

# The effect of corporate governance on environmental and social performance: Evidence from emerging economy

Md Abdur Rouf<sup>1\*</sup> , Mohammad Sharif Hossain<sup>2</sup> , Md Mohedul Islam<sup>3</sup> , Md Anisuzzaman<sup>4</sup> ,  
Md Akhtaruddin<sup>5</sup> 

<sup>1</sup>Department of Business Administration, Daffodil International University, BANGLADESH

<sup>2</sup>Department of Business Administration, Uttara University, BANGLADESH

<sup>3</sup>Department of Business Administration, University of Pikeville, USA

<sup>4</sup>Research Assistant, Georgia State University, USA

<sup>5</sup>Department of Business Administration, Ahsania Mission University of Science & Technology, BANGLADESH

\*Corresponding Author: [roufnakua@gmail.com](mailto:roufnakua@gmail.com)

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## ABSTRACT

This study aims to investigate the effect of corporate governance (CG) on environmental and social performance (ESP) by determining the moderating effect of insider ownership (IO) within the context of the Bangladeshi textile industry. Employing a quantitative approach, this research analyzes data from 255 annual reports of 51 textile firms listed on the Dhaka Stock Exchange over five years (2020-2024). Content analysis was utilized to assess ESP levels, while regression models investigated the relationships between CG variables (female directors, board leadership structure, board size) and ESP, considering the moderating role of IO. The results show that CG variables positively affect ESP, with significant effects coming from female directors, board leadership structure, and board size. While IO exhibits a negative moderation with IO, natural conflicts between majority and minority shareholders may hamper ESP efforts. This study offers several significant contributions to the literature on CG and ESP. It provides novel insights by focusing on an emerging economy, Bangladesh, and introduces IO as a moderating variable in the CG-ESP relationship. The findings suggest that while CG mechanisms enhance ESP, IO poses challenges that need addressing to optimize ESP outcomes. Furthermore, this study increased the length of the study period, leading to more complete data, and more broadly generalized results. Additional research is needed on other determinants and contexts, such as cross-country studies and different kinds of datasets, to explore corporate ESP behavior in a more comprehensive way.

**Keywords:** corporate governance, environmental and social performance, insider ownership, textile industry, content analysis

## INTRODUCTION

Given the revealing ecological and social correlation of textile firms, corporate governance (CG) is critical for firms to enhance their environmental and social performance (ESP). The textile sector represents an appropriate context to develop this analysis given its high environmental footprint and complex supply chains. Effective corporate governance can improve accountability, transparency in reporting, ethical management practices, and stakeholder engagement, enabling textile companies to challenge key issues such as resource conservation, waste management, and fair labor practices, thereby promoting better environmental stewardship and social responsibility (Correa-Garcia et al., 2020; Gerged, 2020; Nuskiya et al., 2021; Usman & Yahaya, 2023). Empirical research on environmental and social performance and their

determinants is limited and has several shortcomings (Wasiuzzaman & Wan Mohammad, 2020). Firstly, despite suggestions from both empirical and theoretical literature that top management team structure influences corporate disclosure decisions, including environmental disclosures, few studies have investigated the impact of board characteristics on environmental and social performance (ESP) practices (Agyemang et al., 2020; Haque & Ntim, 2018). Existing studies have primarily focused on the relationship between board characteristics and firm value, executive pay, and various types of disclosures, such as financial and social disclosures (Al-Bassam et al., 2018; Elmagrhi et al., 2018; John et al., 2020; Mishra & Kapil, 2018; Ntim et al., 2017; Usman & Yahaya, 2023). Secondly, studies on environmental and social performance practices have predominantly focused on developed and few emerging economies, paying scant

attention such as Indonesia (Gerged, 2020; Trireksani & Djajadikerta, 2016), Middle East and Africa (Akrouf & Othman, 2013; Gerged et al., 2018; Habbash, 2016) region. However, these regions' regulatory, political, cultural, and economic contexts differ considerably, which may affect corporate disclosure practices differently (Al-Gamr et al., 2020). For instance, Gerged et al. (2018) and Shahbaz et al. (2015) suggest that the lack of regulatory enforcement in emerging countries may impact their environmental and social performance. Thirdly, existing studies in emerging economies have largely been descriptive and have primarily examined the effect of general corporate attributes (e.g., profitability, audit committee, and age) on environmental and social performance (Buallay & Al-Ajmi, 2020; Gerged et al., 2018; Giannarakis et al., 2020). Moreover, previous research in emerging economies has only explored the impact of a limited number of internal governance mechanisms on ESP (Gerged, 2020; Ullah et al., 2019) and few studies investigated the moderating influence of insider ownership on the relationship between governance and environmental and social performance. This study addresses these gaps by examining the moderating effect of insider ownership on the relationship between corporate governance and ESP in Bangladesh's textile industry, providing novel insights into internal governance structures' impact on ESP from Agency and Stakeholder Theory perspectives.

