

RESEARCH ARTICLE

Does board gender diversity improve the welfare of lesbian, gay, bisexual, and transgender employees?

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Abstract

This paper focuses on two of the highly debated social issues corporations that are pressured to address—gender equality and workplace discrimination. Countries around the world mandate gender quotas on corporate boards to facilitate firms in addressing the issue of gender equality and anti-discrimination legislations to address workplace discrimination. Gender diversity on the corporate boards can sway the board toward addressing more to the society and the environment—the external stakeholders of the firm. However, firms' social responsibilities extend to the internal stakeholders. We explore the effect female directors on corporate policies regarding a group of internal stakeholders—lesbian, gay, bisexual, and transgender (LGBT) employees and find firms with gender diverse boards that are more likely to adopt LGBT-supportive policies. Our findings are consistent with the social role theory. Hence, firms should promote board gender diversity to encourage and facilitate inclusive workplace environment, eventually leading to sustainability in firms.

KEYWORDS

board gender diversity, corporate governance, female director, LGBT-supportive, social role theory

JEL CLASSIFICATION

G34; G39

1 | INTRODUCTION

Gender equality is a century-long social issue, which is still outstanding. In the corporate world, the gender pay gap and glass ceiling are two of the most prevalent issues that have caught media, academic, and political attention regularly. A survey conducted by Deloitte shows that Fortune 500 companies have 22.5% female representation on their board in 2018, an increase from 15.7% in 2004 (Deloitte, 2018). To address society's demand, legislators began to introduce a gender quota on corporate boards, pioneered by Norway in 2003 and subsequently introduced by many other countries around the world.

As board decisions and the resulting corporate policies are not gender neutral, board gender diversity (BGD) has implications for

firms. Female directors bring to the boardroom diversity in demographic characteristics (Ahern & Dittmar, 2012), experience and expertise (Terjesen & Singh, 2008), and personal traits such as risk aversion (Croson & Gneezy, 2009). Female directors' disposition toward the welfare of wider stakeholders is reflected in the decisions the boards have made (Adams et al., 2011; Gangi et al., 2021; Gilligan, 1977; Groysberg & Bell, 2013; Rehman et al., 2020). Studies have found empirical evidence that BGD has positive influence on corporate policies that promote responsible corporate actions toward the wider external stakeholders, such as the environment, social, community, and so forth (Pucheta-Martínez et al., 2020; DellaVigna et al., 2013; Adams & Funk, 2012; Schwartz & Rubel, 2005). In addition, gender diverse boards communicate more transparent and reliable information to the external stakeholders (Beasley, 1996;

Buertey, 2021; Evgeniou & Vermaelen, 2017; Khan et al., 2020; Kyaw et al., 2015; Lai et al., 2017; Pucheta-Martínez et al., 2020; Velte, 2018) and are more sensitive to social and ethical issues (Andreoni & Vesterlund, 2001; Bear et al., 2010; Hafsi & Turgut, 2013; Isidro & Sobral, 2015). Conclusively, evidence highlights that corporate social performance, that is, addressing firms' responsibilities toward the environment, social, and community issues, is positively associated with BGD (Amorelli & Garcia-Sanchez, 2021; Burkhard et al., 2020; Kassinis et al., 2016; Martinez et al., 2020; Orazalin & Baydauletov, 2020; Provasi & Harasheh, 2021; Veltri et al., 2021; Yasser et al., 2017). Often, decisions regarding social responsibilities are associated with firm's reputation (Bear et al., 2010), competitive advantage (McGuinness et al., 2017), and, consequently, financial performance (Liu et al., 2014; Provasi & Harasheh, 2021; Rehman et al., 2020).

Nevertheless, there is scant evidence on how BGD attends to the other groups of internal stakeholders, in particular, the employees, who also are subject to workplace discrimination. This paper addresses this issue. Specifically, this paper focuses on the employee group that is gaining increasing attention in the world—lesbian, gay, bisexual, and transgender (LGBT) employees. Although companies increasingly pay more attention to policies against discrimination (Birindelli et al., 2019; Ciocirlan & Pettersson, 2011; Parizek & Evangelinos, 2021), especially on the basis of sexuality (Fontana, 2020; Sinicropi & Cortese, 2020), there is yet more to be done. As female directors bring their personality traits to the boardroom, which endows the board, gender diverse boards are, thus, better equipped to deliberate on issues that are considered unpalatable or, in some cases, overlooked by all-male boards. Recently, Kyaw, Treepongkaruna, and Jiraporn (2021) show that companies that have inclusive policies, such as LGBT-supportive policies, exhibit improved employee commitments, better alignment of employees' interests to the owners, and higher innovation, all of which are critical for a firm to be sustainable. We posit that gender diverse boards are more inclined to adopt inclusive policies in firms. In other words, by addressing gender diversity on the board, firms are better equipped to mitigate other forms of workplace discrimination in firms.

The paper proceeds as follows: Section 2 describes the theoretical background for the study and develops hypotheses; Section 3 explains the sample, methodology, and variables used in the study; Section 4 provides the analyses and discusses the findings, whereas Section 5 discusses the conclusions.

2 | THEORETICAL BACKGROUND AND HYPOTHESES

2.1 | Female directors—Inclusive corporate policies

There are two main theories indicating that gender diversity can contribute to elevated social performance: resource dependency and social role theory.

According to resource dependency theory, female directors can enrich the resources available to a board in its decision making. Hambrick and Mason (1984) and Carpenter (2002) explain that the cognitive frame of the directors, regarding information seeking and evaluation processes, is contingent on their knowledge and experiences. That is, decision-makers' knowledge and experience could shape how directors seek and interpret information, and, consequently, the board's decisions. As female directors bring different cognitive frames to the board due to their differences in experience and knowledge, this can expand the pool of knowledge and experience within the board. Thus, female directors bring a fresh outlook on complex issues and assist in correcting the informational biases in strategy formulation and problem solving (Francoeur et al., 2008). Consequently, gender diverse boards are better positioned toward addressing complex issues and making comprehensive decisions.

