

Corporate Philanthropic Expenditure Before and During COVID-19: The Role of Board Composition and Firm Performance

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Abstract: *This study investigates the impact of corporate board composition (CBC) on corporate philanthropic expenditure (CPE) before and during the COVID-19 pandemic. It also examines how firm profitability moderates the association between CBC and CPE. Using a panel dataset of 264 firm-year observations from listed banks in Bangladesh from 2015 to 2022, the study finds that both board size and board independence positively and significantly influenced CPE before and during the COVID-19 pandemic. Conversely, board gender diversity significantly negatively affected CPE before and during the pandemic. These results remain robust when alternative measures and models are applied to address potential endogeneity concerns. Furthermore, the interaction effects of firm profitability with board independence and gender diversity on CPE are positive and statistically significant. Notably, the positive interaction of female board representation with firm profitability highlights the critical role of women in bridging shareholder interests with social community needs. This study is the first to explore the roles of firm performance in the CBC-CPE relationship, offering new insights into how firm financial performance and board attributes jointly influence CPE. It also advocates for global initiatives to enhance female representation on corporate boards, underscoring the critical role of female directors in evaluating corporate contributions, safeguarding investor value, preventing resource misallocation, and ensuring financial support for philanthropic activities when firm profitability allows.*

Keywords: *Corporate philanthropic contribution, board composition, gender diversity, COVID-19, firm performance, Bangladesh*

Abstrak: *Penelitian ini menyelidiki dampak komposisi dewan perusahaan (CBC) terhadap pengeluaran filantropi perusahaan (CPE) sebelum dan selama pandemi COVID-19. Hal ini juga menguji bagaimana profitabilitas perusahaan memoderasi*

hubungan antara CBC dan CPE. Dengan menggunakan kumpulan data panel yang terdiri dari 264 observasi tahunan perusahaan dari bank-bank yang terdaftar di Bangladesh dari tahun 2015 hingga 2022, penelitian ini menemukan bahwa ukuran dewan direksi dan independensi dewan direksi berpengaruh positif dan signifikan terhadap CPE sebelum dan selama pandemi COVID-19. Sebaliknya, keberagaman gender di dewan mempunyai pengaruh negatif yang signifikan terhadap CPE sebelum dan selama pandemi. Hasil-hasil ini tetap kuat ketika langkah-langkah dan model-model alternatif diterapkan untuk mengatasi potensi permasalahan endogenitas. Selain itu, pengaruh interaksi profitabilitas perusahaan dengan independensi dewan dan keragaman gender terhadap CPE adalah positif dan signifikan secara statistik. Khususnya, interaksi positif antara keterwakilan dewan perempuan dengan profitabilitas perusahaan menyoroti peran penting perempuan dalam menjembatani kepentingan pemegang saham dengan kebutuhan sosial komunitas. Penelitian ini adalah penelitian pertama yang mengeksplorasi peran kinerja perusahaan dalam hubungan CBC-CPE, dan menawarkan wawasan baru tentang bagaimana kinerja keuangan perusahaan dan atribut dewan direksi secara bersama-sama mempengaruhi CPE. Hal ini juga mengadvokasi inisiatif global untuk meningkatkan keterwakilan perempuan di dewan perusahaan, menggarisbawahi peran penting direktur perempuan dalam mengevaluasi kontribusi perusahaan, menjaga nilai investor, mencegah kesalahan alokasi sumber daya, dan memastikan dukungan keuangan untuk kegiatan filantropi ketika profitabilitas perusahaan memungkinkan.

Kata Kunci: *Kontribusi filantropi perusahaan, komposisi dewan direksi, keberagaman gender, COVID-19, kinerja perusahaan, Bangladesh*

1. Introduction

In an era of rapid social and economic change, coupled with unprecedented global challenges, there is growing attention on the relationship between corporate behavior, social impact, and board composition (Poursoleyman et al., 2024; Umar et al., 2023). Businesses face increasing pressure to contribute to social welfare, primarily through corporate philanthropic expenditure (CPE), especially amidst the disruptive effect of the COVID-19 pandemic on developing economies. The pandemic caused widespread global disruptions, disproportionately affecting developing nations due to factors such as high obesity rates, poverty, poor sanitation, and limited access to clean water—conditions that exacerbated comorbidities like diabetes (Sivaprasad & Mathew, 2021). Researchers and professionals have explored strategies to address pandemic-related challenges (Umar et al., 2022; Umar & Abubakar, 2021). During the crisis, Umar et al.

(2023) emphasized the critical role of CPE initiatives in supporting low-income populations.

With the rise of corporate social responsibility (CSR) initiatives, particularly charitable donations, many firms now include their CPE in annual reports. Supporting underprivileged communities through social and philanthropic programs enhances corporate reputation. According to stakeholder theory, CPE can strengthen the social infrastructure necessary for long-term business-community relationships, ultimately benefiting firms (Wang & Coffey, 1992). Some scholars (e.g., Wang et al., 2016; Elamer & Utham, 2024) argue that corporate donations boost stakeholder engagement and provide firms with important resources, improving financial performance. Research suggests that charitable donations contribute to long-term corporate success. Following the COVID-19 outbreak, many corporations made financial and non-financial contributions (Giacomini et al., 2021; Sivaprasad & Mathew, 2021). Beyond wealth creation and profit maximization, firms are increasingly recognized as integral to their communities. Corporate philanthropy, encompassing financial assistance, community engagement, and charitable activities, has become increasingly important amid evolving social expectations and stakeholder demands.

The board of directors plays a crucial role in reconciling stakeholder interests and promoting CSR awareness among non-shareholders (Zhang et al., 2013). Their involvement in CSR decision-making, policy development, and strategic initiatives is essential for long-term success (Fuente et al., 2016). It becomes even more critical during crises such as the COVID-19 pandemic (Umar et al., 2023). The relationship between board characteristics and CSR performance has been extensively studied. Corporate board composition (CBC) suggests that board member characteristics and diversity influence corporate decisions, including philanthropic activities.

We are motivated to explore the association between CBC and CPE for several reasons. First, stakeholders and policymakers are increasingly concerned with how board attributes balance financial performance and societal welfare while allocating resources to CSR activities (Fuente et al., 2016; Ullah et al., 2019; Shaukat et al., 2015; Rouf & Hossan, 2020). However, research on the role of CBC in approving expenditures

for these initiatives remains limited. Second, the COVID-19 pandemic has intensified scrutiny of corporate CSR efforts, compelling businesses to uphold their CSR commitments despite financial challenges (He & Harris, 2020; Carroll, 2021). This has raised significant questions about corporate leaders' responsibilities and the sustainability of CSR investments. Although research on CSR and board governance is growing, studies on the interaction between CPE, CBC, and financial performance are still lacking, particularly during crises in developing economies. Third, prior studies on board composition and CSR performance often rely on disclosure content or scores, which may not fully capture corporate philanthropic activities (Bolourian et al., 2020). Therefore, this study measures CSR performance using actual expenditure in monetary terms as CPE.