This study contributes to literature in several significant ways. Firstly, it provides longitudinal evidence spanning five years, examining the moderating effect of insider ownership between corporate governance and ESP across 51 firms of the textile industry in the emerging economy of Bangladesh, thus departing from the primarily descriptive or qualitative nature of previous studies (Ullah et al., 2019). Second, this study provides new evidence on the factors affected by internal governance structures in shaping ESP practices by investigating different corporate governance mechanisms. Finally, the paper contributes new empirical insights to the agency and stakeholder theory literature by providing efficiency and legitimation perspectives on the influence of corporate governance on environmental and social performance practices.

The subsequent sections of this paper are organized as follows: Section 2 reviews empirical literature and formulates the research hypotheses, Section 3 presents the theoretical background, Section 4 outlines the methodology, Section 5 discusses the empirical findings, and Section 6 concludes the study.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Female Director

According to agency theory, a more diverse board of directors is better equipped to fulfill monitoring functions and is more likely to represent various stakeholder categories (García-Sánchez et al., 2019; Tejedo-Romero & Araujo, 2020). Gender diversity, a highly debated aspect of board diversity (Bazel-Shoham et al., 2024), is particularly noteworthy. Women have been shown to enhance monitoring functions

and better address stakeholder needs and interests (Tejedo-Romero & Araujo, 2020). Their heightened efficiency in monitoring stems from their commitment and diligence and their ability to foster a positive board atmosphere (Elmagrhi et al., 2018; Rouf & Akhtaruddin, 2020). This effectiveness in monitoring managerial activities extends to ethics, corporate social responsibility (CSR), and environmental issues (Amalia et al., 2022; Tejedo-Romero & Araujo, 2020). Women directors have demonstrated a particular interest in sustainability and environmental concerns (Bazel-Shoham et al., 2024; Pucheta-Martínez et al., 2021), which aligns with their cultural values that prioritize well-being and quality of life over economic aspects and personal interests (Tejedo-Romero & Araujo, 2020). Furthermore, as they tend to practice transparency and ethical behavior, they are able to satisfy stakeholder demands (Baalouch et al., 2019; Vitolla et al., 2020). Hence, the greater monitoring abilities, sustainability orientation, and stakeholder orientation of female directors may promote the wider spread of environmental information in integrated reports (Gerged, 2020).

Prior research has yielded conflicting findings regarding the impact of board female directors on environmental and social performance. Baalouch et al. (2019), and Tibiletti et al. (2021) found a positive effect, while Wasiuzzaman and Wan Mohammad (2020), found no significant impact. However, given the robust theoretical underpinning, we propose the following hypothesis:

- H<sub>1</sub>** The female directors of the board have a positive association with Environmental and social performance.

### Board Leadership Structure

CEO duality refers to the practice of one individual serving simultaneously as both the CEO and the chairperson of the board. While the CEO is responsible for devising and executing company-wide strategies and policies, the chairperson's role is to ensure the effective functioning of the board in advising and overseeing the CEO (Husted & de Sousa-Filho, 2019; Khairredine et al., 2020; Miah et al., 2025). Empirical findings regarding the relationship between CEO duality and voluntary environmental and social performance (ESP) are inconclusive (Kılıç & Kuzey, 2019). Wasiuzzaman and Wan Mohammad, (2020) found no significant association between the two variables, Wedari et al. (2021) contended that CEO duality negatively influences ESP. Consequently, firms where the CEO and the board chair are distinct entities are more inclined to adhere to corporate governance (CG) recommendations. Indeed, Al-Qahtani and Elgharbawy (2020) concluded that CEO duality is negatively correlated with the quality of greenhouse gas emission disclosure, aligning with agency theory's assertion that separating these roles mitigates abuses of power and preserves board independence (Crifo et al., 2019; Kılıç & Kuzey, 2019). CEO duality may thus foster ineffective and opportunistic behavior due to excessive power concentration (Castilla-Polo et al., 2018; Ozdemir et al., 2021). However, Shahab and Ye (2018) found no significant impact of CEO duality on ESP. Furthermore, Sankara et al. (2017) found that CEO duality has no significant impact on ethical environmental and social performance, particularly with respect to the timely submission of the CY2013 Form SD and

compliance with the minimum legal requirements for conflict minerals reporting. In light of these findings, the following hypothesis is proposed:

- H<sub>2</sub>** The board leadership structure of a firm has a positive association with Environmental and social performance.

