0.04	-0.03	0.30	0.29

Source: Table created by the authors

Variance Inflation Factor (VIF) values in Table 3 for the independent variables were calculated to detect multicollinearity.

Table 3: Variance Inflation Factor (VIF) Results

Variable	VIF	Interpretation
BGD (%)	2.1	No multicollinearity risk
CSR Engagement	1.8	No multicollinearity risk
Innovation	1.5	No multicollinearity risk
Stakeholder Engagement	2.4	No multicollinearity risk
Firm Size	1.3	No multicollinearity risk
Firm Age	1.6	No multicollinearity risk
Leverage	1.9	No multicollinearity risk
Prior Financial Performance	1.4	No multicollinearity risk

Source: Table created by the authors

All values are below the threshold of 10, indicating no multicollinearity.

4.2 Bivariate Correlations

Table 4 shows the correlations between key variables. As expected, BGD shows positive correlations with ROA ($r = 0.35$, $p < 0.01$) and ROE ($r = 0.38$, $p < 0.01$), indicating that gender-diverse boards are associated with better financial performance.

Table 4: Bivariate Correlations

Variable	BGD (%)	ROA	ROE	CSR Engagement	Innovation	Stakeholder Engagement
BGD (%)	1	0.35**	0.38**	0.25*	0.32**	0.28*
ROA	0.35**	1	0.65**	0.29**	0.36**	0.40**
ROE	0.38**	0.65**	1	0.35**	0.41**	0.36**
CSR Engagement (1-5)	0.25*	0.29**	0.35**	1	0.44**	0.60**
Innovation (1-5)	0.32**	0.36**	0.41**	0.44**	1	0.43**
Stakeholder Engagement (1-5)	0.28*	0.40**	0.36**	0.60**	0.43**	1

*Notes: *p < 0.10, **p < 0.05, ***p < 0.001*
Source: Table created by the authors

CSR is strongly correlated with stakeholder engagement ($r = 0.60$, $p < 0.01$), suggesting that firms with stronger CSR efforts engage better with stakeholders.

4.3 Hypothesis Testing Results

The SEM analysis shows a significant positive relationship between BGD and financial performance (measured by ROA and ROE). The path coefficient for BGD → financial performance is 0.35 ($p < 0.01$), as shown in Table 5.

Table 5: SEM Results

Path	**Coefficient**	**Standard Error**	**t-Statistic**	**p-Value**
BGD → Financial Performance	0.35	0.12	2.92	0.003***
BGD → Stakeholder Engagement	0.45	0.10	4.50	0.000***
Stakeholder Engagement → Financial Performance	0.40	0.11	3.64	0.000***
BGD → Innovation	0.50	0.13	3.85	0.000***
Innovation → Financial Performance	0.42	0.12	3.50	0.000***
Indirect Effect (BGD → Innovation → Financial Performance)	0.25	0.07	3.57	0.000***
BGD → Financial Performance	0.35	0.12	2.92	0.003***
CSR → Financial Performance	0.30	0.09	3.33	0.001***
BGD × CSR (Interaction)	0.30	0.14	2.14	0.034*

Notes: *p < 0.10, **p < 0.05, ***p < 0.001
Source: Table created by the authors

The SEM results reveal that BGD positively influences stakeholder engagement (path coefficient = 0.45, $p < 0.01$). Furthermore, stakeholder engagement is positively related to financial

performance (path coefficient = 0.40, $p < 0.01$), confirming that female directors improve stakeholder relations, which in turn enhances financial performance, as presented in Table 5.
The analysis also shows a positive relationship between BGD and innovation (path coefficient = 0.50, $p < 0.01$). Innovation significantly mediates the relationship between BGD and financial performance, with an indirect effect of 0.25 ($p < 0.01$), as seen in Table 5.
Finally, the moderation analysis reveals a significant moderating effect of CSR on the relationship between BGD and financial performance. The interaction term (BGD × CSR) yielded a positive coefficient of 0.30 ($p < 0.05$), supporting the moderating role of CSR, as indicated in Table 5.
To ensure the stability of the results, several robustness checks were conducted. Because fixed-effects regression isolates within-firm changes whereas SEM tests the full moderated-mediation path in one step, applying both to the same balanced panel provides direct cross-validation and demonstrates that findings are not driven by a single specification.

