Green Finance

Green Finance, 7(3): 481–494.
DOI: 10.3934/GF.2025018
Received: 25 March 2025
Revised: 17 July 2025
Accepted: 18 July 2025
Published: 01 August 2025

https://www.aimspress.com/journal/GF

Research article

How does profitability impact the relationship between gender diversity on boards of directors and social performance?

B. Elango*

Management Department, College of Business, Illinois State University, Illinois, USA

* **Correspondence**: Email: elango@ilstu.edu; Tel: +13094385701; Fax: +13094388201.

Abstract: Using upper-echelon theory and the notion of managerial slack as a conceptual base, this study examines the moderating effect of profitability on the relationship of board of directors (BOD) gender diversity with social performance. This study's sample is based on a matched dataset of insurance firms using two reliable sources, namely S&P Global IQ and Refinitiv (now known as LSEG Data & Analytics). We focus on a single industry from a single country as it will allow for a reasonable performance comparison across firms. We use step-wise multiple regression models to test the hypotheses. Our findings indicate that gender-diverse boards are positively related to the social performance of firms. We find the strength of this relationship to vary according to the profitability of the firm. Study findings advance our knowledge of the corporate governance literature on this topic by bringing the notion of managerial discretion into the relationship between BOD diversity and social performance.

Keywords: board of directors; gender diversity; social performance, ESG ratings; firm size; profitability

JEL Codes: D71, D91, G34, G39, M14

1. Introduction

Societal pressure on firms to behave socially responsibly has increased in recent years, a trend that has resulted in investors and the general public closely scrutinizing firms in this regard. Given the overall need for more information on the social activities of firms, many rating companies provide information on firms using ESG ratings, a scoring system wherein E stands for

environmental, S for social, and G for governance. These ratings aim to give a more holistic assessment of corporations by focusing on environmental, social, and governance aspects. Firms and managers spend considerable time and money enhancing their social image by investing in or addressing ESG-related factors. The intensity of public interest in this issue has resulted in many ESG mutual funds/exchange-traded funds (ETFs), which focus on companies with better ESG ratings. Many individual investors emphasize these ESG ratings when picking stocks, while activists call for the divestment by pension funds of firms with poor ESG scores. Firms use this feedback to assess their own ESG initiatives and influence stakeholders on their socially responsible behavior.

Surveys indicate that 88% of investment professionals use ESG ratings in their investment process. Bank of America estimates that about $200 billion was invested in ESG bond funds from 2019 to 2022 (Larcker et al., 2022). In their study, Hartzmark and Sussman (2019) show that funds with high ESG ratings had net positive inflows, while funds with low ESG scores had net negative inflows. The proponents of ESG ratings argue that investment in social objectives reduces a company's risk, as it addresses vital social and societal goals while also benefiting both shareholders and stakeholders (Bear et al. 2010). Additionally, with some caveats, evidence suggests that having higher ESG ratings allow firms to reduce their borrowing costs, minimize negative repercussions during controversies, and potentially enhance corporate and stock performance. Irrespective of the business case for ESG investments, others have also highlighted that firms in a society should fulfill their obligations and expectations and that only such behavior will help them gain legitimacy among stakeholders (Velte, 2022).

The increasing general interest in ESG ratings has not gone unnoticed in academic research. Using such ratings as a proxy for social performance or socially desirable behavior, many studies exist on this topic. Based on these studies, several attempts to synthesize the findings using meta-analytic procedures have been reported in the literature. A consistent theme in the findings of these meta-analytic studies (Wu et al., 2022; Endrikat et al., 2021; Guerrero-Villegas et al., 2018; Byron and Post, 2016) is that board gender diversity (also referred to as board female diversity) is related to positive corporate social responsibility (CSR) outcomes. Given the general consistency in these findings (e.g., Nerantzidies et al., 2022), the importance of a gender-diverse board for desirable social outcomes is well accepted.

While we concur with these overall affirmations, we seek to add to this literature by bringing in the notion of managerial discretion (Finkelstein and Hambrick, 1990). Our core argument is that while a gender-diverse board may facilitate socially responsible behavior, its ability to act in this manner will be limited by the degree of constraints it operates under. Therefore, we believe the amount of financial slack available will restrict the relationship between gender board diversity and CSR outcomes. This is because any firm's board of directors cannot act beyond its financial resource base unless it seeks to be reckless or irresponsible. The importance of slack for socially desirable behaviors can be found in extant literature. For instance, Xu et al. (2015) studied 1299 Chinese firms and found that unabsorbed slack facilitated corporate social performance. We believe this constraint needs to be factored in any assessment of the relationship between BOD gender diversity and social performance, an issue which has not gained enough attention in extant research.

It is worth exploring if the relationship between gender board diversity and CSR outcomes hold when the performance of a firm varies. It is quite possible that boards with gender diversity are generous towards CSR when performance is high, while the reverse could be true when performance is lower. This assertion, though consistent with the notion that the existence of slack offers

managerial discretion, is counter to the assumption that gender-diverse boards always lead to social performance outcomes, and therefore it needs to be verified empirically. Hence, this study seeks to understand how a firm's profitability influences the relationship between BOD gender diversity and social performance.