### Board Size

Board size refers to the composition of both inside and outside directors serving on a corporate board (Correa-Garcia et al., 2020). More significant board composition typically represents an increased diversity in experience, financial proficiency, and Problem-solving skills (Tibiletti et al., 2021) which also enhances the firm's social/positive reputation/image, which, as a consequence, increases the board-level ability to shadow and detect the managerial opportunism level (Elmagrhi et al., 2018). Some studies have found that compared to firms with smaller boards, those with larger boards are more inclined to disclose information regarding their corporate governance (CG) practices (Al-Bassam et al., 2018; Elmagrhi et al., 2018; Samaha et al., 2015). Additionally, prior research has indicated a positive association between board size and environmental disclosures (Agyemang et al., 2020; Ndalu et al., 2021; Trireksani & Djajadikerta, 2016), as well as with the level of corporate social responsibility (CSR) reporting (Jan et al., 2021; Shahab & Ye, 2018). Furthermore, it has been argued that larger boards may facilitate ethics disclosure due to the likelihood of including highly ethical members who can influence such disclosures (Baselga-Pascual et al., 2018; Giner et al., 2020). However, studies suggest that larger boards may encounter coordination, communication, and monitoring challenges (Cao et al., 2019), which could have adverse effects on both CG and environmental disclosures (Giannarakis et al., 2020; Nuskiya et al., 2021). Consequently, the more directorships held by board members, the less likely a company will disclose information about governance and the environment. Moreover, Khaireddine et al. (2020) reported a non-significant association between board size and ethical CSR disclosure. These conflicting findings indicate a lack of consensus on the impact of board size on voluntary disclosure (Samaha et al., 2015). Grounded in agency theory—which suggests that smaller boards are more effective in monitoring—and supported by corporate governance codes that advocate limits on board size (Correa-Garcia et al., 2020; Giner et al., 2020), the following hypothesis has been developed:

- H<sub>3</sub>** The board size of a firm has a positive association with Environmental and social performance.

### Moderating Effect of Insider Ownership Structure on the Relationship Between CG and ED

When insiders own large numbers of shares, it is called insider ownership. As noted by Farooq and Noor (2023), to gain either stable access to the firm or maximum control over the organization, insider ownership usually contains large shares, and their opportunistic use of private information may include but is not limited to the expropriation of minority shareholders' rights in developing countries. This situation fosters an environmental and social performance of information asymmetry between managers and shareholders,

resulting in an agency problem that elevates agency costs for the firm (Alduais et al., 2022; Rehman et al., 2022; Rouf et al., 2024).

Within the discussion, there are two very different theoretical approaches. Insider management ownerships of firms are undertaken to maintain the reputation and reputation of the company through investing in long assets that could reduce agency costs because of their unique ties (Nugroho et al., 2018) on the one hand. According to agency theory, the alignment of interests between managers (decision-makers) and owners (residual claimants), who are often insiders, helps mitigate type I agency problems (Alduais et al., 2022). Insider owners, having privileged access to company information, are better positioned to monitor management effectively, thus reducing agency conflicts with shareholders (Nugroho et al., 2018; Rouf & Hossan, 2020).

On the other hand, it is argued that insider ownership may lead to type II agency problems, such as conflicts of interest between majority and minority investors (Duréndez & Madrid-Guijarro, 2018). This scenario is commonly observed in concentrated ownership structures where individual and block shareholders acquire a significant portion of shares (Akhtaruddin & Haron, 2010) and exert control over managerial decisions. Consequently, major shareholders include internal investors and block shareholders, while minor shareholders consist of external investors. Thus, when insider owners hold the majority of shares, monitoring activities on the firm are reduced, leading to increased agency costs (Alduais et al., 2022; Nugroho et al., 2018).