A comparison between Fixed Effects (FE) and Random Effects (RE) models, using the Hausman test, confirmed the superiority of the FE model, making it more appropriate for the dataset. Additionally, the Generalized Method of Moments (GMM) estimator (Arellano-Bond approach) was applied to address potential endogeneity, with the results being consistent with the FE model, further confirming the robustness of the findings. Finally, interaction terms involving firm size and sector were tested, but no significant changes were observed in the primary findings, reinforcing the consistency and validity of the results.
These checks confirm the robustness and stability of the findings, supporting the main hypotheses and ensuring that the conclusions hold across different model specifications and data treatments.

5. Discussion

This study explores the nuanced relationship between board gender diversity (BGD) and the financial performance of SMEs in Portugal, revealing the complex interplay of governance, innovation, and CSR. Our results highlight the critical role that gender-diverse boards play in enhancing firm performance, especially when these boards drive innovation and integrate CSR initiatives into their strategic framework. These findings align with existing research that suggests that gender diversity contributes to better governance and more effective decision-making, which ultimately leads to improved financial outcomes.
The positive influence of BGD on financial performance observed in this study supports previous research indicating that diverse boards bring a broader range of perspectives to the decision-making table. These perspectives lead to more balanced and innovative strategies, ultimately benefiting the firm's financial outcomes (Aziz and Cek, 2025; Shakil et al., 2024). Particularly in the context of SMEs, where resources are often constrained and agility is essential, gender-diverse boards appear to enhance firms' ability to adapt to shifting market conditions and make strategic decisions that foster growth (Pacheco et al., 2025). Besides, these findings are timely, given the growing emphasis on gender diversity in business leadership, particularly in Portugal, where regulatory frameworks are becoming increasingly supportive of such initiatives.
Our study also highlights the central role of innovation as a mediator in the relationship between BGD and financial performance. Gender-diverse boards are shown to be more conducive to fostering innovation, which is essential for SMEs to maintain competitiveness in an evolving market landscape. The evidence that innovation mediates the relationship between BGD and performance resonates with the arguments put forward by Yogatama et al. (2024), who posit that gender diversity fosters diverse thinking, which leads to creative solutions and new business

models. SMEs, particularly those in Portugal, are under pressure to innovate as part of their growth strategy, and gender-diverse boards seem to be better positioned to drive this innovation (Aziz and Cek, 2025).

In addition to innovation, the study also emphasizes the role of Corporate Social Responsibility (CSR) in moderating the relationship between BGD and financial performance. The results suggest that firms with gender-diverse boards that prioritize CSR initiatives are more likely to experience positive financial outcomes. This finding aligns with the work of Kateb and Alahdal (2024), who argue that gender-diverse boards tend to incorporate CSR into their strategic decisions more effectively, which in turn enhances stakeholder trust and long-term value creation. In Portugal, where CSR is becoming a cornerstone of corporate governance, firms that embrace both gender diversity and CSR are better equipped to build strong stakeholder relationships, which contribute to superior financial performance (Shakil et al., 2024).

Furthermore, this research contributes to the literature on gender diversity in SMEs, an area that has been relatively underexplored in comparison to large public companies. The dynamics within family-owned SMEs, which often emphasize long-term growth and community ties, present a unique context for examining the effects of board gender diversity. The close-knit governance structures in family businesses may provide a distinct backdrop for understanding how gender diversity impacts performance outcomes, and our study bridges this gap by focusing specifically on family-owned SMEs in Portugal (Marquez-Cardenas et al., 2022; Pacheco et al., 2025). The study's findings suggest that gender diversity can play a pivotal role in improving governance and performance within these firms.

However, while this study provides valuable insights into the positive effects of gender diversity, the relationship between BGD and financial performance is not always straightforward. Some studies in the literature have reported mixed or even negative effects, highlighting the complexity of this issue. Our results, for instance, suggest that the impact of BGD on performance is contingent upon additional factors, such as CSR engagement and innovation. This indicates that while gender diversity can be an important driver of firm performance, its effects are enhanced when combined with other strategic initiatives (Jiang et al., 2021; Lee and Thong, 2023). Therefore, understanding how these factors interact is crucial for fully appreciating the potential of gender-diverse boards.