To accomplish the study's objective, the study sample will be drawn from a single industry, namely the U.S. insurance sector, rather than a cross-section of firms from a spectrum of industries, as it will allow for a reasonable comparison of performance across firms. Given the context of this study, it is critical that the sample is drawn from a single sector, as it is widely known that industries vary in profitability and have unique characteristics which need to be accounted for (Porter, 1980). Additionally, doing so will allow for more variation of firms within the industry and may offer a more realistic estimation of the situation than the standard practice of using the larger public firms in a study sample. Importantly, conventional financial information from the insurance industry is also closely scrutinized by regulatory bodies, providing a greater degree of confidence in the underlying data.

In this paper, we first provide evidence from extant knowledge that gender-diverse board impacts CSR outcomes favorably. More importantly, we extend current knowledge by showing how performance outcomes impact the above relationship. To start, we test the relationship between BOD gender diversity and social performance of firms. Then, we examine whether the degree of profitability and BOD gender diversity will positively impact social performance of firms.

By deciphering how profitability impacts social performance outcomes, this study's findings will allow external and internal stakeholders to understand the parameters board members operate within, providing a better understanding of their socially responsible behavior. This will allow for reasonable expectations by stakeholders and potentially greater trust in corporate governance behavior. This paper's contribution will be helpful to investors, corporate executives, academics, and regulators. It seeks to extend our current understanding by delineating boundary conditions regarding when BOD gender diversity will lead to positive social outcomes, an issue which needs greater attention.

This paper is structured into five parts. The first section provides the introduction and places the paper in the context of the literature. Section 2 reviews previous findings, sets up the theoretical framework for the paper, and develops the study hypotheses. Section 3 presents the sample selection and measures. Section 4 presents the methodology and study results. Section 5, the paper's conclusion, discusses its limitations, summarizes the study findings, and presents implications for research and practice.

2. Conceptual foundations and hypothesis development

The argument for BOD gender diversity impacting ESG outcomes is based on upper echelon theory (Hambrick and Mason, 1984). This theory operates under two assumptions: leaders act on the basis of their personalized interpretations and these interpretations are a function of an individual's life history, personality, and ethos (Hambrick, 2007). The logic of this idea is that leaders of an organization view the world through their own experiences, values, and beliefs. When leaders act on these beliefs, they get reflected in the strategies implemented. The board of directors reflects a critical facet of a company's leadership; therefore, it follows that the board's makeup will have an influence on strategic choices. Researchers (e.g., Boeker, 1997) have shown that the demographic

profile of leaders or leadership teams relates to strategic decisions and outcomes, supporting the premise of upper-echelon theory.

Recently, there has been a call for greater female representation on firms' boards of directors (Burgess and Tharenou, 2002). This call is based on the rationale that female directors differ from male directors in soft skills, experiences, and preferences (Adams, 2016). The argument that female directors bring in different values, leadership roles, and norms that will be reflected in their choices is supported by scholars under three different paradigms. In the first paradigm, gender diversity theories (e.g., social role theory and gender socialization theory) provide a rationale for this assertion. Social role theory (Eagly and Wood, 2012) proposes that men and women behave according to gender-based stereotypes. Such stereotypes pressure women to act in a caring way so that they do not differ from gender roles (Gutek and Morasch, 1982; Galletta, et al. 2022). Typically, females have a more participative leadership style (Eagly et al., 2003), are socially oriented (Burgess and Tharenou, 2002; Ibrahim and Angelidis, 1994), and are more amenable to feedback and investing resources in issues they care about. A similar argument can be made based on gender socialization theory, which suggests that males and females have different viewpoints on ethical issues regarding interaction in their early life experiences (Gilligan, 1982). Additionally, females tend to take greater care and cognizance of others than males (Liu, 2018).

The second argument is based on the notion of the group diversity perspective. Female directors have better attendance records and join monitoring committees (Adams and Ferreira, 2009) and bring diverse information, views, and backgrounds to the board with more creative solutions and a willingness to consider alternate perspectives (Byron and Post, 2016), leading them to make more socially oriented choices. The third argument is based on stakeholder theory, which calls for management accountability to various stakeholders with divergent interests (Liao, Luo, and Tang, Q, 2015), and the belief that women are more concerned about stakeholder welfare (Elango, 2019). Given these differences, it can be argued that female board members are more likely to attend to and invest in stakeholders' border concerns, such as fairness, social, governance, and environmental issues, thus inducing a dynamic toward CSR activities (Harjoto et al., 2015; Seto'-Pamies, 2015; Landry et al., 2016).