Research indicates that ownership concentration impacts environmental performance (Fitri et al., 2019; Rouf & Al-Faryan, 2024; Viana & Crisóstomo, 2020). Should that be the case, this study uses the concentration of insider ownership as the moderating variable with respect to the relationship between corporate governance, environmental performance, and social performance as the moderating variable. Insider ownership concentration influences environmental and social performance by exacerbating agency problems and increasing agency costs, particularly in firms with weak governance systems, where controlling shareholders may seek to conceal their motives through various corporate governance activities and withhold information (Jan et al., 2021). Rehman et al. (2022) posits that while corporate governance activities yield long-term benefits for firms, they pose short-term burdens. In ownership structures with a dominant owner, the focus is often on short-term profit maximization, leading to a reluctance to invest in corporate governance activities and a belief that environmental concerns are not easily quantifiable, thereby amplifying environmental and social performance while diminishing firm value (Al-Bassam et al., 2018).

The analysis suggests that increases in insider ownership are associated with lower levels of voluntary disclosure related to corporate governance practices, as well as diminished environmental performance. These findings imply a positive relationship between corporate governance quality and environmental performance, particularly in firms with more concentrated ownership structures. Accordingly, the hypothesis is formally stated as follows:

**H<sub>4</sub>** Insider ownership (i.e., the proportion of equity held by top-level management) is negatively associated with environmental and social performance.

### Theoretical Framework

The literature on corporate governance and corporate disclosures underscores a robust link between these domains in both developed and emerging economies (Al-Bassam et al., 2018; Al-Hadi et al., 2019; Elmagrhi et al., 2018; John et al., 2020; Mishra & Kapil, 2018; Ntim et al., 2017; Usman & Yahaya, 2023). Drawing support from agency theory and stakeholder theory, this literature suggests that well-governed firms tend to disclose higher-quality information to investors, thereby reducing information asymmetry, investor risk, and the cost of capital (Farooq & Noor, 2023). Such firms function as agents between managers and investors, aiming to mitigate information asymmetry.

This association between corporate governance and disclosures extends beyond general corporate disclosures to include environmental and social performance (Giannarakis et al., 2020). The effectiveness of environmental and social performance is shaped by firms' external and internal governance systems (Chen et al., 2020). Additionally, there exists a bidirectional relationship, where quality environmental and social performance enhances the effectiveness of corporate governance practices (Al-Hadi et al., 2019). Managers, perceiving themselves as agents of investors' interests, tend to disclose more information when it outweighs associated agency costs (Jensen & Meckling, 2019).

Environmental and social performance transcends shareholder wealth maximization to encompass the interests of all stakeholders, garnering support from stakeholder theory (Jan et al., 2021). Stakeholder theory underscores the importance of disclosures in facilitating informed decision-making for all stakeholders, not just investors, and in achieving environmental and social performance goals and maximizing firm value (Broadstock et al., 2020; Buallay & Al-Ajmi, 2020). The engagement and representation of all stakeholders in governance and decision-making processes promote environmental and social performance (Ntim et al., 2017).

Consequently, although agency theory focuses on the role of disclosures in serving stakeholders to alleviate information asymmetry, stakeholder theory, on the other hand, focuses on the role of engagement through disclosures in mitigating firm risk due to stakeholders making uninformed decisions. Together, these complementary theories shed light on the main research question regarding the relationship between female directors and board leaders and environmental and social performance.

## METHODOLOGY

### Sample

This study's sample, covering 56 companies selected from the top listed firms on the Dhaka Stock Exchange over a 5-year period (2020 – 2024), was selected due to its contributions to Bangladesh's GDP growth. Five firms were excluded because of

data unavailability and other constraints, resulting in a final sample size of 51 firms and 255 annual reports.

### Dependent Variable and Content Analysis

Content analysis serves as a valuable tool for summarizing and analyzing quantitative data within written documents offering replicable and valid methods for drawing inferences from observed communications (Riffe et al., 2019). It enables the detection of associations that might otherwise be challenging to identify, making it an ideal method for this study to assess the level of environmental and social performance (Gerged, 2020). Most of the annual reports of Bangladeshi firms are scanned documents; therefore, conversion into PDF files creates complications. Manual testing leads to precise results by reading all the related information at the individual level, where manual working and thinking are required (Mousa & Elamir, 2014). Besides the identification of statements with respect to one another, human judgment can outperform computers and is more effective and flexible (Elmagrhi et al., 2018). Therefore, this study has used content analysis to meet these objectives.

### Estimation Approach

This study applies the following econometric models to investigate the effect of corporate governance mechanisms on environmental and social performance (ESP). In the model specification, *i* denotes cross-sectional units and *t* represents the time dimension. The empirical analysis is conducted using the mean values of the variables over the study period. The independent variables are defined accordingly, while Environmental and Social Performance (ESP) constitutes the dependent variable, operationalized through the Environmental and Social Performance Reporting Index.