Social role theory describes how different genders perceive ethical decision making (Eagly, 1987). Female perception of ethical business practices differs from that of their male counterparts, and the difference is greater in nonfinancial issues than in financial ones. Furthermore, compared with males, females tend to exhibit a greater philanthropy and community service (Groysberg & Bell, 2013), being more compassionate and less materialistic (Beutel & Marini, 1995) and more receptive to social and community needs and ethical issues (Adams & Funk, 2012; Bear et al., 2010; Isidro & Sobral, 2015). Thus, inclusion of females on corporate boards is expected to persuade the board more toward addressing social needs and ethical issues. In the context of this study, it means that female directors are more likely to address nonfinancial issues, such as in formulation of corporate policies toward welfare of the employees, differently from male directors. This together with female tendency to being more sensitive toward the needs of society and the community suggests that females are more inclined toward addressing the needs of a wider group of stakeholders. Consequently, female representation on corporate boards will steer the boards toward decision making that takes on a broader range of perspectives. This suggests that gender diverse boards are more likely to formulate policies that will address the welfare of the employees than other boards. Empirical evidence to date is generally supportive of the social role theory. Gender diverse boards exhibit better philanthropic performance (Wang & Coffey, 1992) and social performance (Bear et al., 2010; Harjoto et al., 2015; Kyaw et al., 2017). In addition, empirical accounts also suggest a strong connection between BGD and firms' policy regarding corporate social responsibilities (Grosser & Moon, 2005). Besides, as social role theory would have anticipated, studies find no clear evidence that female directors have a positive effect on firm financial performance (see, e.g., Erhardt et al., 2003; Luckerath-Rovers, 2013; Mahadeo et al., 2012). Nevertheless, addressing stakeholders' concerns has a clear link to improved reputation (Bear et al., 2010), relative competitive advantage (McGuinness et al., 2017), and higher return on assets and return on sales (Liu et al., 2014). Furthermore, studies show that socially responsible firms experienced a less negative shock in the equity market following the 9/11 terrorist attack (Ongsakul et al., 2021) and lower stock price crash risk (Kim et al., 2014), all of



which indicate a positive association between social performance and sustainable financial performance.

The empirical studies to date, however, have focused on the connection between BGD and firms' responsibilities toward stakeholders external to the firms—the environment, customers, suppliers, community, shareholders, and so forth. However, there is scant evidence on how gender diverse boards address the issues related to their employees—the largest group of internal stakeholders. Given the discussions above, we hypothesize that:

Hypothesis 1. *gender diverse boards address better the issues related to their employee.*

2.2 | LGBT-supportive policy

The group of employees that is gaining increasing attention worldwide among the regulators and businesses in the recent years is the LGBT-employee group. Since the implementation of the Employment Non-discrimination Act of 2013, with the top executives of some Fortune 500 companies coming out about their sexual orientation (Tim Cook, CEO of Apple and Peter Thiel, co-founder of Paypal), LGBT-supportive legislation has taken center stage as one of the main factors that can improve firm competitiveness and profitability (Pichler et al., 2018). Studies find a positive connection between LGBT-supportive strategy and business-related results in the areas of greater job commitment, improved health outcomes, increased job satisfaction, improved workplace relationships, and increased productivity (Badgett et al., 2013).

Thus, LGBT-supportive arrangements empower the workplace, which, in turn, develops an organization as a “preferred workplace” (Cordes, 2012). Furthermore, performance improvements through reception of LGBT-supportive strategy include: lower employee turnover and better worker enrollment (Matcalf & Rolfe, 2011), and more accepting workplace, all of which empower workers as well as the organizations (Ragins et al., 2007; Ragins & Cornwell, 2001). Through examining loan evaluations, Chintrakarn et al. (2020) found that organizations with LGBT-steady arrangements have better credit rating scores.

In addition, human resources are one of the key factors that can improve firm sustainability (Becker & Gerhart, 1996; Huselid et al., 1997). The manner in which they are managed is an important factor for firms that depend significantly on knowledge-based work (Barney & Wright, 1997). Faleye and Trahan (2011) and Kyaw, Treepongkaruna, and Jiraporn (2021) found that support for LGBT employees is correlated with firm performance for those that require talented workers, which is estimated by the commitment in R&D activities. Explicit human resource policy, such as LGBT-supportive policy, is the key factor that will enhance competitive strength when linked appropriately to the firm's competencies or strengths. High commitment in R&D activities is essential for the firms to develop sustainably. Thus, LGBT-supported policies can contribute to sustainability in firms.

Despite the increasing empirical evidence on the financial and non-financial benefits associated with LGBT employees, relatively little is known about what a firm can do to support this group of employees. However, if a firm was to nurture a work environment and take steps toward mitigating workplace discrimination based on sexuality, it has to start at the top—the directors. Female directors are particularly suited for this purpose due to their predisposition toward addressing the needs of a wider group of stakeholders (social role theory). This together with the resources and perspectives female directors bring to the boardroom (resource theory), we postulate that:

Hypothesis 2. *gender diverse boards are more likely to support adoption of LGBT-supportive policies.*

3 | SAMPLE AND DATA DESCRIPTION

We draw data from various databases. First, for our key variable of interest, Kinder, Lydenberg, and Domini (KLD) Research and Analytics, Inc., the database provides a data item on the presence of LGBT-supportive policies in firms. It is an indicator variable that takes on value 1 if a firm has adopted LGBT-supportive policies, which are policies that are beneficial to the firm's homosexual employees. LGBT-supportive policies range from employee benefits to their partners to a clear-cut policy against any discrimination focusing on sexual orientation (Chintrakarn et al., 2020).

Board characteristics are drawn from the RiskMetrics database. For accounting information and financial market information, we collect data from COMPUSTAT and CRSP, respectively. Our sample covers the period of 1998–2009 with a total of 5627 firm-year observations from 1014 unique firms (unbalanced panel data).¹

3.1 | Main variables of interest

Two main variables of interest are LGBT-supportive policies and percentage of female directors on the board. LGBT supportive is a dummy variable, setting to 1 if firms adopt inclusive policies toward their gay and lesbian employees and 0 otherwise. Percentage of female directors on the board is the ratio of number of female directors to board size.