Extant literature demonstrates that researchers have tested this assertion and offer empirical support for it. For instance, Adams et al. (2011) find that female directors typically tend to care for the welfare of all people and the environment. Female directors encourage firms to act in a socially and environmentally desirable manner and push firms to disclose more information on CSR practices (Larrieta-Rubín de Celus et al., 2015). Additionally, it has been pointed out that females tend to be more risk-averse compared to males and, therefore, more likely to make choices that reduce information asymmetry, as well as litigation, environmental, and health risks (Wasiuzzaman and Mohammad, 2019). Based on their literature review, Nguyen et al. (2020) claim that boards with female directors are less likely to engage in corporate fraud or aggressive tax strategies and have fewer financial restatements. Studies have reported that female presence on boards leads to better oversight of monitoring of CSR performance (Boulouta, 2013). Many studies have been conducted on the relationship between board female diversity and CSR performance, making it challenging to review all of them. However, one could infer that the general assertion has been supported across four different meta-analyses (Wu et al., 2022; Endrikat et al., 2021; Guerrero-Villegas et al., 2018; Byron and Post, 2016). One of the earliest meta-analyses on this link was conducted by Byron and Post (2016), who found a positive relationship between female board representation and social

performance. Most recently, Wu et al. (2022), based on an analysis of 44 studies from 2010 and 2019, showed that board gender diversity was positively related to CSR performance. Similarly, Endrikat et al. (2021) and Guerrero-Villegas et al. (2018) made analogous conclusions using 82 and 88 studies, respectively, for their analysis. Additionally, it should be noted that these studies also report that the efficacy of the relationship between board gender diversity and CSR performance was contingent on other factors, such as institutions, national, locational, and within-firm governance considerations (Iannuzzi, et al., 2023). Nevertheless, these factors cannot be seen as negating the overall relationship, as one should expect institutional or geographic factors to attenuate or strengthen any relationship based on the underlying context it operates under. Therefore, based on the upper echelon theory, we propose the following:

Hypothesis 1: *BOD gender diversity will positively impact social performance of firms*.

While concurring with the notion that board gender diversity would impact CSR outcomes based on the upper echelon theory and coupled with gender differences, we believe the level of discretion or slack should be factored in while considering this relationship, as noted by Hambrick and Finkelstein (1987) and Finkelstein and Hambrick (1990). Child (1972, page 11) explains slack as "*…The margin or surplus [performance exceeding "satisficing" level] which permits an organization's dominant coalition to adopt structural arrangements which accord with their own …*". Slack offers the freedom for leaders to make choices that reflect their personal preferences. The availability of slack resources can enhance managerial discretion in terms of choices (Cyert and March, 1963; Pfeffer and Salancik, 1978). They argue that managerial discretion is high (i.e., freedom to act to one's preference) when slack resources are available. When a firm's profitability is high, it will be able to meet its regular resource commitments to sustain its critical strategic or operational needs. The leftover or surplus (i.e., slack) resources can be deployed by managers to social causes and issues. Therefore, arguments advanced by Hypothesis 1 will hold good as long as there is administrative freedom to deploy resources for social performance.

However, when a firm's profitability is low, most resources will already be committed. In such instances, organizational freedom to deploy resources will be curtailed (Hambrick and Finkelstein, 1987). Cyert and March (1963) refer to these payments (i.e., allocations) that are required for specific tasks to maintain the support of the more powerful stakeholders. All significant initiatives require resources for implementation, and the lack of resources will bring a need to choose among options (Finkelstein and Hambrick, 1990). After these commitments, the firm may lack resources for other expenditures such as CSR. In instances of poor profitability, there will be extra pressure on the Board of Directors to focus on critical activities that will improve profitability. Under such conditions, predispositions or biases toward CSR become less critical than strategic investments, which are deemed crucial to compete successfully. In such conditions even firms with a gender-diverse BOD will invest less on social performance due to an absence of noncommitted (i.e. surplus) funds. Hence, based on the notion of slack, we argue that the extent of profitability would influence the choices made by a gender-diverse BOD towards social performance and propose the following:

Hypothesis 2: *The interaction between profitability and BOD gender diversity will positively impact social performance of firms*.

3. Research methodology

3.1. *Sample*

The sample for this study is based on insurance firms in the United States. It focuses on a single industry, with performance as its moderating variable. Using a cross-sectional sample of industries, although desirable for sample representativeness, could create unknown confounds in the study for two reasons: significant variations exist in profits across industries (Porter, 1980) and sectors vary in their level of oligopoly present, cost differentials, and the elasticity of demand. These factors will have differential effects on profits, and consequently, standard inferences cannot be made (Levy, 1984). Additionally, the insurance sector is regulated, and governmental bodies usually scrutinize post-audit financial numbers, thus it provides us with greater confidence in the integrity of the financials reported.

This study uses data from two reliable sources which have been used in academic research in several instances, namely Refinitiv for ESGC scores and S&P Global for firm data. Given the focus on insurance firms, we employed the following steps to generate the data. We initially identified all the insurance firms for which Refinitiv had data. Later we merged the Refinitiv results with corresponding firms in the S&P Global database where data was available for the variables of interest. This resulted in a sample of 74 firms from the insurance sector. While one could argue that a larger sample would be more desirable, it should be noted that all firms in this sector for which ESGC data is available are included in the analysis, affording a fair representation of this sector of firms involved in social activities.