Bangladesh, one of the world's fastest-growing economies, has made significant progress toward the Sustainable Development Goals (SDGs). CSR expenditure is vital in alleviating poverty (Jahid et al., 2022). Publicly listed companies in Bangladesh can claim a 10% tax rebate on CSR expenditures, up to BDT 120 million or 20% of their total income (Bose et al., 2020). Moreover, Bangladesh's financial sector is also subject to stricter regulations than the non-financial sector. Since 2008, Bangladesh Bank has enforced CSR regulations for financial institutions, ensuring the availability of CSR expenditure data (Bae et al., 2021). Therefore, this study focuses on banking firms in Bangladesh, providing a unique setting to examine the relationship between CBC and CPE.

This paper fills a research gap by evaluating Bangladesh, an emerging market, and empirically analyzing how CBC affects CPE before and during the COVID-19 pandemic. Using an ordinary least squares regression model while controlling for time-fixed effects, we examine these associations and the moderating role of firm profitability. To test the robustness of our findings, we employ a Tobit regression model to account for censored CPE data. Additionally, we investigate how CBC influences sector-wise CPE and address the endogeneity issue using a lead-lag model.

Using 264 firm-year observations from 33 listed banks on the Dhaka Stock Exchange, our findings reveal that larger boards with more independent directors

enhance CPE. In contrast, female directorship had a significantly negative impact before and during the pandemic. The Tobit regression supports the robustness of these results. Furthermore, the interaction between firm profitability and board size is insignificant, while the interactions between board independence and female directorship and firm profitability are positive and significant. These results suggest that firm profitability is key to understanding the CBC-CPE relationship. Finally, findings from the decomposition of CPE and the lead-lag models further validate the baseline regression results.

This study contributes to the literature on CBC and CPE in several ways. First, while many studies examine CSR, they often overlook its financial aspects (Hosain, 2020; Umar et al., 2023). Previous research primarily assesses the impact of board attributes on CSR disclosure using content analysis, which focuses on reporting non-financial activities (Rouf & Hossan, 2020; Rashid, 2021; Biswas et al., 2021; Ullah et al., 2019). However, disclosure-based assessments cannot accurately measure monetary-based CSR performance as they lack financial data (Bose et al., 2020). CPE serves as a strategic mechanism that encourages firms to allocate greater resources to CSR initiatives to engage with diverse stakeholders (Bose et al., 2020). Few studies have examined the impact of CBC on CPE. This research uniquely investigates how board attributes influence CPE in Bangladesh-listed firms before and during COVID-19, contributing to government efforts to mitigate pandemic effects and support SDGs by emphasizing CPE.

Second, this study highlights the role of gender diversity on boards and the interaction between firm performance and CPE. Although female board representation negatively correlates with CPE, its interaction with firm performance is positive, suggesting that female directors influence corporate philanthropic spending when firm performance is strong. Third, this study explores sector-wise CPE, examining corporate spending in the health, education, and environmental sectors. Previous studies have primarily relied on content analysis rather than financial data in this area. Fourth, our findings offer valuable insights for policymakers and regulators in designing policies that enhance corporate participation in CPE. This study also helps Bangladeshi firms

build legitimacy by aligning with societal expectations and meeting stakeholder requirements supported by legitimacy and stakeholder theories.

The remainder of the paper is organized as follows: Section 2 discusses CSR issues in Bangladesh. Section 3 reviews the literature and develops the hypotheses. Section 4 outlines the research design, and Section 5 presents the results. Section 6 provides discussion and policy implications, while Section 7 concludes with study limitations.

2. Bangladesh Bank CSR guidelines

Bangladesh Bank has provided CSR guidelines to all financial companies to promote corporate accountability, ethical conduct, and social justice. In 2008, the bank released a CSR reporting circular to address social and environmental issues fairly and meaningfully. This circular covered the introduction to CSR, source materials, program launch, and performance monitoring. In 2010, the bank included a structure for assessing CSR implementation and performance for banks, requiring them to produce a half-yearly CSR statement within 30 days. This was a milestone for CSR in Bangladesh.

Bangladesh Bank issued green banking rules in 2011, requiring banks to report green banking projects periodically. The bank also promoted workplace gender equality and provided a reporting framework. In 2013, the Green Banking and CSR Department (GBCSRD) was created to monitor banks' CSR operations. The GBCSRD dispensed new CSR reporting formats under the "Statement on Corporate Social Responsibility Initiatives" and advised banks to allocate a minimum of 30% of their entire CSR spending towards healthcare, another 30% towards education, and 20% towards addressing issues related to global warming, climate change, and urban migration (Bangladesh Bank, 2023).

3. Literature Review and Hypothesis development

3.1 Theoretical Perspective

In recent decades, research on corporate governance has gradually shifted from its traditional emphasis on agency concerns to examining a wide range of areas, including accountability, transparency, and disclosure (Miroshnychenko & De Massis, 2020).

Legitimacy and stakeholder theories are particularly relevant to the CPE research. Legitimacy theory suggests that companies and society have a social agreement, requiring companies to legitimize their actions to meet societal expectations (Choudhury & Alam, 2013). This theory stresses the need for managers to use tactics that demonstrate their dedication to satisfying society's expectations (Chan et al., 2014). Businesses fulfill their corporate social responsibility by giving back to the community through various charitable endeavors (Park et al., 2020). Firms face legitimacy concerns when they fail to adopt such tactics (Islam & Kokubu, 2018). Conforming to public expectations guarantees a firm's survival, while failure to legitimize activities risks the firm's continued operation.

According to stakeholder theory, charitable giving is a strategy for companies to win over and retain stakeholders (Ananzeh et al., 2022). The board of directors can feel more compelled to include all stakeholders in response to societal demands (Pucheta-Martínez & Gallego-Álvarez, 2018). Stakeholders include local communities, the environment, consumers, the government, the public, shareholders, workers, and customers (Hosain, 2020). Business activities should be harmless, protect everyone's interests, and help everyone out (Umar et al., 2022). During the COVID-19 pandemic, ethical and selfless actions were critical (García-Sánchez & García-Sánchez, 2020). The board of directors, an apex supervisory body of a firm, is responsible for ensuring the business legitimacy of its activities and protecting stakeholders' interests (Pucheta-Martínez & Gallego-Álvarez, 2018; Poursoleyman et al., 2024).