3.2 | Control variables

To control firm-specific characteristics, we include the following control variables: leverage (total debt/total assets), profitability (EBIT/total assets), investments (capital expenditures/total assets), sales, free cash flow divided by total assets, sales growth rate (current sales divided by sales in previous year), Tobin's q, and corporate social responsibility (CSR) score. Furthermore, we also control two traditional measures of board effectiveness, that is, board independence

(the percentage of independent directors on the board to total board size) and board size, along with the average age of directors.

3.3 | Descriptive statistics

Table 1 reports summary statistics of all variables included in this study. On average, 22% of our sample adopts gay-friendly policies, and 73% has female directors on the board of directors. However, the proportion of female directors on the board is only 11% of the overall observations, whereas percentage of independent directors is much higher at 72%. The average board size is 9.3 directors with average age of 61.4 years. We also report other firm characteristics in Table 1.

4 | ESTIMATIONS AND RESULTS

To investigate the effect of female directors on the adoption of LGBT-supportive policies (Hypothesis 2), we specify regression below.

$$\text{LGBT-supportive policy}_{it} = \alpha + \beta_1 \% \text{female director}_{it} + \sum \beta_n \text{Controls}_{it} + \sum \text{Year effect} + \sum \text{Industry effect} + \varepsilon_{it}, \quad (1)$$

where the presence of LGBT-supportive policies for firm i and year t is the dependent variable. Our key variable of interest is percentage

of female directors on the board. Controls include general firm characteristics, governance, and corporate social responsibility variables as specified in Section 3. Equation (1) is estimated as probit and logistic regressions. Results are summarized in Models 1 and 2 of Table 2, respectively. Furthermore, Models 3 and 4 of Table 2 control omitted variables by including L.LGBT, which is the lagged value of dependent variable. All models in Table 2 include year dummies and industry (two-digit SIC) dummies. The SEs are clustered at firm level. Overall, we find significant positive relation between the percentage of female directors on the board and the likelihood of firm adopting the LGBT-supportive policies. Coefficients for our variable (percentage of female directors) are positive and statistically significant at 1% level in all four models. This indicates that the higher the percentage of female directors on the board, the more likelihood of the board adopting LGBT-supportive policy. From logistic regressions in Models 1 and 3, we can estimate the probability that a firm will adopt LGBT-supportive policy. The row dy/dx in the table reports the probabilities and the corresponding z-statistics. For instance, the value 0.131 in row dy/dx in column Model 3 indicates the probability that a firm will adopt LGBT-supportive policy increases for a 1% increase in female representation on the board.

The propensity score matching analyses reported in Table 3 confirms the results in Table 2. Here, we first estimate the propensity score (the probability of likeness) between the treated group (firms with one or more female directors on the board) to rest of firms (firms with no female director on the board) based on year, industry,

TABLE 1 Summary statistics

	N	Mean	SD	Min	Max
Lesbian, gay, bisexual, and transgender (LGBT)	5627	0.224	0.417	0.000	1.000
Percentage of female director	5627	0.111	0.090	0.000	0.600
CSR	5627	-0.525	1.862	-9.000	7.000
Ln_board size	5627	2.234	0.263	1.386	2.996
Percentage of independent director	5627	0.722	0.151	0.100	1.000
Average age	5627	4.118	0.062	3.792	4.337
FCF/TA	5627	0.095	0.075	-0.455	0.516
Sales	5627	7.814	1.458	3.776	12.457
EBITA/TA	5627	0.140	0.093	-0.319	0.833
Tobin's q	5627	2.026	1.390	0.533	23.077
Leverage	5627	0.217	0.164	0.000	1.326
Investment	5627	0.050	0.047	0.000	0.484

Note: Percentage of female director is the number of female directors divided by board size. LGBT is a dummy variable indicating 1 for firms adopting notably progressive policies toward its gay and lesbian employees and 0 otherwise. Tobin's q represents MV over BV of the firm. Sales represent natural logarithm of annual sales. FCF/TA represents free cash flow divided by total assets. Leverage represents total debts divided by total assets. Investment represents capital expenditure divided by total assets. Investment is capital expenditure divided by total assets. Percentage of independent directors is the number of independent directors divided by board size. Board size represents the total number of directors on board. EBITA/TA is earnings before interest and tax divided by total assets. Average age represents natural logarithm of directors' average age. CSR represents summation of all KLD scores, except for diversity and governance. Economic uncertainty represents economic policy uncertainty index (EPU index), developed by Baker, Bloom, and Davis (2016).

**TABLE 2** Effect of female directors on the adoption of lesbian, gay, bisexual, and transgender (LGBT)-supportive policies

	Model 1 Logit	Model 2 Probit	Model 3 Logit	Model 4 Probit
Percentage of female directors	0.0232*** (0.00840)	0.0132*** (0.00464)	0.0292*** (0.00877)	0.0130*** (0.00415)
L.LGBT			6.069*** (0.279)	3.258*** (0.119)
CSR	0.225*** (0.0415)	0.133*** (0.0236)	0.173*** (0.0515)	0.0944*** (0.0241)
Board size	0.116 (0.400)	0.0282 (0.222)	0.167 (0.374)	0.0981 (0.180)
Percentage of independent directors	0.0145*** (0.00527)	0.00775*** (0.00287)	0.0150** (0.00610)	0.00628** (0.00275)
Average age	-0.996 (1.356)	-0.433 (0.719)	0.647 (1.470)	0.353 (0.680)
FCF/TA	3.220*** (1.167)	1.780*** (0.619)	3.024* (1.810)	1.497* (0.833)
Sales	1.138*** (0.0921)	0.632*** (0.0489)	0.681*** (0.0885)	0.328*** (0.0439)
EBITDA/TA	-6.099*** (1.308)	-3.553*** (0.668)	-3.483** (1.483)	-1.815*** (0.671)
Tobin's q	0.313*** (0.0665)	0.174*** (0.0348)	0.216*** (0.0599)	0.112*** (0.0300)
Leverage	-1.273* (0.670)	-0.678** (0.339)	-0.464 (0.624)	-0.189 (0.288)
Investment	-6.547** (2.723)	-3.440** (1.442)	-6.730*** (2.545)	-3.111** (1.211)
Constant	-8.564 (5.680)	-5.108* (3.027)	-14.29** (6.179)	-7.140** (2.875)
Year fixed effect	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes
Observations	5337	5337	3928	3928
R-squared	0.3413	0.3371	0.7019	0.701
dy/dx	0.263 (z-value: 2.8)		0.131 (z-value: 3.1)	