3.2. Study variables

The dependent variable social performance is proxied using the ESGC score from Refinitiv, who seeks to transparently and objectively measure a company's relative ESG performance, commitment and effectiveness, based on company-reported data. Refinitiv claims to cover eighty percent of the global market capitalization and uses 630 data points/metrics to compute ESGC scores. These initial 630 data points are aggregated into 186 measures and split into four groups (i.e., environmental, social, governance, and ESG controversy), which are combined to form the ESGC percentile score. Greater methodological details are provided at Refinitiv's corporate website in a 30-page document. Given its integrity, this measure has been extensively used in previous academic research (Clément et.al., 2025), even though some scholars have criticized that there is a size bias in the data (Dobrick et.al, 2023). We highlight this bias as one of the limitations of this study.

The independent variable BOD gender diversity refers to the proportion or number of women on boards of directors (Byron and Post, 2016). We measure BOD gender diversity by dividing the number of female directors by the total number of directors in the firm, which is consistent with previous research. The moderating variable profitability is measured through return on average capital employed (ROACE). This measure captures the profitability of the firm relative to the capital employed and shows how effectively the firm uses its capital resources to generate returns and can be considered a proxy of competitive advantage (Singh and Yadav, 2013). This measure is relevant in the context of this study because insurance firms need to hold capital for potential claims by their policyholders, making ROACE a reasonable estimate of the profitability of such firms. This is

because insurance firms collect premiums in an a priori manner from customers, with the possibility that they will pay the policyholder if some event (e.g., an accident) takes place (Elango, 2023). In line with conventional research practice, this study uses three control variables to reduce confounds which can result from differences in firm size, firm leverage, and insurance industry sub-sector. Consistent with conventional practice in business research, we measure firm size as the log of firm revenue and firm leverage as the debt-equity ratio, as these variables are known to affect managerial choices and firm outcomes. Within the insurance sector, firms could be involved in differing lines of business. Therefore, to control for differences across insurers, we introduce a sub-sector dummy for property-liability firms, where such firms are coded 1, 0 otherwise.

4. Results

Table 1. Descriptive statistics and correlations.

Variable	Mean	Std. Dev.	1	2	3	4	5	VIF
1. BOD Gender Diversity	0.266	0.107	1	0.013	0.305**	−0.113	−0.168	1.138
2. Profitability	7.556	66.349	0.013	1	−0.04	0.378**	0.072	1.192
3. Firm Size	14.623	1.748	0.305**	−0.04	1	−0.226	−0.088	1.156
4. Firm Leverage	0.761	1.389	−0.113	0.378**	−0.226	1	−0.09	1.267
5. SubSector-Dummy	0.460	0.502	−0.168	0.072	−0.086	−0.087	−0.087	1.063

** Correlation is significant at the 0.05 level (2-tailed).

Listwise N=74

Given the nature of the data and hypotheses, we use hierarchical step-wise multiple regression models for our testing. Such models have be used in prior research in such contexts (Bear et al. 2010). The study descriptives and correlations are presented in Table 1. A review of the correlational values and VIF indicate the threat of multicollinearity invalidating the study findings to be minimal. The regression results are shown in Table 2, which presents three models. Model 1 is the control model with three control variables, Model 2 adds the independent variable related to Hypothesis 1, and Model 3 is the complete model which adds the interaction terms to Model 2. In each model tested, F values were significant at the .01 level. The control model had an adjusted R-square of .444%, while Model 2 and Model 3 had adjusted R-square values of .565 and .590, respectively, indicating consistent support for the overall validity of the models tested.

To confirm the stability of the results, we also tested alternative specifications of the main (i.e., full) model, wherein we dropped the dummy variable in the model or added variables that we thought could impact the results. For robustness and to reduce the possibility of endogeneity and reverse causality concerns we employed several supplemental tests. To begin, we used a two-stage instrumental model (Greene, 2018) as an additional test. The instrumental variable we use is group membership, as it meets the exclusion restriction condition based on prior research. After the inclusion of all the variables including controls, we found the results to be the same. Then, we used the performance measure from the year prior (t-1) and reran the models. In both of these cases, we found the results to be similar, leading us to infer that potential endogeneity and reverse causality issues are not likely to impact our results. The stability across the specifications tested gives us confidence in the reported findings.

Table 2. Multi-Regression results with social performance as dependent variable.

Variable	Model 1	Model 2	Model 3
Interaction Term			0.469**
BOD Gender Diversity		0.369***	0.368***
Performance	0.129	1.03	−0.340***
Firm Size	0.678***	0.577***	0.552***
Firm Leverage	0.108	0.141*	0.154*
SubSector-Dummy	−0.082	−0.23	−0.005
R-Square (Adjusted)	0.444	0.565	0.590
F	15.589	19.942	18.479
Significance	***	***	***
Sample N	74	74	74

Interaction Term=BOD Gender Diversity*Performance; Beta Values Represent Standardized Coefficients;
* Significant at the 0.01 level (2-tailed);
** Significant at the 0.05 level (2-tailed); *** Significant at the 0.01 level (2-tailed).