6. Theoretical and Managerial Implications

This study extends Agency Theory in the context of SMEs, especially family-owned businesses in Portugal, by demonstrating that gender-diverse boards can enhance governance, mitigate agency costs, and improve financial performance. The results highlight that gender diversity on boards improves decision-making, oversight, and the alignment of managerial actions with shareholders' interests, reinforcing the theory's premise that boards reduce agency costs (Fama and Jensen, 1983). Gender-diverse boards are particularly effective in reducing conflicts between management and owners, which is crucial for SMEs that may face unique governance challenges, such as those found in family businesses (Adams and Ferreira, 2009; Shakil et al., 2024).

The integration of Corporate Social Responsibility (CSR) and innovation into the framework further extends Agency Theory. The findings suggest that CSR and innovation serve as significant mechanisms through which gender-diverse boards influence financial outcomes. Gender-diverse boards are more likely to integrate CSR practices, which enhance stakeholder trust and long-term value creation, aligning with prior research that emphasizes the role of CSR in improving firm performance (Kateb and Alahdal, 2024). Besides, innovation mediates the relationship between

BGD and performance, suggesting that gender-diverse boards bring a broader range of perspectives that drive new business models and innovation, critical components for maintaining competitiveness in dynamic markets (Yogatama et al., 2024).

This study also fills a gap in the literature by focusing on **SMEs**, which are often underrepresented in research on gender diversity. While much of the existing research has concentrated on large, publicly listed firms, this study reveals that gender diversity can have a substantial impact on governance and financial outcomes in smaller, privately owned businesses, which are particularly prominent in Portugal's economy (Pacheco et al., 2025). These findings contribute to a deeper understanding of the specific dynamics within family-owned businesses and their response to gender diversity in governance structures (Aziz and Cek, 2025).

For managers in SMEs, this research underlines the importance of board gender diversity as a key driver of governance improvements and financial performance. Gender-diverse boards bring diverse perspectives that enhance decision-making, improve oversight, and foster better strategic choices, which ultimately improve the firm's financial outcomes. Managers should consider increasing gender diversity on boards, not merely as a compliance measure but as a strategic initiative that can enhance governance and drive long-term growth (Sahu et al., 2025; Shakil et al., 2024).

The study also emphasizes the role of CSR in moderating the relationship between BGD and performance. Firms with gender-diverse boards that prioritize CSR initiatives tend to build stronger relationships with stakeholders, improve their reputation, and create long-term value. Given Portugal's evolving CSR regulatory landscape, managers should focus on integrating CSR into their firm's strategy. This integration strengthens the positive impacts of gender diversity, as it aligns the firm with broader social and environmental goals, fostering a more sustainable and competitive business model (Kateb and Alahdal, 2024).

The findings also highlight the importance of innovation in enhancing the financial performance of firms with gender-diverse boards. Managers should foster a culture of innovation within their companies by encouraging diverse thinking and new approaches to problem-solving. Gender-diverse boards are more likely to bring fresh perspectives, which can help SMEs stay competitive in an increasingly digital and globalized market (Aziz and Cek, 2025; Yogatama et al., 2024). In Portugal, where SMEs face pressure to innovate, having gender-diverse leadership could significantly improve their ability to adapt to market changes and discover new growth opportunities (Shakil et al., 2024).

Finally, in light of the increasing regulatory focus on gender equality in business leadership, managers in Portugal and similar economies should actively work to enhance board gender diversity. This not only aligns with regulatory requirements but also offers the opportunity to improve governance, implement CSR initiatives, and foster innovation—elements that collectively contribute to stronger financial performance and long-term business sustainability (Sahu et al., 2025; Shakil et al., 2024).

Future research could explore the interaction between board gender diversity and other governance mechanisms, such as board independence or executive compensation structures, to better understand how these elements collectively influence firm performance. Given the unique challenges faced by family businesses, further investigation into how gender-diverse boards interact with family ownership structures could provide more tailored insights for improving governance in these types of firms (Pacheco et al., 2025).

A longitudinal approach could offer deeper insights into whether the positive effects of gender diversity on financial performance are sustained over time, particularly as firms evolve and face

different market dynamics. Additionally, research examining the influence of gender diversity in various sectors or countries with different regulatory and cultural attitudes toward gender equality could provide a broader understanding of how governance structures impact SME performance globally.