3.2 Prior Literature

Corporate governance has been studied in CSR literature, but corporate gifts have rarely been discussed (Ananzeh et al., 2022). Empirical results differ due to country-specific factors like corruption, business cultures, and law enforcement status, requiring further studies to gather more knowledge. Ananzeh et al. (2022) explore the impact of corporate governance practices on philanthropic behavior among UK non-financial companies by extracting data from 2018-2020 in annual reports and found that better corporate governance practices positively affect donations amount and intensity. Board

independence, size, female diversity, and inception of the CSR committee positively affect donations amount. In the context of US firms, Cha and Abebe (2016) document that female directors had a favorable role in philanthropic contributions while outside directors had an inverse association with them. However, Jia and Zhang (2012) empirically found an adverse link between corporate donations and women directors on the board in the Chinese context. Umar et al. (2022) investigate the impact of board composition on CPE in Nigerian-traded firms before and during COVID-19 and show that board meeting frequency and foreign directors significantly influence CSR expenditure. Board independence positively affects CSR expenditure before COVID-19 but not during it. However, the size of the board and female diversity did not influence the situation before or during COVID-19. Ananzeh et al. (2022) found that corporate philanthropy improves company size, age, profitability, media exposure, and government ownership while hurting financial leverage and family ownership using 94 Jordanian-listed firms from 2010-2016.

There are limited studies on the firm's financial contribution and its alignment with CBC in the context of an emerging country like Bangladesh. Hosain (2020) investigates the relationship between corporate governance and CSR expenditure within the banking industry of Bangladesh using board size, gender diversity, and board members' interrelationships as independent variables and firm value as a moderator. Results show that board size and gender positively affect CPE, while board meetings negatively affect it. Jahid et al. (2022) explored the relationship between ownership structure and CSR expenditure. Using a longitudinal period from 2007–2019 of 53 listed financial firms, the study found that foreign and managerial ownership significantly contributed to CPE. However, no relationship was found between institutional ownership and CPE. Islam et al. (2021) empirically found a positive relationship between slack resources and CPE, supporting traditional corporate giving. They also showed that higher free cash flow leads to increased CPE, indicating agency issues between managers and shareholders. Adhikary and Mitra (2022), analyzing CSR spending of commercial banks, found evidence that independent directors and board size positively influenced CPE, while board gender and board meetings did not. Firm size and leverage promoted CSR

spending, while profitability did not. Umar (2023) empirically investigated sector-wise CPE with gender and foreign diversity at Islamic banks in Bangladesh. He found that female participation encouraged CPE in education but was insignificant in the health, humanitarian, and disaster relief sectors. However, foreign directors have a significant positive impact on all three sectors.

3.3 Hypothesis Development

3.3.1 The relationship between CBC and CPE

Aligned with stakeholder theory, a board's decisions on expenditure on philanthropic activities should equitably consider the interests of all stakeholders (Rouf, 2016). A larger board that brings together knowledge, experience, and stakeholder representation signify a corporation's commitment to social responsibility and enhances its reputation and corporate transparency (Aboud & Yang, 2022; Jahid et al., 2020; Saiful et al., 2012). This leads to exponential growth as the corporation addresses diverse stakeholder interests through social welfare programs and voluntary contributions (Ananzeh et al., 2022; Poursoleyman et al., 2024). Nevertheless, existing research presents varied findings regarding the impact of board size on CPE. Hosain (2020), Ananzeh et al. (2022), and Adhikary and Mitra (2022) empirically documented a positive association between board size and CPE. They argued that larger, more diverse boards are more likely to allocate significant funds for CSR, balancing welfare and firm performance. In contrast, Kiliç et al. (2015) found an insignificant association between board size and CPE, suggesting that a larger board may reduce efficiency due to communication problems. Careful consideration is needed for charitable expenditures to avoid unnecessary depletion of shareholders' funds and negative impacts on business performance. Elmaghrabi (2021) found mixed opinions on the benefits of larger boards, with some suggesting that boards with eleven or more directors are unproductive. Considering the literature on the topic and theoretical predictions, the study proposes the following hypotheses:

H1a: Board size and CPE are positively correlated before COVID-19.

H1b: Board size and CPE are positively correlated during COVID-19.

An increase in independent directors helps maintain a firm's operations impartially, protecting minority shareholders' interests, enhancing transparency, and enhancing decision-making effectiveness (Aboud & Yang, 2022; Saiful et al., 2012). During the COVID-19 pandemic, independent directors were particularly important in mitigating management's self-interest in deciding charitable donations. Due to their autonomy, independent directors are more effective at oversight than non-independent or executive directors. There is a positive correlation between board independence and CSR performance (Jarboui et al., 2022; Umar, 2023; Akhter & Kabir, 2018). Corporate charitable donations increased when boards were independent (Ananzeh et al., 2022).

In contrast, Cha and Abebe (2016) and Aboud and Yang (2022) found an insignificant association between board independence and CSR performance. Due to other commitments, non-executive directors often treat their role as part-time, which undermines effective oversight (Bosch, 2002). In a crisis, managers focus on short-term economic outcomes, while outside directors focus more on social consciousness and long-term economic outcomes. This contrasting view may lead to independent directors struggling to perform effectively due to pressure from owner-directors and concerns about job security (Uddin & Choudhury, 2008). Similarly, Umar et al. (2023) found no significant link between board independence and CSR performance during COVID-19, suggesting that independent directors might hesitate to boost CSR spending due to widespread operational shutdowns and reduced capacities. Our proposed hypotheses are in line with the current thinking on the topic of board independence and its effect on CPE.

H2a: Board independence and CPE are positively associated before COVID-19.

H2b: Board independence and CPE are positively associated during COVID-19.

CSR performance may improve with more female directors, supported by theoretical and empirical evidence (Elmaghrabi, 2021; Rashid & Barokah, 2024). The cooperation between men and women boosts problem-solving, becoming a competitive asset for the company (Rashid & Barokah, 2024). Agency theory suggests that female directors' enhanced supervision reduces agency costs, increasing CPE (Adams & Ferreira, 2009; Cruz et al., 2018). Stakeholder theory also indicates that gender diversity

on boards enhances CSR by addressing stakeholders' needs and promoting CPE (Shaukat et al., 2015). Women are often linked to charity and community service due to their caring nature (Wang & Coffey, 1992). Boards need a critical mass of female members to prioritize stakeholder interests and encourage philanthropic contributions (Lin et al., 2018). Empirical research shows a positive correlation between corporate philanthropic activities and the presence of female directors (Hosain, 2020; Kiliç et al., 2015; Cha & Abebe, 2016; Rodríguez-Ariza et al., 2017; Ananzeh et al., 2022). It is anticipated that women, especially when reaching a critical number on the board, would urge businesses to increase charitable spending, particularly in response to the COVID-19 pandemic.

In contrast, Adhikary and Mitra (2022) found a negative and significant relationship with CSR performance in listed Bangladeshi banks, suggesting that fewer women in top positions might enhance CSR activities. Similarly, Kabongo et al. (2013) found that female directorship did not significantly impact charitable activities in US firms from 1991 to 2009. Furthermore, Umar et al. (2023) found that female directorship did not significantly impact Nigerian firms' CSR performance before and during COVID-19. Therefore, the following hypotheses are proposed:

H3a: Gender diversity and CPE are positively associated before COVID-19.