This study used four control variables. Since Model 3 is the model with all variables, we use it to infer the study results. Profitability is insignificant in Model 1 and Model 2 but has a positive loading with social performance. Additionally, the correlation value between BOD gender diversity and profitability was found to be positive (0.013), which is consistent with previous findings reported in the literature (Terjesen et al. 2016). However, in Model 3, it turned negative once the interaction effect is controlled for and is significant with a .1 significance level (coefficient = −0.340; p <= 0.1). This result is not surprising given our expectations with Hypothesis 2. Firm size is consistently significant with social performance across all models and had the highest beta values among the variables tested in Model 3 (coefficient = 0.552; p <= 0.01). Firm leverage is positively related to social performance with a .1 significant level (coefficient = 0.154; p <= 0.1). Therefore, it can be said that larger and leveraged firms have relatively higher social performance. Sub-sector dummy, which was introduced as a control for differences in product line, was insignificant in all the models tested.

Hypothesis 1 proposed that board female diversity would positively affect social performance. This hypothesis was supported in Model 2 and Model 3 with beta loading of 0.369 and 0.368, which is significant at the 0.01 level. Hypothesis 2 proposed that the interactive effect between performance and BOD female diversity will positively impact the ESG scores. As proposed, the interactive term is significant in Model 3 (coefficient = 0.469; p <= 0.01), supporting Hypothesis 2. Therefore, both of the hypotheses proposed in this study are supported by the results found.

We plot the relationship to illustrate this (see Figure 1). The horizontal axis represents BOD Female Diversity, and the vertical axis represents social performance. As seen in the Figure, BOD female diversity is related to social performance in a positive manner irrespective of the level of profitability, as both lines have a positive (upward) slope. However, in instances of high profitability (illustrated by the dashed line), the slope between BOD female diversity and social performance is much steeper relative to instances of lower profitability (illustrated by the continuous line). Stated differently, this indicates that in highly profitable firms, a BOD with a higher level of female diversity has a greater impact on the social performance of firms (and vice-versa).

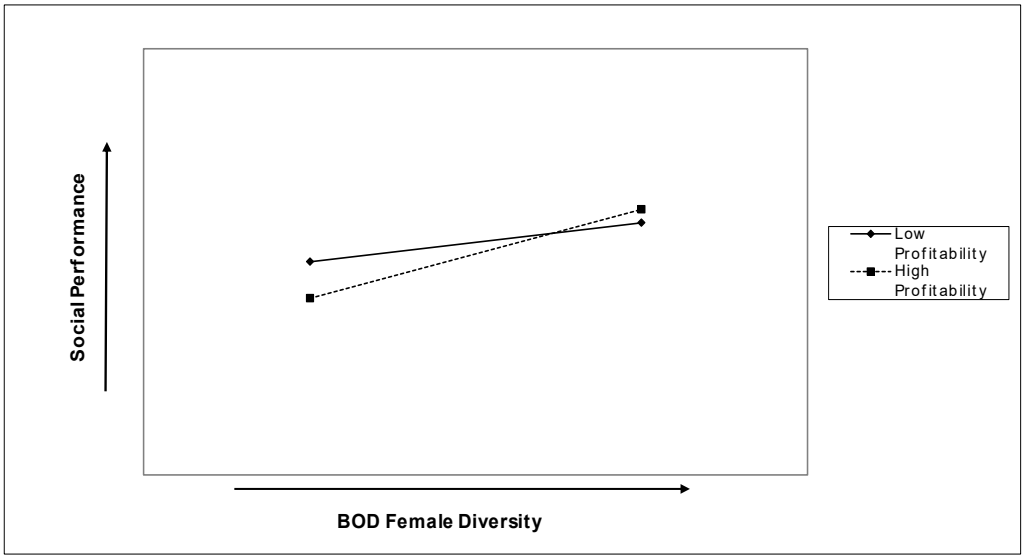

Figure 1. Interactive effect of profitability and BOD female diversity on social performance.

5. Implications for research and practice, limitations and future recommendations, and closing comments

The study, based on upper echelon theory and the notion of managerial slack, proposed two hypotheses, both of which were supported. Overall findings indicate that gender-diverse boards are positively related to the social performance of firms. Relative to most previous research on this topic, we used a single industry sample, as it offers a broader variation in firm size instead of focusing on a cross-section of the largest firms. The replication of previous findings concerning gender-diverse boards and the social performance of firms increases our confidence in this conviction. As argued, we find the strength of this relationship to vary according to the profitability of the firm. When firms have higher profitability, BOD female diversity has a stronger link (i.e., higher slope) with social performance than in a situation of lower profitability. While this paper's argumentation was based on the notion of slack, the findings reported make intuitive sense, as a gender-diverse BOD can invest in social performance only to the extent permitted by surplus resources within the firm. Therefore, this study extends our current understanding of the relationship between BOD gender diversity and social performance by calling for the incorporation of slack, since it offers managerial discretion or freedom to act on social issues. These findings have several implications for research and practice, which are presented in the next section, followed by a discussion of limitations and conclusions.