Although ESP is constructed using content analysis, it is conceptualized as a latent construct represented by a single composite indicator (ESP-1). While modeling a single-indicator construct may appear to limit the conventional covariance-based SEM (CB-SEM) approach, the use of Partial Least Squares Structural Equation Modeling (PLS-SEM) is methodologically justified for several theoretical and empirical reasons.

The following model using cross-sectional data is assessed to look into and verify the veracity of the aforementioned hypotheses.

#### Model 1

$$ESP_i = \alpha_0 + \beta_1 FDi + \beta_2 BLSi + \beta_3 BSi + \beta_4 TAI + \beta_5 TSi + \sum Industry\ dummy + \sum Year\ dummy + \epsilon_i \quad (1)$$

The moderating effect of insider ownership with female directors and board leaders on environmental and social performance is investigated using the following model:

#### Model 2

$$TESPRI_i = \alpha_0 + \beta_1 FDi + \beta_2 BLSi + \beta_3 BSi + \beta_4 TAI + \beta_5 TSi + \beta_6 BS * OS + \beta_7 BLS * OS + \beta_8 FBM * OS + \sum Industry\ dummy + \sum Year\ dummy + \epsilon_i \quad (2)$$

**Table 1.** Individual item reliability

Constructs	Items	Factor loading	Cronbach's Alpha	Rho_A	Composite reliability	AVE
Environmental and social performance	ESP-1	1.000	1.000	1.000	1.000	1.000
Corporate governance	FD	0.559	0.892	0.895	0.707	0.755
	BLS	0.740				
	BS	0.700				
IO	IO		1.000	1.000	1.000	1.000
Control variables	TA	0.969	0.868	0.874	0.934	0.876
	TS	0.901				
R square		0.538				
Adjusted R <sup>2</sup>		0.519				

The variables that resolve in the survey are like shadows:

#### Dependent variables

ESP = Environmental and social performance

#### Independent variables

FBM = Female Board Member - Percentage of female directors on the board

BLS= Board leadership structure

BS = Board Size - Total number of board members.

#### Control variables

TA = Total assets of each firm.

TS = Total Sales of each firm.

#### Moderating variable

IO= Insider Ownership - The percentage of equity owned by the insiders (top-level management) of a firm

#### Justification for Using PLS-SEM

PLS-SEM is appropriate for this study because it is prediction-oriented and focuses on maximizing the explained variance ( $R^2$ ) of Environmental and Social Performance (ESP). The ESP index, derived from content analysis, represents a composite construct rather than a purely reflective latent variable, making PLS-SEM more suitable than covariance-based SEM. Additionally, PLS-SEM accommodates single-indicator constructs, does not require multivariate normality, and performs well with small-to-medium samples. Its bootstrapping procedure further ensures robust statistical inference. Therefore, PLS-SEM provides a methodologically rigorous and theoretically consistent approach for examining the impact of corporate governance on ESP.

## RESULTS AND DISCUSSION

**Table 1** presents the various constructs (or variables) utilized in this study, along with their corresponding items (individual questions) and different statistical reliability assessments. These constructs represent the key ideas or factors under examination, including environmental and social performance, corporate governance insider ownership, and control variables. For instance, within the corporate governance construct, three items are identified: FD, BLS and BS.

Cronbach's alpha, a measure of internal consistency, quantifies the degree of interrelatedness among a set of items (Christmann & Van Aelst, 2006). Typically, a value exceeding 0.7 is considered acceptable (Cho & Kim, 2015). The values

**Table 2.** Variance inflation factor (VIF)

Constructs	VIF
FD	1.017
BLS	1.117
BS	1.104
CG * IO	1.000
ESP	1.000
IO	1.000
TA	2.247
TS	2.427

provided in **Table 1** for each construct, such as 0.895 for corporate governance, indicate strong internal consistency across all items.

Similarly, Rho\_A, also known as the average association between items, serves as a measure of reliability, with values closer to 1 signifying greater reliability (Mia et al., 2022). The high numerical values associated with all constructs in **Table 1** indicate the reliability of the data.

Composite reliability, akin to Cronbach's alpha but more robust for confirmatory factor analysis, assesses the reliability of the entire construct based on how much each item contributes to it (Becker et al., 2023). Values exceeding 0.7 are generally considered satisfactory, and **Table 1** demonstrates that all constructs exhibit a high level of composite reliability.

