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EXAMINING THE NEXUS BETWEEN CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE AND EARNINGS MANAGEMENT: EVIDENCE FROM THE STATE-OWNED ENTERPRISES OF BANGLADESH

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ABSTRACT

Purpose- The purpose of the study is to examine the association between corporate social responsibility (CSR) disclosure and the practice of earnings management in the listed state-owned enterprises (SOEs) of Bangladesh.
Methodology- All the listed SOEs (17 firms) of Dhaka Stock Exchange (DSE) for the years 2017-2022 were considered in the study, resulting in observations of 102 firm-years. Content analysis was used to assess the level of CSR disclosure in the annual reports. For measuring earnings management, Beneish M-score model was used as the proxy variable. To investigate the association between CSR disclosure and earnings management, multivariate regression analysis was conducted using pooled OLS model, random effects model and lag model.
Findings- The regression outcomes of the study found a positive and significant association between CSR disclosure and earnings management. This study shows how managers can use CSR disclosures as a competitive advantage by manipulating earnings while also fostering positive relationships with stakeholders.
Conclusion- Investors and governments alike are increasingly demanding ethical business practices and full disclosure from corporations. The study concludes that managers' opportunistic behavior is a primary motivation for using CSRD to cover their tracks. This study will provide valuable insights to the policy-makers, regulators, investors and other stakeholders on how CSR reporting can be used as a medium to hide management's manipulative practices and, why it is important to implement a more comprehensive guideline on CSR reporting and effective governance to eliminate such practices.

Keywords: Corporate social responsibility (CSR) disclosure, earnings management, Beneish M-Score, state-owned companies (SOEs), Bangladesh.
JEL Codes: G38, M14, M41

1. INTRODUCTION

Corporate Social Responsibility (CSR) encompasses a diverse array of initiatives undertaken by companies with the aim of mitigating adverse effects and enhancing positive contributions to society (Carroll, 1999). Over the past few decades, there has been a noticeable trend in the business world toward a heightened understanding of CSR. Because of this increased knowledge, businesses are now approaching the creation and distribution of profits with greater care. Organizations these days exhibit a greater concern for their moral and ethical behavior, especially when it comes to their dealings with relevant stakeholder groups. Companies that implement CSR aim to satisfy the implicit social contract and stakeholder expectations. As a result, the argument makes the case that a business that exhibits social responsibility and cares about its stakeholders is more likely to release transparent financial data, which will enable it to provide a true picture of its overall financial situation (Salewski & Zulch, 2014). However, there is a claim that CSR could serve as an entrenchment mechanism, manipulating earnings data to further management' self-interested goals (Choi et al., 2013). When managerial discretion is used to change financial statements through transaction structuring and financial reporting, earnings management (EM) takes place. The purpose of this manipulation is to influence contractual outcomes that depend on reported accounting data or to deceive stakeholders about the true economic performance of the company (Healy & Wahlen, 1999).

The relationship between CSR and earnings management has been explored by some studies in recent times. However, the outcomes of the studies cannot be generalized as some studies found a positive relationship whereas some found a negative relationship. According to one group, firms involved in high-level of CSR reporting are more ethical and transparent and thus, do not get involved in earnings management (Alsaadi et al., 2017; Cho & Chun 2016; Choi et al., 2013). In contrast, another group thinks that firms that disclose more about CSR activities tend to do so to obscure their practice of earnings manipulation (Muttakin et al., 2015; Gargouri et al., 2010; Prior et al., 2008). Due to these contrasting findings, the relationship between CSR disclosure and earnings management remains a debatable topic in the existing field of literature.

State-owned enterprises have been considered to have substantial influence over vital industries including communications, energy, and transportation (OECD, 2014). According to Kowalsky et al. (2013), state-owned enterprises are a major factor in the rapid economic development of countries like China, Russia, Brazil, India, Malaysia, Indonesia, and the United Arab Emirates. Bangladesh has made significant contributions to its economic growth since gaining independence, and the country is now recognized as a globally competitive market. Although the private sector is flourishing, state-owned enterprises (SOEs) have accrued losses due to difficulties in institutional management. The continuous accumulation of losses by most of the SOEs and increased pressure from stakeholders increases the possibility of earnings management by the firms. Existence of weak capital markets, inefficient monitoring, and minimal activity in the managerial labor market practices can also provide opportunity for the management to take such manipulative actions (Farooque et al., 2007). So, management can use disclosure mechanisms like CSR reporting as a medium to evade the attention of stakeholders from such earnings management practices.