Implications for research: An important contribution of this study is a demonstration of the need to incorporate the notion of slack as a factor impacting a firm's ability to invest in social performance. Slack offers managers greater discretion, lacking which firms will not have the freedom to invest in social activities in a generous manner. Given this study's findings, we call for researchers to incorporate this dimension in future studies on this topic. In this study's regression models, firm size was strongly related to CSR performance. While this pattern is consistent with prior findings (e.g., Drempetic et al., 2019), it also raises questions. For instance, Drempetic et al. raise the question of the way ESG scores are computed, which gives an advantage to large firms. Larger firms are likely to have an in-house infrastructure (i.e., office, manpower, and budget) to address and highlight facts

related to ESG and offer information to rating agencies. This is a luxury which smaller firms may not have.

The study's findings should also increase the confidence of all stakeholders in how firms with gender-diverse boards deploy resources. We show that a firm's profitability could provide greater latitude due to slack, thereby increasing strategic freedom while deploying firm resources. When firms have higher performance, they seem to be more willing to invest more in social performance (and vice versa). The role played is commendable to a certain extent, as multiple stakeholders' claims need to be balanced. While it is possible that gender-diverse boards lean toward ESG issues, they also cannot ignore their primary fiduciary duty to their firm's primary stakeholders. Given these competing claims, spending more on ESG issues during periods of higher profitability and spending less on ESG issues during periods of lower profitability is a viable tradeoff, considering the exigencies of capitalism. This finding indicates that the intent and action of "doing good" and higher profitability are linked together. It also provides exciting avenues for future research, which we hope stimulates further interest and studies on this topic.

Implications for practice: This leads to a pragmatic query of how the BOD can manage stakeholders who might be dissatisfied with the choices made to invest less in social performance during periods of lower profitability. Harrison et al. (2010) suggest that justice and fairness should be core principles in addressing such a situation. They recommend employing the distributional justice perspective to ensure that affected stakeholders see that choices made are fair relative to other disaffected stakeholders. They also suggest that the perception of fairness is likely to prevail when there is reciprocity between both parties, as it is a universally accepted moral norm (Donaldson and Dunfee, 1994). Reciprocity may be facilitated in three ways: general, reciprocal, and negotiated exchanges (Harrison et al., 2010). Applying Harrison et al. (2010) in this context, several recommendations can be offered which could apply to BOD members of both genders. The BOD might first recognize the claims of the stakeholders and the importance of addressing them. Then it could explain this through meetings and by sharing information on the decision-making process, showing that when there is high profitability, choices are made differently compared to situations of low profitability. Alternatively, the BOD could offer assurances that if specific performance targets are achieved, more significant allocations will be made for social performance. BOD members need to hear the voices and interests of stakeholders and show respect in the interactions. This is because affected stakeholders are impacted by the quality of interactions. The goal is to get stakeholders to see fairness in procedures and processes as advocated by the procedural justice perspective (Lind and Tyler, 1988), even though they may not see the entire allocation as fair.

Limitations and future recommendations of the study: We acknowledge several limitations in this study, which readers must be cognizant of. First, this study is driven by secondary data, and therefore we are limited by what is available publicly. Additionally, in line with most studies on this topic, we proxy social performance through ESG scores. For instance, the sample used consists of public firms that have been rated for ESG by Refinitiv. The usage of secondary data and ESG scores bias the sample to the larger firms, and therefore expanding the study findings to small firms is not advisable. Second, this study focuses on a single industry, which affords variability in firm size within the industry and greater reliability in the secondary data, but limits sample size. Therefore, caution must be taken when extrapolating to other industries. Replication of this study with other industries and large samples would be desirable. Third, recent decades have seen a period of increased interest in and scrutiny of ESG behavior of companies. While this trend is desirable, it is

unclear if the relationships tested will hold good after firms reach a certain threshold level. Replicating the study findings in other contexts and time periods could alleviate some of these concerns.

In conclusion, this study's findings offer insights into how profitability impacts the relationship between gender-diverse boards and social performance. This study extends our current knowledge and offers an important value addition in our understanding of the relationship between gender-diverse boards and social performance by adding firm profitability as a caveat.

Data Availability Statement

The data that support the findings of this study are from two commercial sources, S&P Global IQ and Refinitiv. Restrictions apply to the distribution of these data, which were used under license for this study. The author does not have permission to facilitate the data sharing.

Use of AI tools declaration

The author declares not to have used Artificial Intelligence (AI) tools in the creation of this article.

Acknowledgment

The Katie School of Insurance Research Grant Program funded this project. The findings reported and the views expressed in this research are those of the author and do not necessarily reflect the position of Katie Insurance School.

Conflict of Interest

The authors declare no conflict of interest.