The average variance extracted (AVE) is a statistic assessing the proportion of variance a construct can explain in measuring error (Henseler et al., 2016). A figure above 0.5 usually represents acceptable convergent validity. All the models in **Table 1** show average variance extracted (AVE) values greater than 0.50, providing evidence of adequate convergent validity.

Thus, **Table 1** summarizes this information on concepts (i.e. features) and their items and shows some statistical tests of very good reliability and validity. Cronbach's alpha, Rho A, Composite Reliability, and Average Variance Extracted (AVE) values (see **Table 1**) indicate the reliability and consistent internal nature of each concept.

**Table 2** displays the variance inflation factor (VIF) values for various variables. VIF is a commonly used indicator to assess the presence and severity of multicollinearity in regression analysis (Henseler et al., 2016). Multicollinearity occurs when predictor variables in a regression model are highly correlated with each other, potentially undermining the reliability of the model's results. A VIF value of 1 indicates no relationship between the predicted variable and the others. Values ranging from 1 to 5 suggest modest association and are generally acceptable in many studies, while VIF values

**Table 3.** Correlation matrix and discriminant validity

Constructs	CG	Control variables	ESP	Ownership structure	Moderating effect 1
CG	0.671				
Control variables	0.119	0.936			
ESP	0.561	0.357	1.000		
Insider ownership	-0.392	-0.035	-0.534	1.000	
Moderating effect 1	0.091	0.113	-0.046	-0.061	1.000

**Table 4.** Path coefficient

Constructs	Original sample(O)	Sample mean (M)	Standard deviation	T statistics (O/StDev)	P value
CG→ESP	0.387	0.392	0.076	5.103	0.000
CG → Insider Ownership	-0.392	-0.399	0.079	4.982	0.000
Control variables → ESP	0.313	0.303	0.096	3.249	0.001
Insider Ownership → ESP	-0.380	-0.376	0.066	5.737	0.000
Moderating Efficet-1→ESP	-0.153	-0.158	0.072	2.115	0.035

exceeding 5 indicate potentially problematic levels of multicollinearity (O'Brien, 2007).

The VIF values for BLS (1.117), BS (1.104), FD (1.017), CG \* IO (1.000), ESP (1.000), and IO (1.000) indicate low or negligible multicollinearity. The VIF numbers are nearly 1, indicating little correlation between those variables. On the other hand, the VIF values of TA (VIF = 2.247) and TS (VIF = 2.427) are greater than 2 but far less than the threshold of 5, thus indicating moderate multicollinearity. This level may be acceptable, depending upon the context of the study and how much multicollinearity is tolerable.

Overall, **Table 2** demonstrates that most models exhibit minimal to no multicollinearity, while TA and TS show a moderate level. Given that none of the variables exceed the typical threshold for concern (VIF  $\geq$  5), multicollinearity is unlikely to pose a significant issue in the regression model.

**Table 3** provides insights into discriminant validity through an association matrix, illustrating the strength of relationships among various constructs examined in the study. The correlation coefficients in the matrix quantify the degree of association between constructs, ranging from -1 (indicating no correlation) to +1 (representing a perfect positive correlation), with 0 signifying no correlation (Leys et al., 2018).

A fragile positive association of 0.119 is observed between CG and Control Variables. Conversely, CG exhibits a positive association of 0.561 with ESP, indicating a positive relationship between these constructs. The association between CG and Insider Ownership is -0.392, suggesting a somewhat negative relationship. Control Variables show a weak to moderately positive link with ESP, with a coefficient of 0.357, while the association between Control variables and Insider Ownership is negligible (-0.035). The association between ESP and Insider Ownership is -0.534, indicating a somewhat negative relationship.

Moderating effect 1 demonstrates only weak relationships (ranging from -0.061 to 0.113) with other categories. Discriminant validity, which reflects how distinct a construct is from others, is assessed by comparing the square roots of the average variance extracted (AVE) (diagonal elements) with the correlations between constructs (off-diagonal elements). However, some issues arise in **Table 3** as the diagonal values do not correspond to the square roots of the AVEs, except for ESP and Insider Ownership. This complicates the thorough

examination of discriminant validity. Nevertheless, the criterion is met for ESP and Insider Ownership, as their diagonal values (1.000) surpass any relationship with other constructs.