Note: The table reports probit and logistic regressions, where LGBT-supportive is dependent variable. Key variable of interest is percentage of female directors. Percentage of female directors is the number of female directors divided by board size. LGBT is a dummy variable indicating 1 for firms adopting notably progressive policies toward its gay and lesbian employees and 0 otherwise. Tobin's q represents MV over BV of the firm. Sales represent natural logarithm of annual sales. FCF/TA represents free cash flow divided by total assets. Sales growth rate represents current sales divided by sales in previous year. Leverage represents total debts divided by total assets. Investment represents capital expenditure divided by total assets. Investment is capital expenditure divided by total assets. Percentage of independent directors is the number of independent directors divided by board size. Board size represents the total number of directors on board. EBITA/TA is earnings before interest and tax divided by total assets. Average age represents natural logarithm of directors' average age. CSR represents summation of all KLD scores, except for diversity and governance. Models 3 and 4 control omitting variables by including L.LGBT, which is the lagged value of dependent variable. All models include year dummies and industry (two-digit SIC) dummies. The SEs, adjusted for clustering at the firm level, are reported in parentheses.

*represents statistical significance at the 10% level.

**represents statistical significance at the 5% level.

***represents statistical significance at the 1% level.

general firm characteristics, governance structure, and corporate social responsibility performance. Equation (2) specifies the estimation model.

$$\text{propensity score}_{it} = \alpha + \sum \beta_n \text{firm characteristics}_{it} + \sum \zeta_j \text{corporate governance}_{it} + \Omega \text{corporate social responsibility}_{it} + \sum \text{Year effect} + \sum \text{Industry effect} + \varepsilon_{it}, \quad (2)$$

TABLE 3 Propensity score matching analysis of the effect of female directors on the adoption of lesbian, gay, bisexual, and transgender (LGBT)-supportive policies

Model 5 PSM				
CSR	0.0614*** (0.01520)			
Board size	2.3818*** (0.11367)			
Percentage of independent directors	0.0178*** (0.00163)			
Average age	-2.1991*** (0.37546)			
FCF/TA	-0.2212 (0.42735)			
Sales	0.2500*** (0.02181)			
EBITDA/TA	0.8205*** (0.34629)			
Tobin's q	-0.0082 (0.01850)			
Leverage	0.1068 (0.15047)			
Investment	-1.6228*** (0.60051)			
Constant	0.3769*** (1.72164)			
Year fixed effect	Yes			
Industry fixed effect	Yes			
Observations	5.576***			
Pseudo R2	0.3409***			
Average treatment effect		Common		
	Controls	Difference	Controls	Difference
Unmatched	0.0951	0.1748***(0.01227)	0.0951	0.1748***(0.01227)
ATT	0.1908	0.0792***(0.03055)	0.1944	0.0699***(0.03035)

Note: The table reports propensity score matching analyses, where LGBT-supportive is dependent variable. Key variable of interest is percentage of female directors. Percentage of female directors is the number of female directors divided by board size. LGBT is a dummy variable indicating 1 for firms adopting notably progressive policies toward its gay and lesbian employees and 0 otherwise. Tobin's q represents MV over BV of the firm. Sales represents natural logarithm of annual sales. FCF/TA represents free cash flow divided by total assets. Leverage represents total debts divided by total assets. Investment represents capital expenditure divided by total assets. Investment is capital expenditure divided by total assets. Percentage of independent directors is the number of independent directors divided by board size. Board size represents the total number of directors on board. EBITA/TA is earnings before interest and tax divided by total assets. Average age represents natural logarithm of directors' average age. CSR represents summation of all KLD scores, except for diversity and governance. ATT, represents average treatment effect. PSM, represents propensity score matching. All models include year dummies and industry (two-digit SIC) dummies. The SEs, reported in parentheses, are adjusted for clustering at the firm level.

* represents statistical significance at the 10% level, and ** represents statistical significance at the 5% level.

*** represents statistical significance at the 1% level.

Model 5 in Table 3 summarizes the estimation results from Equation (2). It shows that firms that do well incorporate social responsibility and well governed board (i.e., large board size and independent board) are more likely to have female directors on the board. Moreover, larger firms (i.e., higher sales) and younger firms tend to have gender diverse boards. A control group is then formed based on the propensity score estimated

through Equation (2). Once a control group is formed, we compare the adoption of LGBT-supportive policy between the two groups of firms. We use two approaches in estimating the difference—average treatment effect (ATE) and common support (Common). The second part of Table 3 reports the results from the comparison. The positive and statistically significant results in rows “Unmatched” as well as “Matched” show that firms in the

TABLE 4 Effect of female directors on the lesbian, gay, bisexual, and transgender (LGBT)-supportive policies in the presence of economic policy uncertainty and GFC