References

Adams RB (2016) Women on boards: The superheroes of tomorrow? *Leadership Quart* 27: 371–386. https://doi.org/10.1016/j.leaqua.2015.12.007

Adams RB, Ferreira D (2009) Women in the boardroom and their impact on governance and performance. *J Financ Econ* 94: 291–309. https://doi.org/10.1016/j.jfinec.2008.10.007

Adams RB, Gray S, Nowland J (2011) Does Gender Matter in the Boardroom? Evidence From the Market Reaction to Mandatory New Director Announcements. *Available at SSRN*. https://dx.doi.org/10.2139/ssrn.1953152

Bear S, Rahman N, Post C (2010) The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *J Bus Ethics* 97: 207–221. https://doi.org/10.1007/s10551-010-0505-2

Boeker W (1997) Strategic change: The influence of managerial characteristics and organizational growth. *Acad Manage J* 40: 152–170. https://psycnet.apa.org/doi/10.2307/257024

Boulouta I (2013) Hidden connections: The link between board gender diversity and corporate social performance. *J Bus Ethics* 113: 185–197. https://doi.org/10.1007/s10551-012-1293-7

Burgess Z, Tharenou P (2002) Women board directors: Characteristics of the few. *J Bus Ethics* 37: 39–49. https://doi.org/10.1023/A:1014726001155

Byron K, Post C (2016) Women on boards of directors and corporate social performance: A meta-analysis. *Corp Gov-Int J Bus S* 24: 428–442. https://doi.org/10.1111/corg.12165

Child J (1972) Organizational structure, environment and performance: The role of strategic choice. *Sociology* 6: 1–22. https://doi.org/10.1177/003803857200600101

Clément A, Robinot É, Trespeuch L (2025) The use of ESG scores in academic literature: a systematic literature review. *J Enterp Communities* 19: 92–110. https://doi.org/10.1108/JEC-10-2022-0147

Cyert RM, March JG (1963) *A Behavioral Theory of the Firm*. Prentice-Hall.

Drempetic S, Klein C, Zwergel B (2020) The influence of firm size on the ESG score: Corporate sustainability ratings under review. *J Bus Ethics* 167: 333–360. https://doi.org/10.1007/s10551-019-04164-1

Dobrick J, Klein C, Zwergel B (2023) Size bias in Refinitiv ESG data. *Financ Res Lett* 55: 104014. https://doi.org/10.1016/j.frl.2023.104014

Donaldson T, Dunfee TW (1994) Toward a unified conception of business ethics: Integrative social contracts theory. *Acad Manage Rev* 19: 252–284. https://doi.org/10.2307/258705

Eagly AH (1987) *Sex Differences in Social Behavior: A Social-Role Interpretation*. Erlbaum.

Eagly AH, Wood W (2012) Social role theory. In: P.A.M. Van Lange, A.W. Kruglanski, & E.T. Higgins (Eds.), *Handbook of Theories of Social Psychology,* 2: 458–476. SAGE Publications. https://doi.org/10.4135/9781446249222.n49

Elango B (2019) When do women reach the top spot? A multilevel study of female CEOs in emerging markets. *Manage Decis* 57: 2344–2357. https://doi.org/10.1108/MD-11-2017-1147

Elango B (2023) Do gender-diverse boards lead to selection of female CEOs: a study of life insurance firms in the USA. *Int J Bus Gov Ethics* 17: 279–292. https://doi.org/10.1504/IJBGE.2023.130090

Endrikat J, De Villiers, C, Guenther TW, et al (2021) Board characteristics and corporate social responsibility: A meta-analytic investigation. *Bus Soc* 60: 2099–2135. https://doi.org/10.1177/0007650320930638

Finkelstein S, Hambric DC (1990) Top-management-team tenure and organizational outcomes: The moderating role of managerial discretion. *Admin Sci Q* 35: 484–503. https://doi.org/10.2307/2393314

Galletta S, Mazzù S, Naciti V, et al. (2022) Gender diversity and sustainability performance in the banking industry. *Corp Soc Resp Environ Manage* 29: 161–174. https://doi.org/10.1002/csr.2191

Gilligan C (1982) *In a Different Voice: Psychological Theory and Women's Development.* Cambridge, Mass: Harvard University Press.

Greene WH (2018) Econometric analysis. 2018.

Gutek BA, Morasch B (1982) Sex-ratios, sex-role spillover, and sexual harassment of women at work. *J Soc Issues* 38: 55–74. https://doi.org/10.1111/j.1540-4560.1982.tb01910.x

Guerrero-Villegas J, Pérez-Calero L, Hurtado-González JM, et al. (2018) Board attributes and corporate social responsibility disclosure: A meta-analysis. *Sustainability* 10: 4808. https://doi.org/10.3390/su10124808

Hambrick DC (2007) Upper echelons theory: An update. *Acad Manage Rev 32*: 334–343. https://www.jstor.org/stable/20159303

Hambrick DC, Finkelstein S (1987) Managerial discretion: A bridge between polar views of organizational outcomes. *Res Organ Behav* 9: 369–406.