H3b: Gender diversity and CPE are positively associated during COVID-19.

3.3.2 CBC-CPE relationship: The moderating role of firm performance

The board of directors is a crucial mechanism for corporate governance, overseeing business management and influencing internal control systems (Gillan, 2006). Once the primary association between corporate governance and CPE has been established, it is logical to hypothesize that firm profitability could moderate this relationship. Numerous empirical investigations (Simpson & Kohers, 2002; Fernández-Gago et al., 2014) are grounded in the theoretical framework proposed by Preston and O'Bannon (1997). This framework presents two prevailing arguments regarding firm performance and social contribution. The availability fund hypothesis argues that lower (higher) levels of profitability result in lower (higher) levels of CSR. Hence, enhanced economic

performance is more likely to generate a surplus (Amato & Amato, 2006), which can be allocated to various CSR activities (Campbell, 2007). Conversely, the managerial opportunity hypothesis posits that increased (or decreased) profitability levels will correspondingly decrease (or increase) CSR levels. When firms experience better economic performance, managers may reduce CSR activities to maximize their short-term personal income (Williamson, 1985). Reducing social expenditure can increase company profitability, leading to higher personal compensation for managers (Cespa & Cestone, 2007). However, if financial performance falls short, managers might introduce appealing social initiatives to justify the deficiency. The moderation hypothesis suggests that arguments can support both an increase and decrease in the influence of CSR without specifying a particular direction. Therefore, the following hypotheses are proposed:

H4a: Firm financial performance moderates the relationship between board size and CPE.

H4b: Firm financial performance moderates the relationship between board independence and CPE.

H4c: Firm financial performance moderates the relationship between board gender diversity and CPE.

4. Research Methodology

This study investigates the influence of board attributes on the corporate social responsibility efforts of publicly traded financial companies in Bangladesh. The financial sector in the country is experiencing rapid growth and expansion, with numerous local and international banking institutions participating in this sector (Jahid et al., 2022) and regulating it more stringently than its non-financial sector (Bae et al., 2021). Bangladesh, an emerging economy, has made significant strides towards the SDGs and poverty reduction through its CPE (World Bank, 2017). Currently, 35 banks are listed on the Dhaka Stock Exchange, Bangladesh (Dhaka Stock Exchange, 2023). However, the study considers 33 banks as two banks that were listed after 2022. The data collection covers two distinct periods—before and during the pandemic. A total of

264 firm-year observations have been utilized in our study after carefully extracting data from published annual reports through handpicking from 2015 to 2022. CPE data are directly collected from published CSR reports of Bangladesh Bank.

TCPE, the dependent variable, represents the total contributions made by banks towards charitable or philanthropic endeavors. To measure TCPE, we followed prior studies (Umar et al., 2022; Ananzeh et al., 2022; Shobandiyah & Rahmadhani, 2024) and used the natural log of the total monetary philanthropic contributions for data normalization. TCPE is divided into four major categories for robust results: philanthropic expenditure in education (CPEEDU), health (CPEHEL), environment (CPEENV), and other (CPEOTH), all converted into logarithmic form. The research variable in focus is CBC, which includes board size, board independence, and female directorship. Board size (LBOD) is the total number of directors transformed to a logarithmic scale for data normalization. Board independence (INDP) is the ratio of independent directors to total directors. Female directorship (FDBOD) is a dummy variable coded as one if the firm has at least one female director and zero otherwise.

We also include five firm-specific control variables aligned with prior studies. The firm's profitability (ROA) is measured by the net profit after tax divided by total assets. Profit, as an abundance of slack resources, significantly impacts corporate giving (Kabongo et al., 2013). The leverage of the firm, coded as LEV, is the ratio of total debts to total assets (Shobandiyah & Rahmadhani, 2024). The banking industry relies heavily on relational capital and reputation, significantly impacting banks' CSR spending (Adhikary & Mitra, 2022). The size of the audit committee enhances the credibility of voluntary performance (Jahid et al., 2020). LAC is measured as the number of directors in the audit committee and is transformed into a logarithmic scale for data normalization. Board meetings facilitated discussions on charitable activities, which helped increase CSR spending (Umar et al., 2023). BM is measured as the frequency of meetings in a firm's fiscal year (Umar et al., 2023). We also consider the firm age (FAGE) to be aligned with Jahid et al. (2020) and measure the number of years since incorporation, which is transformed into the log for data normalization. Appendix A shows the measurements of all the variables used in the study.

To examine the relationship between the independent and dependent variables and moderating role firm performance, ordinal least squares (OLS) regression was applied.

$$TCPE_{it} = \beta_0 + \beta_1 LBOD_{it} + \beta_2 INDP_{it} + \beta_3 FDBOD_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6 LAC_{it} + \beta_7 LAGE_{it} + \beta_8 BM_{it} + \beta_9 Year FE + \varepsilon_{it}$$

$$TCPE_{it} = \beta_0 + \beta_1 LBOD_{it} + \beta_2 ROA_{it} + \beta_3 (LBOD*ROA)_{it} + \beta_4 LEV_{it} + \beta_5 LAC_{it} + \beta_6 LAGE_{it} + \beta_7 BM_{it} + Year FE + \varepsilon_{it}$$

$$TCPE_{it} = \beta_0 + \beta_1 INDP_{it} + \beta_2 ROA_{it} + \beta_3 (INDP*ROA)_{it} + \beta_4 LEV_{it} + \beta_5 LAC_{it} + \beta_6 LAGE_{it} + \beta_7 BM_{it} + Year FE + \varepsilon_{it}$$

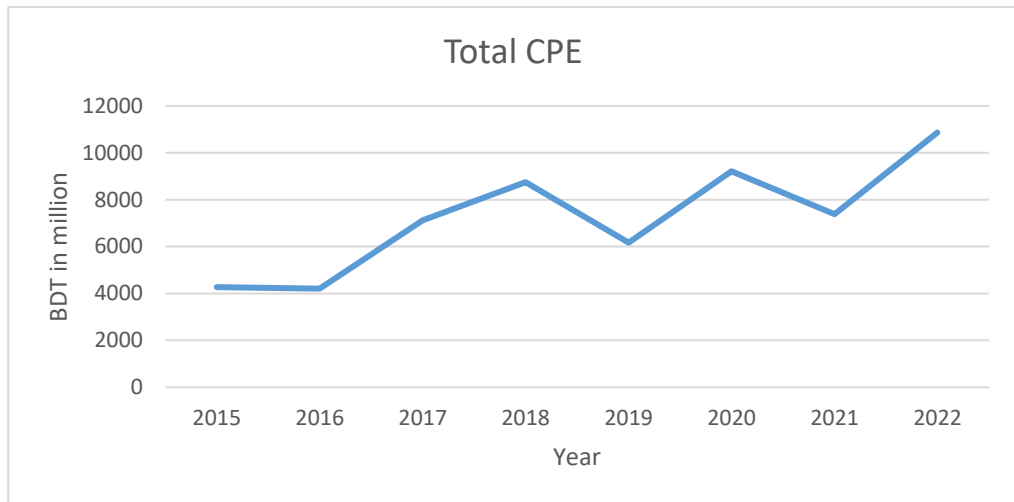
$$TCPE_{it} = \beta_0 + \beta_1 FDBOD_{it} + \beta_2 ROA_{it} + \beta_3 (FDBOD*ROA)_{it} + \beta_4 LEV_{it} + \beta_5 LAC_{it} + \beta_6 LAGE_{it} + \beta_7 BM_{it} + Year FE + \varepsilon_{it}$$