**Table 4** and **Figure 1** present the results of a statistical analysis investigating the relationships between various concepts in the study.

Corporate governance (CG) and environmental and social performance (ESP) exhibit a strong positive relationship, with a coefficient of 0.387 in the original sample. This association is statistically significant, as evidenced by the high T statistic of 5.103 (Henseler et al., 2016), and the P value of 0.000, indicating significance below common thresholds like 0.05.

The relationship between Corporate Governance (CG) and Insider Ownership (IO) is notable but could be improved. In the original sample, the coefficient for this relationship was -0.392, indicating an inverse relationship where insider ownership tends to decrease as CG increases, or vice versa. Despite this negative association, the link is statistically significant based on the T value and P value.

Regarding control variables and environmental and social performance, there is a positive relationship with a coefficient of 0.313. This indicates that control variables have a favorable impact on environmental and social performance. The statistical significance of this association is confirmed by the T statistic and the P value (Jan et al., 2021).

On the contrary, Insider ownership negatively correlates with Environmental and social performance (Original sample coefficient: -0.380). Hence, it indicates that as the percentage of insider ownership increases, Environmental and social performance declines. That said, it still remains significant statistically, so it does matter.

The moderating effect labeled as Moderating Effect-1 exhibits a coefficient of -0.153, indicating a less pronounced impact on environmental social performance compared to other factors in the table. Nevertheless, this relationship remains statistically significant, as indicated by a P value below 0.05.

**Table 5** displays the effect sizes, measured using Cohen's  $f^2$ , of various factors on environmental and social performance, as determined by multiple regression analysis (Mia et al., 2022). Cohen's  $f^2$  is the way to measure the effect size, that is, the value of the interest of how impactful the

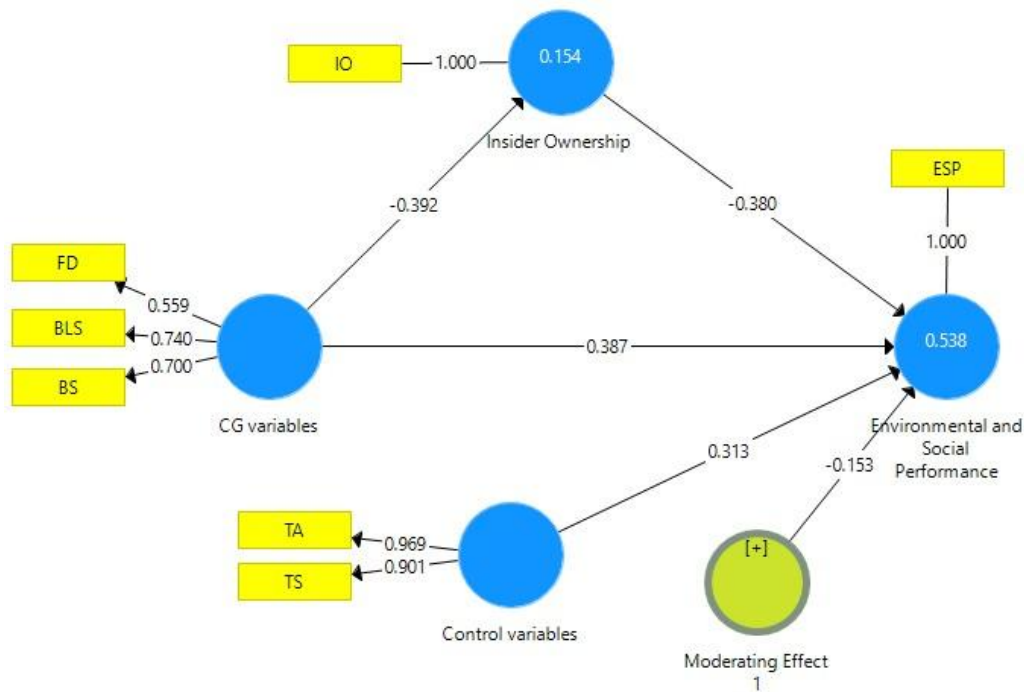


Figure 1. Path coefficient values (Source: Authors’ own elaboration)

Table 5. F square (effect size)

Constructs	ESP
CG	0.270
Control variables	0.208
Insider Ownership	0.264
Moderating effice1	0.041

independent variable total will be for the dependent variable (Yuan et al., 2016) to understand the practical significance of the forecasted variable.

Effect sizes are interpreted according to general guidelines, where values ranging between 0.02 and 0.35 define effects as small or negligible and 0.15 to 0.35 as moderate or substantial (Chin et al., 2003).