	Model 6 Logit	Model 7 Probit
Percentage of female director	0.0319*** (0.0104)	0.0168*** (0.00572)
GFC	3.439*** (0.449)	1.840*** (0.229)
GFC × Female	−0.0173 (0.0129)	−0.00752 (0.00710)
CSR	0.225*** (0.0415)	0.133*** (0.0236)
Board size	0.112 (0.401)	0.0290 (0.222)
Percentage of independent directors	0.0144*** (0.00528)	0.00765*** (0.00287)
Average age	−1.037 (1.365)	−0.458 (0.721)
FCF/TA	3.236*** (1.168)	1.790*** (0.619)
Sales	1.139*** (0.0922)	0.632*** (0.0489)
EBITDA/TA	−6.131*** (1.307)	−3.567*** (0.667)
Tobin's q	0.313*** (0.0669)	0.174*** (0.0349)
Leverage	−1.268* (0.670)	−0.673** (0.339)
Investment	−6.538** (2.704)	−3.440** (1.436)
Constant	−8.421 (5.725)	−5.015* (3.040)
Year fixed effect	Yes	Yes
Industry fixed effect	Yes	Yes
Observations	5337	5337
R-squared	0.342	0.338

Note: The table reports logistic and probit regressions, where LGBT-supportive is dependent variable. Key variable of interest is percentage of female director. Percentage of female director is the number of female directors divided by board size. LGBT is a dummy variable indicating 1 for firms adopting notably progressive policies toward its gay and lesbian employees and 0 otherwise. Tobin's q represents MV over BV of the firm. Sales represents natural logarithm of annual sales. FCF/TA represents free cash flow divided by total assets. Leverage represents total debts divided by total assets. Investment represents capital expenditure divided by total assets. Percentage of independent directors is the number of independent directors divided by board size. Board size represents the total number of directors on board. EBITA/TA is earnings before interest and tax divided by total assets. Average age represents natural logarithm of directors' average age. CSR represents summation of all KLD scores, except for diversity and governance. GFC is a dummy variable equal to 1 for year 2007–2009 and 0 otherwise. All models include year dummies and industry (two-digit SIC) dummies. The SEs, adjusted for clustering at the firm level, are reported in parentheses.

*represents statistical significance at the 10% level.

**represents statistical significance at the 5% level.

***represents statistical significance at the 1% level.

treated group (i.e., firms with gender diverse board) exhibit higher adoption of LGBT-supportive policy than firms in the control group (i.e., firms with no gender diversity on the board).

In summary, we find evidence in support of our Hypothesis 2 that BGD is strongly connected with adoption of LGBT-supportive policy.

TABLE 5 Effect of female directors on the change in lesbian, gay, bisexual, and transgender (LGBT)-supportive policies

	Model 8 Tobit	Model 9 Regress	Model 10 GFC-Tobit	Model 11 GFC-Regress
Percentage of female directors	0.000786** (0.000319)	0.000786** (0.000322)	0.00121*** (0.000465)	0.00121** (0.000470)
GFC			0.00420 (0.0117)	0.00420 (0.0118)
GFC × Female			−0.00120* (0.000633)	−0.00120* (0.000640)
CSR	0.00293 (0.00180)	0.00293 (0.00182)	0.00290 (0.00180)	0.00290 (0.00182)
Board size	0.0112 (0.0128)	0.0112 (0.0130)	0.0115 (0.0128)	0.0115 (0.0130)
Percentage of independent directors	0.000470** (0.000213)	0.000470** (0.000215)	0.000453** (0.000216)	0.000453** (0.000218)
Average age	0.0523 (0.0503)	0.0523 (0.0508)	0.0490 (0.0502)	0.0490 (0.0507)
FCF/TA	0.0485 (0.0663)	0.0485 (0.0669)	0.0477 (0.0661)	0.0477 (0.0668)
Sales	0.00803*** (0.00248)	0.00803*** (0.00251)	0.00823*** (0.00248)	0.00823*** (0.00250)
EBITDA/TA	−0.0210 (0.0439)	−0.0210 (0.0444)	−0.0195 (0.0437)	−0.0195 (0.0442)
Tobin's q	0.00596** (0.00273)	0.00596** (0.00276)	0.00586** (0.00270)	0.00586** (0.00273)
Leverage	0.00607 (0.0188)	0.00607 (0.0189)	0.00669 (0.0188)	0.00669 (0.0190)
Investment	−0.0913 (0.0650)	−0.0913 (0.0656)	−0.0937 (0.0649)	−0.0937 (0.0656)
Constant	−0.361* (0.211)	−0.361* (0.213)	−0.347* (0.211)	−0.347 (0.213)
Year fixed effect	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes
Observations	4172	4172	4172	4172
Pseudo R2 or R-squared	−0.154	0.034	−0.157	0.035

Note: The table reports probit and logistic regressions, where change in LGBT-supportive policies is dependent variable. Key variable of interest is percentage of female directors. Percentage of female directors is the number of female directors divided by board size. LGBT is a dummy variable indicating 1 for firms adopting notably progressive policies toward its gay and lesbian employees and 0 otherwise. Tobin's q represents MV over BV of the firm. Sales represents natural logarithm of annual sales. FCF/TA represents free cash flow divided by total assets. Sales growth rate represents current sales divided by sales in previous year. Leverage represents total debts divided by total assets. Investment represents capital expenditure divided by total assets. Investment is capital expenditure divided by total assets. Percentage of independent directors is the number of independent directors divided by board size. Board size represents the total number of directors on board. EBITA/TA is earnings before interest and tax divided by total assets. Average age represents natural logarithm of directors' average age. CSR represents summation of all KLD scores, except for diversity and governance. Economic uncertainty represents economic policy uncertainty index (EPU index), developed by Baker, Bloom, and Davis (2016). GFC is a dummy variable equal to 1 for year 2007–2009 and 0 otherwise. All models include year dummies and industry (two-digit SIC) dummies. The SEs, adjusted for clustering at the firm level, are reported in parentheses.

*represents statistical significance at the 10% level.