β_0 = the constant; ε_{it} = error terms; β_1 to β_8 = coefficient of each explanatory variable defined in Appendix A, and ‘i’ and ‘t’ = each of bank and year, respectively.

5. Results and Discussion

The graph (Figure. 1) illustrates the trend of the total CPE of the banking industry in Bangladesh from 2015 to 2022. The CPE remained stable from 2015 to 2016, followed by a shape increase until 2018, indicating the banking industry’s growing corporate commitment towards philanthropic activities. However, a sudden short-term decline in 2019 would be due to potential economic challenges and bank profitability hardships. Banks increased their social and philanthropic expending at the onset of the COVID-19 pandemic, evidencing the banking industry’s prompt and responsive role during a crisis. However, the CPE dropped slightly in 2021, possibly due to lingering uncertainties of the COVID-19 crisis. A sharp rise in 2022 marks the highest level of CPE, indicating a greater focus on CSR and fulfilling societal expectations. The trend shows increasing attention to CPE over time despite occasional fluctuations.

Figure. 1
The trend of total CPE



Source: Compiled by authors

5.1 Descriptive Statistics

Table 1 provides descriptive statistics for all variables in the study. The natural logarithm of TCPE shows an average of 7.944, with a minimum of 0.00 and a maximum of 9.515, indicating that some organizations did not allocate funds to TCPE during the study period. When divided into four categories, the average values (in logarithms) are 6.609 for CPEEDU, 6.624 for CPEHEL, 2.024 for CPEENV, and 7.622 for CPEOTH. The greater standard deviation of corporate philanthropic contributions suggests significant variability in spending. The mean board size (LBOD) is 1.098, with a narrow standard deviation of 0.156, indicating consistency in board sizes. On average, 20% of board members are independent (mean INDP of 0.202). Female representation on boards (FDBOD) averages 65.2%, with most firms having at least one female director. The mean leverage (LEV) is 0.933, showing high leverage in the banking industry. The average return on assets (ROA) is 0.9%, ranging from -6.2% to 43.8%. The mean logarithmic audit committee size (LAC) is 0.626, indicating a moderate size, and the mean logarithmic company age (LAGE) is 1.348, indicating moderate age. Banking firms hold an average of 18 board meetings annually.

Table 1.
Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
TCPE	264	7.944	1.296	0	9.515
CPEEDU	264	6.609	1.939	0	9.326
CPEHEL	264	6.624	1.709	0	9
CPEENV	264	2.024	3.004	0	8.461
CPEOTH	264	7.622	1.578	0	9.508
LBOD	264	1.098	.156	.699	1.38
INDP	264	.202	.103	0	.778
FDBOD	264	.652	.477	0	1
LEV	264	.933	.193	.02	2.041
ROA	264	.009	.028	-.062	.438
LAC	264	.626	.111	0	.778
LAGE	264	1.348	.259	.477	1.806
BM	264	18.489	7.796	4	69

Source: Compiled by authors

5.2 Univariate analysis

Table 2 shows that TCPE is positively correlated with LBOD and BM at a 1% significance level and with INDP at a 10% significance level. Conversely, TCPE is negatively correlated with ROA and LEV at a 1% significance level and FDBOD at a 10% significance level. The highest correlation is between LAC and LBOD (0.458), while the lowest is between LEV and TCPE (-0.564). These coefficients suggest that collinearity is unlikely among the variables. VIF results further confirm the absence of collinearity issues.

Table 2.
Pearson correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	VIF
(1) TCPE	1.000									-
(2) LBOD	0.278***	1.000								1.70
(3) INDP	0.103*	-0.464***	1.000							1.32
(4) FDBOD	-0.108*	0.098	-0.027	1.000						1.21
(5) LEV	-0.564***	-0.196***	0.040	0.085	1.000					1.39
(6) ROA	-0.228***	-0.011	-0.061	-0.099*	-0.381***	1.000				1.28
(7) LAC	-0.014	0.458***	-0.234***	0.034	-0.114*	0.050	1.000			1.36
(8) LAGE	0.017	-0.203***	0.072	-0.062	0.077	-0.011	-0.015	1.000		1.45
(9) BM	0.198***	0.048	-0.063	0.101*	-0.208***	-0.023	0.155**	0.432***	1.000	1.49

Note. ***, **, and * denote significance levels at 1%, 5%, and 10% respectively. Source: Compiled by authors

5.3 Regression Result

Table 3 shows that the size of the board (LBOD) has a significant positive association with TCPE before COVID-19 ($\beta = 3.514$), after COVID-19 ($\beta = 2.395$), and for the total sample period ($\beta = 2.873$), all at a 1% significance level. This supports hypotheses H1a and H1b, which predicted a significant positive association between LBOD and TCPE in Bangladesh before and during the COVID-19 pandemic. Board size significantly impacts TCPE, with larger boards positively influencing it. These findings align with previous studies by Hosain (2020), Jahid et al. (2020), and Ananzeh et al. (2022), indicating that larger board sizes are associated with increased TCPE. Larger boards enhance a firm's reputation and drive demand for CSR and transparency through diverse knowledge and expertise, suggesting that expanding board size can improve TCPE (Jahid et al., 2020). Similarly, Ananzeh et al. (2022) found that larger boards, with their diverse experiences and suggestions, better represent stakeholders and are more effective in driving corporate donation strategies. Furthermore, companies prioritize philanthropic expenditure based on stakeholders' power, urgency, and legitimacy, with COVID-19 necessitating increased genuine CSR initiatives that the board should facilitate and encourage managers to innovate (He & Harris, 2020).