CG reflects a medium-sized effect on environmental and social performance,  $d = 0.270$ , almost reaching the boundary of a large effect. This reveals that CG has a large impact on environmental and social performance, which means that a large difference in CG will result in a large difference in environmental and social performance.

The effect size for ESP and Control factors is 0.208, indicating a medium to significant impact. While not as pronounced as Corporate Governance, this suggests that control factors exert a noteworthy influence on ESP.

Insider ownership has an effect size of 0.264 on environmental and social performance, which is higher than that of corporate governance. This indicates the importance of environmental and social performance as a driver of the Insider ownership.

Oppositely, Moderating Effect-1 has no meaningful effect size ( $f^2 = 0.041$ ), which womanizes the moderating effect on environmental and social performance. While still important, this effect is relatively minor compared to other factors.

Table 6. Factors showing the level of impact from highest to lowest

S. No.	Factors/constructs	Path coefficient value
1	CG	0.387
2	Control variables	0.313
3	Insider ownership	-0.380
4	Moderating effice1	-0.153

Overall, **Table 5** highlights that corporate governance and insider ownership significantly impact ESP, with Control variables also exerting a notable influence. In contrast, the impact of Moderating Effect-1 on ESP is comparatively minor.

**Table 6** presents findings from a statistical analysis, likely from a study investigating factors influencing online learning. It includes various constructs and their corresponding path coefficients, which quantify the strength and direction of relationships between factors, commonly used in structural equation modeling (SEM) (Becker et al., 2023).

The path coefficient of Corporate Governance (CG) is 0.387, which is a strong relationship between CG and ESP. ARG1 levels were determined to have a moderately strong effect on ESP (coefficient = 0.387), with greater levels of CG corresponding to a greater impact on ESP.

Control Variables (including the effects of institutional factors TA and TS) reveal a path coefficient of 0.313, indicating that control variables are highly correlated with ESP. Although not as substantial as CG, Control Variables exert a significant influence on ESP. Conversely, insider ownership shows a path coefficient of -0.380, indicating a significant and negative impact on ESP.

One moderating effect exhibits a path coefficient of -0.153, also reflecting a negative relationship, albeit less pronounced than the impact of insider ownership. This moderating effect alters the size or direction of the relationships between other variables, albeit with a minor impact on ESP.

In summary, corporate governance and control variables positively affect environmental and social performance, with CG having the most significant impact. Conversely, Insider ownership structure and a specific moderating effect negatively impact ESP, with insider ownership structure exerting the most substantial adverse effect.

## CONCLUSION AND FURTHER STUDY

This study advocates for employing quantitative analysis to explore the moderating effect of insider ownership between CG and ESP among listed textile firms in Bangladesh covering from 2020 to 2024. It aligns with the Agency Theory, which examines the relationship of CG factors such as female director (FD), board leadership structure (BLS), and board size (BS) with environmental and social performance (ESP). The findings indicate that CG and control variables positively influence ESP, with CG exerting the most significant impact. Conversely, IO structure as the moderator affects ESP negatively which indicates that IO structure has the most substantial adverse effect.

The present study offers significant theoretical, conceptual, knowledge, methodological, and contextual contributions to the literature related to CG and ESP. First, it investigates the impact of CG on ESP within the context of Bangladeshi textile firms, yielding divergent findings compared to prior theories, with CG demonstrating a significant positive effect on ESP. Second, it introduces IO as a moderating variable in this association, marking as one of the ample studies to consider the moderating role of IO structure between CG and ESP instead of focusing on the direct link between CG and ESP. Moreover, other moderators like stakeholder protection context and family ownership have been experimented with CG by scholars. Additionally, this study covers a longer time frame that ensures data pervasiveness to generalize the research outcomes.

Despite those significant contributions, having a few limitations is not an exception that opens avenues for future research prospects. First, this study is based on selected CG variables. Future researchers can focus on investigating the impact of other influential factors on ESP. Moreover, as the study is confined to an emerging economy like Bangladesh, other economies can be investigated with new dimensions and directions. Therefore, future cross-country studies on ESP are encouraged to enhance the comprehension of corporate ESP practices across different contexts. Additionally, while the study relies on annual reports as its primary data source, other data outlets such as interim reports, websites, prospectuses, and press releases could provide valuable insights for decision-makers. Last, a relevant computer-aided data (CAD) analysis can provide significant findings covering big data.

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