**represents statistical significance at the 5% level.

***represents statistical significance at the 1% level.

Next, we investigate the motivation behind the positive relationship between BGD and LGBT-supportive policy (Hypothesis 1). Firms with inclusive policies are perceived positively by the customers and

other stakeholders (Bear et al., 2010). As a result, some may argue that the positive relationship could be due to the ulterior motive to promote financial performance. To shed further light on whether the



positive relationship observed so far is due to the female directors' attempt to address the welfare of LGBT employees, or for potential financial gains, we introduce economic uncertainty as the external shock. During economic uncertainty periods, for instance, during the global financial crisis of 2008, financial motive tends to supersede other motives. Thus, we examine the nature of the relationship during times of financial hardship. For that, we estimate Equation (3).

$$\begin{aligned} \text{LGBT-supportive policy}_{it} = & \alpha + \beta_1 \% \text{female director}_{it} + \beta_2 \text{GFC}_t \\ & + \beta_3 \% \text{female director} \times \text{GFC}_{it} \\ & + \sum \gamma_n \text{Controls}_{it} + \sum \text{Year effect} \\ & + \sum \text{Industry effect} + \varepsilon_{it}, \end{aligned} \quad (3)$$

Estimation results are reported in Table 4. Variable global financial crisis (GFC) is positive and significant in Models 6 and 7. This supports our expectation that firms pay more attention to LGBT-supportive policy during economic difficulty as such policy improves employee satisfaction and loyalty (Kyaw, Chindasombatcharoen, et al., 2021) while the firm gains reputation and legitimacy (Parizek & Evangelinos, 2021). Even after controlling for those motives, the effect of female directors remains positive as indicated by the positive and significant variable percentage of female director. Moreover, the insignificant coefficient for the interactive variable percentage of female director \times GFC indicates that the effect of female directors does not differ between crisis period and normal period. This furthers the notion that the adoption of LGBT-supportive policy by gender diverse boards is due to an attempt to address the welfare of LGBT employees. As a robustness test, we employ a change in LGBT variable as the dependent variable in Table 5. As our LGBT variable is a zero-one variable, a positive change in the LGBT variable would indicate an adoption of LGBT-supportive policies. Results in the table show that variable percentage of female director exhibits a positive association with the dependent variable as indicated by the positive and statistically significant coefficient for variable percentage of female director. This shows a positive relation between percentage of female director and an adoption of LGBT-supportive policies. Moreover, the interactive variable (GFC \times Female) is not significant in Models 10 and 11. Thus, gender diverse boards' adoption of LGBT-supportive policy is not different during a financial crisis period. In sum, the results in Table 5 further support the results in Tables 2–4 (1) that gender diverse boards are more inclined to address the employee stakeholders, and (2) that gender diverse boards are more likely to adopt policies that promote the welfare of LGBT employees.

To address possible collinearity among the control variables, we adopt two approaches. First, we calculate the variance inflation factors (VIFs) for all the independent variables. In general, a VIF value greater than 10 would indicate a serious problem of multi-collinearity. The results, not reported here but available upon request, indicate that none of the VIFs is greater than three. So, it does not appear that our results are influenced by multi-collinearity. Second, we employ orthogonalization to reduce potential collinearity. For this purpose, we first examine the pairwise correlations between the control variables. Because sales and board size, and FCF to assets and EBITDA to

assets appear to be highly correlated in pairwise correlation, we orthogonalize them. In particular, we regress sales on board size and keep the residual from the regression. The residual represents the portion of sales that is uncorrelated with board size, that is, the orthogonal component. We then include the residual in the regression as a control variable (sale_orthog). We also orthogonalize FCF to assets and EBITDA to assets in the same manner and include fct to assets_orthog as a control variable. The coefficient of the percentage of female directors remains positive and significant. For brevity, we do not report the results here but they are available from the authors.

All in all, the results lend support to our hypotheses that gender diverse boards are more likely to address the welfare of the employees—especially the LGBT employees.

5 | CONCLUSIONS

In this paper, we investigate whether gender diversity on corporate boards is associated with adoption of LGBT-supportive corporate policies. Through the use of logistic regressions, we find that gender diverse boards are positively associated with an adoption of LGBT-supportive policies. This finding is robust to a battery of tests that address endogeneity issues. In an effort to shed more light on the underlying motives for a gender diverse board in adopting LGBT-supportive policies, we use the global financial crisis in 2008 as a natural experiment. The results suggest that the adoption of LGBT-supportive policies by gender diverse boards is not motivated by financial gains, but by the willingness to attend to the employees, the internal stakeholders of the firm.

The findings in this paper highlight a mechanism through which gender diverse boards can promote sustainability in firms. The literature has indicated that addressing stakeholders of a firm legitimizes the firm while endowing the firm with reputation, competitive advantage, and financial returns. Yet, most of the literature focuses on the firms' engagement with the external stakeholders, such as the customers, community, and environment. Nascent studies show that firms' sustainability is also dependent on the employee group—the stakeholders internal to the firms. We contribute to this debate by providing evidence of this. To this end, we consider corporate policies that have gained attention worldwide only relatively recently, relating to the LGBT group. Only a handful of studies have focused on the contributions this group of employees bring to the corporation, but the findings so far suggest that this group of employees is associated with positive outcomes—outcomes associated with promoting sustainability in firms. Findings in this study show that gender diverse boards attend to the welfare of this special group of employees who are often subject to workplace discrimination.

Findings in this study have implications for investors, managers, and regulators. Besides responsibilities toward the stakeholders external to the business, the firm also has responsibilities toward stakeholders internal to the firm—such as the employees. Firms have the responsibility to treat employees fairly and to not discriminate based

on their sexuality. Thus, regulators whose interests are to promote socially responsible businesses should focus on promoting gender diversity in corporate boards. By introducing board members who are more inclined toward aspects that are very much intertwined with the firms' social responsibilities, firms are more destined to be steered toward being socially responsible both externally and internally. Investors (owners) and managers today demand that firms they invest in or work for meet certain social etiquettes not just toward the external stakeholders but also toward the internal stakeholders. By addressing the increasingly important issues, such as the welfare of LGBT employees, firms are signaling to (current and potential) investors and (potential) future employees that they strive to be at the forefront in addressing social issues. As the findings in this study show, gender diversity on the corporate boards has a ripple effect—in particular, better welfare for another stakeholder group that frequently faces discrimination. Therefore, by formulating a gender diverse board, firms not only address the long outstanding social issue of gender equality, but also have made a step toward being equitable toward its vulnerable employees.