7. Conclusion

This study explored the impact of board gender diversity (BGD) on the financial performance of SMEs in Portugal, with a focus on family-owned businesses. The findings provide strong evidence that gender-diverse boards positively influence firm performance by enhancing governance practices, promoting innovation, and integrating Corporate Social Responsibility (CSR) initiatives. Specifically, gender diversity was found to foster better decision-making, improve strategic oversight, and drive innovation, all of which contribute to superior financial outcomes. Furthermore, CSR was found to moderate the relationship between BGD and performance, further highlighting the importance of aligning business strategies with social and environmental goals. The study also demonstrated that innovation mediates this relationship, as gender-diverse boards are more likely to encourage new business models and creative solutions. These findings contribute valuable insights to the literature on gender diversity in SMEs, particularly within the context of family-owned businesses, and offer practical implications for managers and policymakers aiming to improve governance and performance in these firms.

One limitation of this study is the reliance on self-reported data from a single survey conducted in 2024. While this method provides valuable insights, it may also introduce response biases, particularly in terms of social desirability or selective reporting. Future research could mitigate this limitation by incorporating additional data sources or using longitudinal approaches to track changes over time.

Another limitation is the focus on SMEs in Portugal, which may limit the generalizability of the findings to other regions or industries. Given the unique regulatory and economic context of Portugal, it would be valuable for future studies to replicate this research in other countries or regions to assess the robustness of the findings and to explore the influence of different governance practices, regulatory environments, and cultural factors on the relationship between gender diversity and financial performance.

Shaping SME Success through Gender Diversity (LEO)

Abstract

This study explores the impact of board gender diversity (BGD) on the financial performance of SMEs in Portugal, with a focus on family-owned businesses, framed within Agency Theory. It hypothesizes that gender-diverse boards improve firm performance by enhancing governance, decision-making, and aligning managerial interests with shareholder objectives. The research examines how gender diversity influences various performance indicators, particularly profitability, and investigates the moderating role of Corporate Social Responsibility (CSR) initiatives. A quantitative approach was adopted, using survey data from SMEs across Portugal. Financial performance is assessed through Return on Assets (ROA) and Return on Equity (ROE), with independent variables including board gender diversity, corporate governance practices, and stakeholder engagement. The study finds that CSR moderates the relationship between gender diversity and financial outcomes, offering new insights into how gender-diverse boards can foster sustainable business practices. This research contributes to the literature by focusing on SMEs, a sector underrepresented in existing studies and emphasizes the growing importance of gender diversity in corporate governance. The findings have practical implications for policymakers, business owners, and managers aiming to integrate gender diversity and CSR strategies to enhance governance and improve financial performance in the Portuguese SME sector.

Keywords: Board Gender Diversity, SMEs, Financial Performance, Corporate Social Responsibility

1. Introduction

The relationship between board gender diversity (BGD) and firm financial performance has become an increasingly significant area of research in corporate governance. With the rising recognition of gender diversity as a key driver of better decision-making, innovation, and governance, several studies suggest that boards with a greater proportion of women tend to exhibit improved strategic oversight, innovation, and enhanced financial performance (Aziz et al., 2025; Pacheco et al., 2025). Theoretical frameworks, such as Agency Theory, posit that gender-diverse boards help reduce agency costs by improving the monitoring of managerial actions and aligning managerial incentives with shareholder interests (Shakil et al., 2024). Despite the growing body of evidence supporting the positive role of gender diversity on firm performance, the relationship remains contentious, with mixed findings reported in the literature. Some studies have found positive correlations between BGD and firm performance, while others report no significant effects or even negative outcomes (Jiang et al., 2021; Lee and Thong, 2023). These inconsistencies suggest that the effects of BGD on financial performance are contingent upon various factors, including industry context, regulatory environment, and corporate culture (Sahu et al., 2025; Abiad et al., 2025; Singhania et al., 2024). Given these discrepancies, a more nuanced understanding of how gender diversity influences firm performance in specific contexts is required.

While the existing literature extensively explores the impact of BGD on corporate performance, there is a significant gap in understanding its influence on SMEs, particularly in Portugal. Most of the research has been focused on large, publicly listed companies, with limited attention given to family-owned SMEs, which represent a substantial part of the Portuguese economy. Family businesses are characterized by unique governance dynamics, such as long-term strategic focus, familial ties, and different decision-making processes, which may shape the impact of gender diversity on firm performance. Furthermore, while Corporate Social Responsibility (CSR) is assumed to enhance firm performance, its moderating role in the

Declarations

All authors declare that they have no conflicts of interest.

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