Over the years, a good number of studies have analyzed the impact of CSR disclosure on earnings management practice by firms. However, most of the studies were conducted in the context of developed countries (Habbash & Haddad, 2019; Almahrog et al., 2018; Moratis & Egmond, 2018). Only a handful of studies can be found in the context of developing countries. In Bangladesh, Muttakin et al. (2015) conducted such study using 135 non-financial companies. This is the only study conducted in the context of Bangladesh as per the best knowledge of authors. Besides, currently there are no studies that have investigated such relationship by exclusively considering the SOEs of Bangladesh only. The dearth of existing research in this area accompanied by the importance of SOEs in Bangladesh have encouraged the authors to explore the area and contribute to the field of research.

The primary objective of this study is to investigate whether there exists a relationship between CSR disclosure and earnings management practices by listed SOEs in Bangladesh. The study also looks into the nature and level of CSR reporting by the SOEs in Bangladesh. In addition, the study sheds light on the earnings management practice by firms using Beneish M-Score. The study has found a positive and significant association between CSR disclosure and earnings management implying that firms that provide more disclosures on CSR tend to do so to conceal their earnings management practices. The study also found an increasing pattern in the level of CSR disclosure as well as earnings management practices by the sample firms.

The study will contribute to the existing field of literature in several ways. First, this is the first study that explores the association between CSR reporting and earnings management in the listed SOEs of Bangladesh. The outcomes of the study will provide valuable insights on the reasons behind such relationship. Second, the study demonstrates the current picture of CSR reporting by the listed SOEs in Bangladesh. Third, the study investigates the level of earnings management practiced by the SOEs in Bangladesh. Finally, the study addresses the issue of autocorrelation and endogeneity using appropriate regression models to provide more robust results on this matter.

The rest of the study is organized in the following way: Section 2 discusses the theoretical framework used in the study. Section 3 gives a brief overview of the findings of previous studies and draws a hypothesis based on the discussion. Section 4 presents the sample, data and research methods used in the study. Section 5 presents the key findings of the study using descriptive statistics, bivariate analysis and multivariate analysis and discusses the results. Finally, section 6 provides the concluding remarks and possible implications of the study.

2. THEORETICAL FRAMEWORK

2.1. Agency Theory

Agency theory encourages opportunity-based management approaches (Jensen & Meckleng, 1976). According to Velayutham (2018), managers would conceal their own opportunistic actions within the company by using CSR reporting and financial success as smokescreens. Because of this, CSR management provides managers with protection for their professional reputations, which in turn allows them to more skillfully manage profits and report inflated financial data. According to Kim et al. (2012), managers who engage in profit management do so covertly by inflating CSR reports and padding the books. Those in charge of a company's bottom line risk losing investors' faith if they lose sway over the company's outcomes. CSR reporting and performance that value several stakeholder groups will attract and retain a wider audience.

2.2. Stakeholder Theory

Stakeholder demand has a significant impact on businesses' decisions to use CSR practices and the amount of information they choose to share. Stakeholder theory is applied to the study of how state-owned businesses' financial results change after adopting CSR policies (Brown & Deegan, 1998). Businesses may improve their status in the market by listening to and responding to the needs of their stakeholders. There is increasing pressure on businesses to reduce the negative effects of externalities while maximizing the positive ones from a wide range of interested parties, including customers, workers, rivals, suppliers, and governments. Stakeholder theory provides a theoretical basis for assessing a firm's actions in relation to the stakeholders it has identified and the actions it has taken as a result (Neu et al., 1998). Participation in CSR initiatives is essential for organizations to effectively manage stakeholder relationships and create value. According to stakeholder theory, companies can reduce agency costs by implementing social activities, especially Corporate Social Responsibility (CSR), which improves and influences their relationships with various stakeholders (Scholtens & Kang, 2013). Unlike agency theory that focuses on the opportunistic hypothesis, the stakeholder theory emphasizes on the ethical hypothesis which assumes that firms that provide more CSR disclosure are unlikely to manage earnings as this is regarded as an unethical act (Kumala & Siregar, 2020).