Hambrick DC, Mason PA (1984) Upper echelons: The organization as a reflection of its top managers. *Acad Manage Rev* 9: 193–206. https://doi.org/10.2307/258434

Harjoto M, Laksmana I, Lee R (2015) Board diversity and corporate social responsibility. *J Bus Ethics* 132: 641–660. https://www.jstor.org/stable/24703556

Harrison JS, Bosse DA, Phillips RA (2010) Managing for stakeholders, stakeholder utility functions, and competitive advantage. *Strategic Manag J* 31: 58–74. https://doi.org/10.1002/smj.801

Hartzmark SM, Sussman AB (2019) Do investors value sustainability? A natural experiment examining ranking and fund flows. *J Financ* 74: 2789–2837. https://doi.org/10.1111/jofi.12841

Iannuzzi AP, Dell'Atti S, D'Apolito E, et al. (2023) Nomination committee characteristics and exposure to environmental, social and governance (ESG) controversies: Evidence from European Global Systemically Important Banks. *Corp Gov-Int J Bus S* 23: 1314–1338. https://doi.org/10.1108/cg-03-2022-0119

Ibrahim NA, Angelidis JP (1994) Effect of board members gender on corporate social responsiveness orientation. *J Appl Bus Res* 10: 35–40. https://doi.org/10.19030/jabr.v10i1.5961

Larcker DF, Tayan B, Watts EM (2022) Seven myths of ESG. *Eur Financ Manage* 28: 869–882. https://doi.org/10.1111/eufm.12378

Landry EE, Bernardi RA, Bosco SM (2016) Recognition for sustained corporate social responsibility: Female directors make a difference. *Corp Soc Resp Env Manag* 23: 27–36. https://doi.org/10.1002/csr.1358

Larrieta-Rubín de Celis I, Velasco-Balmaseda E, Fernández de Bobadilla S, et al. (2015) Does having women managers lead to increased gender equality practices in corporate social responsibility? *Bus Ethics* 24: 91–110. https://doi.org/10.1111/beer.12081

Levy DT (1984) Variation in the Concentration-Profit Relationship across Industries. *South Econ J* 51: 267–273. https://doi.org/10.2307/1058338

Liao L, Luo L, Tang Q (2015) Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *British Account Rev* 47: 409–424. https://doi.org/10.1016/j.bar.2014.01.002

Lind EA, Tyler TR (1988) *The Social Psychology of Procedural Justice*. Springer Science & Business Media.

Liu C (2018) Are women greener? Corporate gender diversity and environmental violations. *J Corp Financ* 52: 118–142. https://doi.org/10.1016/j.jcorpfin.2018.08.004

Nerantzidis M, Tzeremes P, Koutoupis A, et al. (2022) Exploring the black box: Board gender diversity and corporate social performance. *Financ Res Lett* 48: 102987. https://doi.org/10.1016/j.frl.2022.102987

Nguyen THH, Ntim CG, Malagila JK (2020) Women on corporate boards and corporate financial and non-financial performance: A systematic literature review and future research agenda. *Int Rev Financ Anal* 71: 101554. https://doi.org/10.1016/j.irfa.2020.101554

Pfeffer J, Salancik GR (1978) *The External Control of Organizations: A Resource Dependence Perspective*. Harper & Row.

Porter ME (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press.

Setó-Pamies D (2015) The relationship between women directors and corporate social responsibility. *Corp Soc Resp Env Manage* 22: 334–345. https://doi.org/10.1002/csr.1352

Singh J, Yadav P (2013) Return on capital employed-A tool for analyzing profitability of companies. *Int J Techno-Manage Res* 1: 1–13.

Tantalo C, Priem RL (2016) Value creation through stakeholder synergy. *Strategic Manage J* 37: 314–329. https://doi.org/10.1002/smj.2366

Terjesen S, Couto EB, Francisco PM (2016) Does the presence of independent and female directors impact firm performance? A multi-country study. *J Manage Gov* 20: 447–483. https://doi.org/10.1007/s10997-014-9307-8

Velte P (2022) Meta-analyses on corporate social responsibility (CSR): A literature review. *Manage Rev Q* 72: 627–675. https://doi.org/10.1007/s11301-021-00211-2

Wasiuzzaman S, Wan Mohammad WM (2020) Board gender diversity and transparency of environmental, social and governance disclosure: Evidence from Malaysia. *Manag Decis Econ* 41: 145–156. https://doi.org/10.1002/mde.3099

Wu Q, Furuoka F, Lau SC (2022) Corporate social responsibility and board gender diversity: A meta-analysis. *Manage Res Rev* 45: 956–983. https://doi.org/10.1108/MRR-02-2021-0136

Xu E, Yang H, Quan JM, et al. (2015) Organizational slack and corporate social performance: Empirical evidence from China's public firms. *Asia Pac J Manag* 32: 181–198. https://doi.org/10.1007/s10490-014-9401-0

AIMS Press