Both before and after the emergence of COVID-19, a positive and statistically significant association was observed between board independence (INDP) and TCPE. This result supports H2a and H2b, which postulated a significant positive association between board independence and TCPE. Moreover, these findings align with the conclusions of Ananzeh et al. (2022), Fernández-Gago et al. (2014), and Jarboui et al. (2022), all of whom suggest that independent boards play a favorable role in corporate donations. The presence of independent directors enhances stakeholder representation on boards, leading to more charitable agendas to meet stakeholder expectations (Ananzeh et al., 2022). They are more likely to protect non-shareholder interests by proposing and adopting socially and environmentally sustainable strategies (Fernández-Gago et al., 2014). Furthermore, Baatwah et al. (2023) suggest that independent directors promoted CSR budgeting during COVID-19 to address the pandemic's challenges. However, Umar et al. (2023) found that board independence had a

significantly positive association with TCPE before COVID-19, but this association became insignificant during the pandemic. They argued that independent directors might hesitate to push for increased CSR expenditure during COVID-19, as many companies either shut down or significantly reduced operations due to lockdowns and restrictions.

Regarding female participation in the corporate boardroom (FDBOD), the results reveal a significant negative association with TCPE both before ($\beta=-0.546$) and after ($\beta=-0.289$) COVID-19, as well as for the total sample period ($\beta=-0.395$). Consequently, hypotheses H3a and H3b are rejected, which proposed a significant positive correlation between FDBOD and TCPE in Bangladeshi banks before and during COVID-19. The negative link between FDBOD and CPE aligns with the findings of Jia and Zhang (2012), suggesting that female directors consider the benefits of corporate donations and aim to minimize agency costs. The unexpected findings can be explained in several ways: First, female representation on boards in Bangladesh is minimal, which may lead them to act as free riders to safeguard their positions. Secondly, females on corporate boards may be treated as token representation due to the lack of specific quotas in the Corporate Governance Code-2018 of Bangladesh. Finally, female directors may be included in connecting with industry groups, attracting resources, and maintaining legitimacy, with power dynamics often limiting their influence compared to males.

However, this research contradicts several studies that claim the inclusion of women on corporate boards motivates companies to make more philanthropic donations than when boards are male-dominated (Cha & Abebe, 2016; Ben Selma et al., 2020; Elmaghrabi, 2021; Ananzeh et al., 2022).

Among the control variables, leverage (LEV) is statistically significant at the 1% level both before ($\beta=-4.972$) and during ($\beta=-4.578$) COVID-19, as well as for the total sample period ($\beta=-4.751$). Agency theory posits that disputes between shareholders and managers can be effectively addressed by employing debt instruments. Sheikh (2019) found a negative association between firm leverage and corporate social performance. ROA, the measure of firm profitability, is also found to be negatively and significantly associated with TCPE both in the total sample period and before the COVID-19

pandemic. This finding supports the managerial opportunism hypothesis proposed by Preston and O'Bannon (1997), confirming that more profitable firms contribute less to TCPE to pursue managers' benefits (Williamson, 1985). The audit committee size (LAC) revealed a significantly negative relationship with TCPE, indicating that the size of the audit committee deterred the CPE. Firm size (LAGE) positively impacts TCPE, as larger companies face greater public pressure (Godos-Díez et al., 2018) and have more resources to finance their CSR practices, which further elucidates the cause of their greater environmental and social score (Wellalage et al., 2018). This suggests that larger companies are more likely to invest in corporate social responsibility activities. Board meetings (BM) are positive and insignificant with TCPE. However, Kouaib et al. (2020) empirically documented a significant positive association between BM and sustainable performance.

Table 3.
OLS regression results

VARIABLES	Model 1 Full Sample	Model 2 Before COVID-19	Model 3 During COVID-19
<i>LBOD</i>	2.873*** (0.692)	3.514*** (1.126)	2.395*** (0.800)
<i>INDP</i>	2.569*** (0.734)	3.363*** (0.835)	2.099** (0.902)
<i>FDBOD</i>	-0.395*** (0.114)	-0.546*** (0.188)	-0.289* (0.152)
<i>ROA</i>	-21.27*** (2.372)	-20.33*** (3.263)	-27.14 (23.56)
<i>LEV</i>	-4.751*** (1.042)	-4.972*** (1.597)	-4.578*** (1.685)
<i>LAC</i>	-2.129*** (0.639)	-2.531*** (0.961)	-1.717** (0.726)
<i>LAGE</i>	0.345* (0.212)	-0.0714 (0.425)	0.604** (0.263)
<i>BM</i>	0.0102 (0.00884)	0.0310 (0.0213)	0.00215 (0.00781)
Constant	9.618*** (1.271)	9.406*** (2.204)	9.789*** (1.891)
Year FE	Yes	Yes	Yes
Observations	264	132	132
R-squared	0.667	0.741	0.576

Note. Robust standard errors are in parentheses. ***, **, and * denote significance levels at 1%, 5%, and 10% respectively. Source: Compiled by authors

Table 4.
OLS regression results with moderation

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
<i>LBOD</i>	2.327*** (0.480)		
<i>LBOD*ROA</i>	-49.18 (36.01)		
<i>INDP</i>		-0.431 (0.752)	
<i>INDP*ROA</i>		128.1*** (46.11)	
<i>FDBOD</i>			-0.943*** (0.134)
<i>FDBOD*ROA</i>			80.91*** (10.49)
<i>ROA</i>	25.16 (34.57)	-36.85*** (5.498)	-22.44*** (1.865)
<i>LEV</i>	-4.713*** (0.370)	-4.897*** (0.330)	-3.077*** (0.393)
<i>LAC</i>	-2.045*** (0.528)	-0.671 (0.499)	-0.687 (0.440)
<i>LAGE</i>	0.403* (0.235)	0.237 (0.239)	0.282 (0.216)
<i>BM</i>	0.00450 (0.00782)	0.00189 (0.00814)	-0.000885 (0.00746)
Constant	10.52*** (0.764)	12.53*** (0.548)	10.98*** (0.558)
Observations	264	264	264
R-squared	0.621	0.598	0.670

Note. Standard errors are in parentheses. ***, **, and * denote significance levels at 1%, 5%, and 10% respectively. Source: Compiled by authors

Table 4 reveals the moderating role of firm performance in the association between TCPE and CBC. The board of directors is a key player in corporate governance, responsible for ratifying and monitoring key decisions like recruitment, dismissal, and management rewards, impacting all corporate decisions and social performance (Jo & Harjoto 2011). The interaction term of *LBOD*ROA* is insignificant and fails to support H4a. However, the interaction coefficient of *INDP*ROA* is significantly positive with TCPE and supports H4b. This finding is consistent with the outcome of Fernández-Gago et al. (2014). This result supports the stakeholder theory, which claims that independent boards are increasingly striving to meet the expectations of various

stakeholders (Kaymak & Bektas, 2017; Liao et al., 2015) and, consequently, the firm's external reputation and financial performance. Similarly, Baatwah et al. (2023) emphasize that recognizing the importance of board independence is crucial for companies to meet shareholders' financial expectations and effectively address social responsibility and transparency requirements.