3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT:

Whether or not there is a connection between CSR reporting and a company's performance has been the subject of interest for researchers of different countries. Prior studies have found contrasting results while assessing such relationship. Table 1 shows the brief summaries of different studies that investigated the relationship between CSR disclosure and earnings management. Two different perspectives can be used to explain such differences in findings. According to the first perspective, organizations with strong commitments to CSR show a lower inclination to manipulate earnings. This tendency results from their refusal to engage in the practice of earnings management, which is to hide negative earnings realizations (Chih et al., 2008). Choi et al. (2013) argue that companies that exhibit a strong commitment to CSR are more likely to adopt responsible practices in the reporting of their financial statements, given the perceived irresponsibility associated with earnings management in line with CSR principles. Businesses that commit time, money, and energy to developing and implementing CSR programs that address stakeholders' ethical concerns tend to be more inclined to provide accurate and open financial reporting. Furthermore, these businesses are less inclined to engage in earnings management practices (Kim et al., 2012). García-Sánchez and García-Meca (2017) and Sun et al. (2010) stated that CSR is perceived as a mechanism for elucidating the broader concerns of the organization to stakeholders and underscoring its commitment to accountability, thereby compelling the firm to conduct itself in a socially responsible manner. Almahrog et al. (2018) conducted a study on listed UK firms and found a negative association between CSR reporting and earnings management. They stated that organizations disseminating an extensive volume of CSR data reduce information asymmetry and foster stronger connections with stakeholders, putting these goals ahead of just maximizing profits. Ding et al. (2007) and Wang and Yung (2011) found a negative correlation between these two factors at state-owned businesses but a positive one at privately held companies that are more likely to push profit-boosting financial strategies.

The second perspective, managerial opportunism, implies that executives involved in earnings manipulation may purposefully use information from CSR to conceal their self-serving behavior (Prior et al., 2008). According to Choi et al. (2013), engaging in CSR activities might strengthen the status of managers who manipulate earnings information for personal gain. Based on the investigation conducted on a sample of 593 firms in 26 countries, Prior et al. (2008) found a positive relationship between the variables and identified two reasons behind such relationship. First, stakeholder activism may arise as a result of earnings manipulation, thereby undermining the stakeholders' standing inside the firm. One way to stop this kind of action is to speak to and satisfy stakeholders' interests. Second, for entrenchment reasons, managers are more likely to work together with other stakeholders as a hedging tactic to lessen the impact of shareholder disciplinary measures against them for profits management methods. According to the predictable earnings hypothesis, companies with high levels of CSR tend to use earnings smoothing mechanisms (Goel & Thakor, 2003). This reduces earnings volatility and information asymmetry between insiders and uninformed investors. This procedure helps to disclose to the investing community more consistent earnings. Habbash and Haddad (2019) conducted a study on Saudi Arabian companies and found that companies that take CSR actions are more prone to earnings management. In order to win over stakeholders, executives who manipulate earnings are driven to foster a positive social image. As a result, there is a decreased chance of managerial termination; this is why Corporate Social Responsibility (CSR) is used as a means of entrenchment. Based on the mixed findings of different studies, the following hypothesis is drawn:

H1: Ceteris Paribus, there exists a significant association between the level of CSR disclosures and earnings management in the listed state-owned firms of Bangladesh.

Table 1: Review of Previous Studies on CSR Disclosures and Earnings Management

Author(s) and Year	Sample	Variables	Significant Findings
Prior et al. (2008)	593 firms, 26 countries, 2002-2004	Earnings Management and CSR performance	Earnings management positively impacts CSR, as managers manipulating earnings for their own benefit motivate participation as these activities counter shareholder demand.