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ENDNOTE

¹ Data on LGBT ends in 2009 when KLD stopped collecting LGBT data.

REFERENCES

- Adams, R. B., & Funk, P. (2012). Beyond the glass ceiling: Does gender matter? *Management Science*, 58, 219–235.
- Adams, R. B., Licht, A. N., & Sagiv, L. (2011). Shareholders and stakeholders: How do directors decide? *Strategic Management Journal*, 32(12), 1331–1355.
- Ahern, K. R., & Dittmar, A. K. (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *Quarterly Journal of Economics*, 127(1), 137–197.
- Amorelli, M., & Garcia-Sanchez, I. (2021). Trends in the dynamic evolution of board gender diversity and corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 28, 537–554.
- Andreoni, J., & Vesterlund, L. (2001). Which is the fair sex? Gender differences in altruism. *Quarterly Journal of Economics*, 116(1), 293–312.
- Badgett, M. V. L., Durso, L. E., & Schneebaum, A. (2013). New patterns of poverty in the Lesbian, Gay, and Bisexual community. <https://escholarship.org/uc/item/8dq9d947>.
- Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring economic policy uncertainty. *The quarterly journal of economics*, 131(4), 1593–1636.
- Barney, J. B., & Wright, P. M. (1997). On becoming a strategic partner: The role of human resources in gaining competitive advantage. *Human Resource Management*, 37, 31–46.
- Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics*, 97(2), 207–221.
- Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71, 443–465.
- Becker, B., & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *The Academy of Management Journal*, 39(4), 779–801.
- Beutel, A. M., & Marini, M. M. (1995). Gender and values. *American Sociological Review*, 60(3), 436–448.
- Birindelli, G., Iannuzzi, A. P., & Savioli, M. (2019). The impact of women leaders on environmental performance: Evidence on gender diversity in banks. *Corporate Social Responsibility and Environmental Management*, 26, 1485–1499.
- Buertey, S. (2021). Board gender diversity and corporate social responsibility assurance: The moderating effect of ownership concentration. *Corporate Social Responsibility and Environmental Management*, 28(6), 1579–1590. <https://doi.org/10.1002/csr.2121>
- Burkhard, K., Nguyen, P., & Poincelot, E. (2020). Agents of change: Women in top management and corporate environmental performance. *Corporate Social Responsibility and Environmental Management*, 27, 1591–1604.
- Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal*, 23(3), 275–284.
- Chintrakarn, P., Treepongkaruna, S., Jiraporn, P., & Lee, S. M. (2020). Do LGBT-supportive corporate policies improve credit ratings? An instrumental-variable analysis. *Journal of Business Ethics*, 162(1), 31–45.
- Ciocirlan, C., & Pettersson, C. (2011). Does workforce diversity matter in the fight against climate change? An analysis of fortune 500 companies. *Corporate Social Responsibility and Environmental Management*, 19, 47–62.
- Cordes, C. L. (2012). The business case for offering domestic partner benefits. *Compensation & Benefits Review*, 44(2), 110–116.
- Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, 47(2), 448–474.
- Deloitte (2018). Missing pieces report: The 2018 board diversity census of women and minorities on Fortune 500 boards.
- DellaVigna, S., List, J. A., Malmendier, U., & Rao, G. (2013). The importance of being marginal: Gender differences in generosity. *American Economic Review*, 103(3), 586–590.
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Erlbaum.
- Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review*, 11(2), 102–111.
- Evgeniou, T., & Vermaelen, T. (2017). Share buybacks and gender diversity. *Journal of Corporate Finance*, 45, 669–686.
- Faleye, O., & Trahan, E. A. (2011). Labor-friendly corporate practices: Is what is good for employees good for shareholders? *Journal of Business Ethics*, 101, 1–27.
- Fontana, E. (2020). Managing diversity through transgender inclusion in developing countries: A collaborative corporate social responsibility initiative from Bangladesh. *Corporate Social Responsibility and Environmental Management*, 27, 2548–2562.
- Francoeur, C., Labelle, R., & Sinclair-Desgagne, B. (2008). Gender diversity in corporate governance and top management. *Journal of Business Ethics*, 81, 83–95.
- Gangi, F., Daniele, L. M., Varrone, N., Vicentini, F., & Coscia, M. (2021). Equity mutual funds' interest in the environmental, social and governance policies of target firms: Does gender diversity in management teams matter? *Corporate Social Responsibility and Environmental Management*, 28(3), 1018–1031.
- Gilligan, C. (1977). In a different voice: Women's conceptions of self and morality. *Harvard Education Review*, 47(4), 481–517.
- Grosser, K., & Moon, J. (2005). Gender mainstreaming and corporate social responsibility: Reporting workplace issues. *Journal of Business Ethics*, 62(4), 327–334.
- Groysberg, B., & Bell, D. (2013). Dysfunction in the boardroom. *Harvard Business Review*, 91(6), 89–97.