The moderating role of ROA with TCPE and FDBOD is also statistically positive at the 1% level, espousing H4c. Terjesen et al. (2009) confirm that the presence of female directors on corporate boards enhances the efficacy of governance through various board procedures and interactions with entities. Mallin and Michelon (2011) concluded that the inclusion of female directors who are sensitive to the concerns of others and consider the various interests of stakeholders can improve the service function of the board of directors. Mallin et al. (2013) state that monitoring mechanisms increase organizations' probability of committing to CPE and improving their performance.

5.4 Robustness Test

To test the robustness of our study, we adopted various alternative approaches. First, to account for differences in CPE engagement between firms, we used Tobit regression following the recommendation of Umar et al. (2023). This approach accommodates situations where certain firm years have no contribution to CPE. Given that a corporation cannot incur negative CSR expenditures and incurs no CSR expenditures, it is crucial to understand that corporate philanthropic contributions are subject to a minimum threshold but have no maximum. However, we cannot ascertain the maximum value of the corporations' CSR expenditures. As a result, corporate philanthropic contributions were left censored at a 'zero' limit value (Umar et al., 2022). Table 5 reveals the Tobit regression of the association between CPE and CBC. Consequently, the outcomes of both the OLS (Table 3) and Tobit regression analyses are qualitatively similar.

Table 5.

Tobit Regression

VARIABLES	Model 1	Model 2	Model 3
	Total Sample	Before COVID-19	During COVID-19
<i>LBOD</i>	2.908*** (0.393)	3.595*** (0.597)	2.417*** (0.517)
<i>INDP</i>	2.597*** (0.526)	3.429*** (0.876)	2.113*** (0.661)
<i>FDBOD</i>	-0.401*** (0.108)	-0.559*** (0.154)	-0.292* (0.150)
Constant	9.731*** (0.676)	9.495*** (1.069)	9.842*** (0.957)
Baseline controls	Yes	Yes	Yes
Pseudo R2	0.3229	0.3724	0.2761
Observations	264	132	132

*Note. Robust standard errors are in parentheses. ***, **, and * denote significance levels at 1%, 5%, and 10% respectively. Source: Compiled by authors*

Secondly, CPE is divided into four major subgroups (education, health, environment, and others), as Umar (2023) recommended. In 2014, Bangladesh banks directed all scheduled banks to allocate approximately 30% of TCPE to education and 20% to health, and they added about 10% to the environment in 2015. In 2022, the revised education, health, and environment allocations were 30%, 30%, and 20%, respectively (Bangladesh Bank, 2023). The sector-wise association of CPE and CBC among all banks is represented in Table 6. The regression results for LBOD and INDP with CPE are consistent with the baseline results across all sectors. The association of FDBOD with CPE also matches across sectors, except for CPE in the environment.

Finally, to address potential endogeneity issues caused by reverse causation in the association between CPE and CBC, the study employed a lead-lag method in all regression models, as Bose et al. (2022) and Das et al. (2023) suggested. The regression results using the lead-lag model are presented in Table 7. The outcomes are both sector-wise and align with the baseline regression results.

Table 6.

Regression results sector-wise CPE

VARIABLES	Model 1 CPEEDU	Model 2 CPEHEL	Model 3 CPEENV	Model 4 CPEOTH
<i>LBOD</i>	4.375*** (1.293)	2.793*** (0.717)	3.670** (1.443)	4.057*** (1.176)
<i>INDP</i>	6.032*** (1.252)	2.817*** (0.842)	7.086*** (1.641)	3.259*** (1.244)
<i>FDBOD</i>	-0.698*** (0.216)	-0.599*** (0.181)	-0.637 (0.426)	-0.477*** (0.140)
Constant	3.300 (2.540)	7.298*** (1.306)	0.647 (2.402)	7.779*** (1.935)
Baseline controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	264	264	264	264
R-squared	0.290	0.388	0.146	0.534

Note. Robust standard errors are in parentheses. ***, **, and * denote significance levels at 1%, 5%, and 10% respectively. Source: Compiled by authors

Table 7.
Lead lag regression model

VARIABLES	Model 1 TCPE	Model 2 CPEEDU	Model 3 CPEHEL	Model 4 CPEENV	Model 5 CPEOTH
<i>LBOD</i>	2.580*** (0.705)	3.948*** (0.948)	2.797*** (0.873)	4.209** (1.712)	2.805*** (0.812)
<i>INDP</i>	2.595*** (0.725)	4.103*** (1.024)	3.134*** (1.126)	5.940*** (2.213)	2.095*** (0.600)
<i>FDBOD</i>	-0.319*** (0.113)	-0.454* (0.238)	-0.459** (0.187)	-0.846* (0.457)	-0.385*** (0.144)
Constant	9.835*** (1.398)	6.154*** (2.019)	7.020*** (1.510)	-0.465 (2.633)	9.932*** (1.700)
Baseline controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	231	231	231	231	231
R-squared	0.690	0.337	0.390	0.112	0.650

Note. Robust standard errors are in parentheses. ***, **, and * denote significance levels at 1%, 5%, and 10% respectively. Source: Compiled by authors

Table 8.
Summarized results of hypothesis tests

Hypothesis	Variables	Findings
<i>Panel A: Board attributes and CPE</i>		
H1a	Effect of board size on CPE before COVID-19	Positive and significant
H1b	Effect of board size on CPE during COVID-19	Positive and significant
H2a	Effect of board independence on CPE before COVID-19	Positive and significant
H2b	Effect of board independence on CPE during COVID-19	Positive and significant
H3a	Effect of board gender diversity on CPE before COVID-19	Negative and significant
H3b	Effect of board gender diversity on CPE during COVID-19	Negative and marginally significant
<i>Panel B: Moderating effect of firm performance (ROA)</i>		
H4a	The joint effect of board size and ROA on CPE	Not significant
H4b	The joint effect of board independence and ROA on CPE	Positive and significant
H4c	The joint effect of board gender diversity and ROA on CPE	Positive and significant

Table 8 summarizes the key findings of the analyses. Panel A of Table 8 explains the results of hypotheses H1 to H3, which are constructed to capture how main board attributes, board size, independence, and gender diversity affect the CPE. Board size and independence positively affect the CPE before and during the COVID-19 pandemic, whereas board gender diversity negatively affects the CPE before and during the pandemic. Panel B of Table 8 shows how firms' financial performance, i.e., profitability, moderates these associations. The positive effect of board size has become insignificant when interacting with profitability (ROA). However, the joint effect of board independence and ROA remains positively significant. Interestingly, the negative association between gender diversity and CPE reverses when gender diversity interacts with profitability, indicating the crucial role of women directors in shaping the level of CPE and bridging the interest of diverse stakeholders, particularly ensuring the interest of key stakeholders, i.e., investors.