- Hafsi, T., & Turgut, G. (2013). Boardroom diversity and its effect on social performance: Conceptualization and empirical evidence. *Journal of Business Ethics*, 112(3), 463–479.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206.
- Harjoto, M., Laksmana, I., & Lee, R. (2015). Board diversity and corporate social responsibility. *Journal of Business Ethics*, 132, 641–660.
- Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and strategic human resources management effectiveness as determinants of firm performance. *Academy of Management Journal*, 40(1), 171–188.
- Isidro, H., & Sobral, M. (2015). The effects of women on corporate boards on firm value, financial performance, and ethical and social compliance. *Journal of Business Ethics*, 132(1), 1–19.
- Kassinis, G., Panayiotou, A., Dimou, A., & Katsifaraki, G. (2016). Gender and environmental sustainability: A longitudinal analysis. *Corporate Social Responsibility and Environmental Management*, 23, 399–412.
- Khan, I., Khan, I., & Saeed, B. (2020). Does board diversity affect quality of corporate social responsibility disclosure? Evidence from Pakistan. *Corporate Social Responsibility and Environmental Management*, 26, 1371–1381.
- Kim, Y., Li, H., & Li, S. (2014). Corporate social responsibility and stock price crash risk. *Journal of Banking and Finance*, 43, 1–13.
- Kyaw, K., Chindasombatcharoen, P., Jiraporn, P., & Treepongkaruna, S. (2021). Do co-opted boards strategically choose LGBT-supportive policies? *International Review of Financial Analysis*, 73, 101651.
- Kyaw, K., Olugbode, M., & Petracchi, B. (2015). Does gender diverse board mean less earnings management? *Finance Research Letters*, 14, 135–141.
- Kyaw, K., Olugbode, M., & Petracchi, B. (2017). Can board gender diversity promote corporate social performance? *Corporate Governance*, 17(5), 789–802.
- Kyaw, K., Treepongkaruna, S., & Jiraporn, P. (2021). Stakeholder engagement and firms' innovation: Evidence from LGBT-supportive policies. *Corporate Social Responsibility and Environmental Management*, 28(4), 1285–1298.
- Lai, K., Srinidhi, B., Gul, F. A., & Tsui, J. S. (2017). Board gender diversity, auditor fees, and auditor choice. *Contemporary Accounting Research*, 34(3), 1681–1714.
- Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China? *Journal of Corporate Finance*, 28, 169–184.
- Luckerath-Rovers, M. (2013). Women on boards and firm performance. *Journal of Management and Governance*, 17, 491–509.
- Mahadeo, J. D., Soobaroyen, T., & Hanuman, V. O. (2012). Board composition and financial performance: Uncovering the effects of diversity in an emerging economy. *Journal of Business Ethics*, 105, 375–388.
- Martinez, M. C. V., Cervantes, P. A. M., & Rambaud, S. C. (2020). Women on corporate boards and sustainable development in the American and European markets: Is there a limit to gender policies? *Corporate Social Responsibility and Environmental Management*, 27, 2642–2656.
- Matcalfe, H., & Rolfe, H. (2011). Barriers to employers in developing lesbian, gay, bisexual and transgender-friendly workplaces. NIESR Report.
- McGuinness, P. B., Vieito, J. P., & Wang, M. (2017). The role of board gender and foreign ownership in the CSR performance of Chinese listed firms. *Journal of Corporate Finance*, 42, 75–99.
- Ongsakul, V., Jiraporn, P., Tong, S., & Treepongkaruna, S. (2021). The effect of corporate social responsibility (CSR) on shareholder value: Evidence from the 9/11 terrorist attack. *Accounting Research Journal*, 34, 91–105.
- Orazalin, N., & Baydauletov, M. (2020). Corporate social responsibility strategy and corporate environmental and social performance: The moderating role of board gender diversity. *Corporate Social Responsibility and Environmental Management*, 27, 1664–1676.
- Parizek, K., & Evangelinos, K. I. (2021). Corporate social responsibility strategies and accountability in the UK and Germany: Disclosure of lesbian, gay, bisexual and transgender issues in sustainability reports. *Corporate Social Responsibility and Environmental Management*, 28(3), 1055–1065.
- Pichler, S., Blazovich, J. L., Cook, K. A., Huston, J. M., & Strawser, W. R. (2018). Do LGBT-supportive policies enhance firm performance?. *Human Resource Management*, 57(1), 263–278.
- Provasi, R., & Harasheh, M. (2021). Gender diversity and corporate performance: Emphasis on sustainability performance. *Corporate Social Responsibility and Environmental Management*, 28, 127–137.
- Pucheta-Martinez, M., Olcina-Sempere, G., & López-Zamora, B. (2020). Female directorship on boards and corporate sustainability policies: Their effect on sustainable development. *Sustainable Development*, 28, 56–72.
- Ragins, B. R., & Cornwell, J. M. (2001). Pink triangles: Antecedents and consequences of perceived workplace discrimination against gay and lesbian employees. *Journal of Applied Psychology*, 88(6), 1244–1261.
- Ragins, B. R., Singh, R., & Cornwell, J. M. (2007). Making the invisible visible: Fear and disclosure of sexual orientation at work. *Applied Psychology*, 92(4), 1103–1118.
- Rehman, S., Orij, R., & Khan, H. (2020). The search for alignment of board gender diversity, the adoption of environmental management systems, and the association with firm performance in Asian firms. *Corporate Social Responsibility and Environmental Management*, 27, 2161–2175.
- Schwartz, S., & Rubel, T. (2005). Sex differences in value priorities: Cross-cultural and multimethod studies. *Journal of Personality and Social Psychology*, 89(6), 1010–1028.
- Sinicropi, S., & Cortese, D. (2020). (Re)Thinking diversity within sustainable development: A systematic mapping study. *Corporate Social Responsibility and Environmental Management*, 28(1), 299–309.
- Terjesen, S., & Singh, V. (2008). Female presence on corporate boards: A multi-country study of environmental context. *Journal of Business Ethics*, 83, 55–63.
- Velte, P. (2018). Does gender diversity in the audit committee influence key audit matters' readability in the audit report? UK evidence. *Corporate Social Responsibility and Environmental Management*, 24, 748–755.
- Veltri, S., Mazzotta, R., & Rubino, F. E. (2021). Board diversity and corporate social performance: Does the family firm status matter? *Corporate Social Responsibility and Environmental Management*, 28(6), 1664–1679. <https://doi.org/10.1002/csr.2136>
- Wang, J., & Coffey, B. (1992). Board composition and corporate philanthropy. *Journal of Business Ethics*, 11(10), 771–778.
- Yasser, Q. R., Mamun, A. A., & Ahmed, I. (2017). Corporate social responsibility and gender diversity: Insights from Asia Pacific. *Corporate Social Responsibility and Environmental Management*, 24, 210–221.

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