6. Discussion and Policy Implications

This study empirically scrutinized the effect of three board attributes on CPE and the moderating role of firm performance using a sample of listed banks in Bangladesh. CPE was measured by the annual expenditure incurred by sample companies on CSR activities during the sample period. Findings reveal the significant positive associations between board size and independent directors with CPE before and during COVID-19, aligning with stakeholder and legitimacy theory predictions. On the contrary, board gender diversity is significantly and negatively associated with CPE before COVID-19, which becomes marginally significant during COVID-19. The results are robust, using Tobit regression and segment-wise CPE data. The lead-lag model was also utilized to address the endogeneity, with findings consistent with base regression results.

The positive association between board size and CPE is consistent with findings from Hosain (2020), Adhikary & Mitra (2022), Ananzeh et al. (2022), and Umar et al. (2022). It is advisable to encourage corporate entities to increase the size of their boards. This will empower a wider range of members to leverage their extensive expertise to guide a firm's operations and efficiently oversee corporate executives, particularly in discussions concerning the relationship with philanthropic activities. A larger board size and diverse expertise enable more detailed and comprehensive analysis in decision-making processes, ensuring a positive linkage of firm performance with CPE.

Board independence, a pivotal monitoring mechanism of sound corporate governance, is also positively and significantly associated with CPE. These results align with findings from Adhikary and Mitra (2022), Ananzeh et al. (2022), and Fernández-Gago et al. (2014). Additionally, more external or non-executive directors with diverse perspectives, expertise, and abilities should be encouraged to remain in the boardroom, as their presence positively influences discussions on financial contributions to philanthropic areas. The interaction between board independence (INDP) and return on assets (ROA) is also positive and significant in TCPE. This supports Fernández-Gago et al. (2014), who documented that board independence influences the adoption of corporate philanthropic activities, with firm performance strengthening this relationship. The presence of an independent board significantly and favorably affects

social activities, suggesting that directors representing minority shareholders may be more sensitive to the claims of other stakeholders.

The negative relationship between board gender diversity and CPE is similar to what Jia and Zhang (2012) found, suggesting that CPE incurs agency costs and that female directors may prioritize minimizing these costs over corporate donations. However, the interaction effect of FDBOD with ROA is positive and significant, justifying the role of female directors in protecting shareholder value and supporting corporate philanthropic activities when sufficient resources (profit) are available.

These findings have several implications for policymakers, regulators, company directors, and other stakeholders. Firstly, Bangladeshi policymakers and regulators should develop effective CSR regulations mandating companies to increase their CPE for essential needs such as education, health, and the environment. This would help achieve SDGs, including no poverty (SDG 1), zero hunger (SDG 2), good health and well-being (SDG 3), quality education (SDG 4), and reduced inequality (SDG 10). Companies should also disclose their sector-wise donations in annual reports. Secondly, policymakers and regulators should ensure larger and more independent boards, as both attributes significantly affect the adoption of social activities. This would protect shareholders, as firm performance could strengthen the association of board size and board independence with corporate philanthropic expenditure. Thirdly, this study examines the influence of women in boardrooms on CPE before and during COVID-19 and explores the segment-wise association of these variables. Therefore, this study enhances the present understanding of the correlation between women on boards and CPE, advancing knowledge regarding corporate connections with institutional and governmental settings. Fourthly, the research challenges the notion that women are more benevolent during crises, highlighting the vital function of female directors in assessing corporate contributions in the aftermath of COVID-19. As a result, investor value is protected, resources are not wasted, and financial backing for corporate philanthropic initiatives is facilitated when sufficient profit is available. The study recommends global initiatives to increase female participation on corporate boards, particularly in developing countries. Finally, the study highlights the lack of research

on the optimal approach for companies to initiate and implement CPE, particularly in response to COVID-19. It recommends that female directors assist publicly traded companies in assessing the benefits of CPE and preventing frivolous resource donations.

7. Conclusion and Limitations

This study examines the impact of CBC on CPE in all listed banks in Bangladesh. Using 264 firm-year observations from 33 listed banks between 2015 and 2022, it investigates three key corporate governance attributes—board size, board independence, and board gender diversity—and their influence on CPE. Additionally, it explores the moderating role of firm performance in the CBC-CPE relationship.

The findings reveal that board size and independence positively influence CPE both before and during the COVID-19 pandemic and over the full sample period. In contrast, board gender diversity is negatively associated with CPE during normal periods but becomes marginally significant during the pandemic. This suggests that female directors in Bangladesh's banking industry prioritize resource efficiency and shareholder interests over broader stakeholder concerns, challenging the assumptions of stakeholder theory. However, the interaction effects of firm profitability with board independence and board gender diversity are positive and significant, indicating that both independent and female directors ensure better resource allocation, balancing the interests of shareholders, communities, and other stakeholders. The positive interaction effects suggest that independent and female directors adopt a rational approach to corporate philanthropy, supporting CPE when financial performance is strong. This aligns with the stakeholder perspective, as banks prioritize philanthropy after securing substantial returns for investors, thereby addressing the competing interests of different stakeholders. The study also identifies three critical sectors—education, health, and environment—central to achieving the United Nations' SDGs.

Despite its contributions, this study has some limitations. First, it focuses solely on listed banks on the Dhaka Stock Exchange. Future research could extend the analysis to other industries or conduct cross-national studies to provide broader insights. Second, the study employs an accounting-based measure of firm performance as a moderating

variable, which may be influenced by accounting choices and reporting discretion. Finally, the study examines only three broad attributes of CPE. Future research should explore additional governance factors, such as board tenure, director interlocks, and other aspects of board diversity, to gain deeper insights into corporate philanthropy's governance mechanisms. Additionally, cross-country comparisons could help determine whether regulatory differences influence the CBC-CPE relationship.

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Appendix

Appendix A. Definition of variables

Variable	Acronym	Operational definition
Total Corporate Philanthropic Expenditure	TCPE	The total amount paid for the corporate social contribution was transformed into a log value.
CPE in Education	CPEEDU	The total amount of money paid for the corporate social contribution to education and transformed into a log value.
CPE in Health	CPEHEL	The total amount paid for the corporate social contribution to health was transformed into a log value.
CPE in the Environment	CPEENV	The total amount of money paid for the corporate social contribution to the environment and climate change and transformed into a log value.
CPE in other areas	CPEOTH	The total amount of money paid for the corporate social contribution in other areas and climate change and transformed into a log value.
Board Size	LBOD	The number of directors in the corporate boardroom and transformed into a log value.
Board independence	INDP	The fraction of independent directors to total directors in the boardroom.
Board gender	FDBOD	The dummy variable coded as 1 if having at least one female director in the boardroom, zero otherwise.
Leverage	LEV	Total debts scaled by total assets
Profitability	ROA	Net income scaled by total assets
Audit committee size	LAC	The number of directors in the audit committee and transformed into a log value.
Firm Age	LAGE	The number of years since incorporation and converted into to log.
Board meeting	BM	The number of meetings held in a financial year

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