Chih et al. (2008)	46 countries, 1653 firms	CSR index, Earnings smoothing, and Earnings decrease avoidance	Increased CSR disclosures boost earnings aggressiveness, potentially enabling socially conscious businesses to manipulate earnings and conceal profit-seeking actions. Unrelated institutional variables may influence earnings management.
Laksmana And Yang (2009)	USA, 1304 firm-year observations, 2001-2002	CSR disclosure and Earnings management	Companies with high CSR disclosures experience more consistent, smooth, and predictable earnings than those with low CSR.
Wang and Yung (2011)	China has 142 listed firms.	firm ownership, CSR performance, CSR disclosures, and Earnings management	No relationship between CSRD and earnings management in state-owned enterprises, whereas a positive relationship in privately owned firms prone to promoting financial plans that unfairly increase earnings has been found.
Hong and Andersen (2011)	USA, 8078 firm-year observations, 1995-2005	CSR performance and Earnings Management (dependent)	Higher-quality accruals and fewer uses of activity-based earnings management are factors that affect financial reporting quality in socially responsible businesses.
Choi and Pae (2011)	Korea, 1432 firm-year observations	CSR (ethical commitment list) disclosure and earnings management (accounting Accuracy)	In comparison to businesses with lesser ethical commitment, companies with stronger commitment report earnings cautiously and correctly forecast future cash flows.
Yip et al. (2011)	USA, 110 firms	CSR reporting, Earnings management, Political cost, and ethical predisposition	There is a negative relationship between CSR disclosures and earnings management in the oil and gas industry but a positive relationship in the food industry. This data suggests that, besides ethical issues, there are other factors that affect the result.
Kim et al. (2012)	USA, 23392 firm-year observations, 1991–2009	CSR Disclosures (independent) and Earnings Management	Companies with a social conscience are less likely to influence operations, control earnings, or face SEC investigations. They argue that ethical and reputational reasons motivate managers to produce high-quality financial reports, aligning with the legitimacy hypothesis.
Salewski and Zulch (2012)	258 firms, 10 developed countries	CSR performance and earnings management (dependent)	Companies with higher CSR levels are more likely to manipulate results and delay negative news releases.
Pyo and Lee (2013)	Korea, 4257 firm-year observations, 2004-2010	CSR performance (independent), Accounting conservatism	Found a positive relationship between CSR disclosure and Earnings Management. Firms with high CSR performance tend to manipulate earnings.
Scholtens and Kang (2013)	Asia, 39 firms, 10 countries	CSR performance and Earnings management	Companies that practice social responsibility are less likely to manipulate earnings because CSR can diminish earnings management incentives, possibly dealing with agency problems between managers and shareholders.
Hoang et al. (2014)	Vietnam, 142 listed firms	firm ownership, CSR disclosure, and earnings management	Found an insignificant relationship in a state-owned firm, and a significant positive relationship in a private owned firm.
Muttakin et al. (2015)	Bangladesh, 116 firms, 580 firm-year observations, 2005–2009	CSR disclosure score and Earnings management	Managers in emerging economies manage earnings by increasing CSR disclosures. (Relationships are Positive.) And adverse links with export-focused industries and influential stakeholders.
Suteja et al. (2016)	Indonesia,55 firm-year observations,2010-2014	CSR performance and earnings management	Found a positive relationship between bank CSR disclosure and earnings manipulation.

4. RESEARCH METHODOLOGY

4.1. Sample Size and Data Collection

For the purpose of the study, all 17 state-owned manufacturing firms listed in Dhaka Stock Exchange (DSE) have been considered. The study has covered the timeframe of 2017-2022 resulting in a sample size of 102 firm-years. Data were collected from secondary sources (annual reports of the firms). As none of the firms disclosed their CSR related information in separate CSR reports, only annual reports were considered for content analysis. Data regarding earnings management and control variables were collected from financial statements of the firms. Table 2 depicts the industry-wise sample composition for the study.

Table 2: Industry-wise Category of Selected SOEs

Industry	Total Firms
Fuel and Power	7
Engineering	4
Food and Allied	2
Miscellaneous	4
Total	**17**

4.2. Definition of Variables

4.2.1. Dependent Variable (M-Score)

While several alternatives exist for measuring earnings quality, the Beneish M-Score has been chosen for this research because of its superior specification and less precise requirements for data. When it comes to the identification of possible fraudulent activity in financial accounts, the Beneish M-Score model offers a more complete tool for forensic accounting than traditional measurements used in fraud detection systems (Özcan, 2018; Akra & Chaya, 2020). Studies conducted by Kamal et al. (2016), Repousis (2016), Mamo and Sehu (2017), Arman and Sharmin (2019) used the M-Score as a proxy for earnings management. According to the model, a score higher than-2.22 indicates the existence of earnings management (Beneish, 1999). Eight factors taken from the income statement, balance sheet, and statement of cash flows are needed to compute the M-Score. The level of earnings manipulation was then determined by calculating the M-Score for the company using the following model:

Beneish M Score Formula = -4.84 + 0.92 * DSRI + 0.528 * GMI + 0.404 * AQI + 0.892 * SGI + 0.115 * DEPI - 0.172 * SGAI + 4.679 * TATA - 0.327 * LVGI (1)

Table 3 represents the detailed components of Beneish M-Score Model:

Table 3: Beneish M-score Model Variables

Variable Name	Definition	Formula
DSRI	Days Sales Ratio Index	(Net Receivales$_t$ /Sales$_t$) / (Net Receivales$_{t-1}$/sales$_{t-1}$)
GMI	Gross Margin Index	(Gross Margin$_t$/Sales$_t$)
AQI	Asset Quality Index	[1-(Current Asset$_t$+PP&E$_t$+Securities$_t$)/Total Asset$_t$}] / [1-(Current Asset$_{t-1}$ +PP&$_{t-1}$+Securities$_{t-1}$)/Total Asset$_{t-1}$}]
SGI	Sales Growth Index	(Sales$_t$/Sales$_{t-1}$)
DEPI	Depreciation Index	[Depreciation$_{t-1}$/(PPE$_{t-1}$+Depreciation$_{t-1}$)] / [Depreciation$_t$/(PPE$_t$+Depreciation$_t$)]
SGAI	Sales, General Administration Index	(SGA Expense$_t$/Sales$_t$)/ (SGA Expense$_{t-1}$/Sales$_{t-1}$)
TATA	Total Accruals to Total Assets	(Income from continuing operations$_t$ -Cash Flow from Operations$_t$)/Total Asset$_t$
LVGI	Leverage Index	(Total Debt$_t$/Total Asset$_t$)

4.2.2. Independent Variable (CSRD)

CSR disclosure index (CSRD) served as the independent variable in the study. To assess the number of disclosures by firms, content analysis has been performed. A checklist containing 20 items have been used for the content analysis (see Appendix). The checklist was derived from the study conducted by Muttakin et al. (2015). The reason behind selecting this checklist was the similarity in context as the study has also been conducted in context of Bangladesh. Although the weighted method was used by some of the previous studies for content analysis (Fayad et al., 2022; Qaderi et al., 2022), the unweighted method has been used in this study to minimize subjectivity (Elsayed and Hoque, 2010; Omran et al., 2021) . An item was scored one if the sample company disclosed the same information mentioned in the checklist, otherwise it was scored zero. The scores were cross-checked by the authors to ensure the content analysis's reliability. After the analysis, an index was prepared based on the ratio of the total score achieved and the maximum achievable score. The calculation of CSRD for each firm can be represented using the following formula:

$$CSRD_j = \sum_{t=1}^{n_j} \frac{X_{ij}}{n_j} \quad (2)$$

Where,
$CSRD_j$ = corporate social disclosure index for j-th firm.
n_j= number of items expected for j-th firm, where n=20;
X_{ij} = 1, if i-th items are disclosed for firm j, otherwise 0; and

4.2.3. Control Variables

Four control variables namely leverage, return on assets (ROA), firm size and firm age have been considered for the study. There exist opposite views on the relationship between leverage and earnings management. Studies conducted by Becker et al. (1998) and Sweeney (1998) found a positive relationship between leverage and earnings management as highly levered firms tend to manipulate earnings to respond to debt contracting. On the other hand, Dechow and Skinner (2000) found a negative association between the variables stating that high levered firms are closely monitored by the creditors, leaving little scope for management to get engaged in earnings management. According to Dechow et al. (1995), in order to increase ROA, management may use accrual-based and real earnings management. Contrasting views also exist regarding the impact of firm size on earnings management. Larger firms tend to engage in earnings management due to excessive pressure from capital markets (Richardson et al., 2002). In contrast, Lee and Choi (2002) found that larger firms are less likely to get involved in earnings management as they are strongly monitored by the outsiders. As for firm age, older firms tend to manage earnings more compared to newer ones as they need to maintain their reputation (Yunietha & Palupi, 2017).

4.3. Model Specification

In consistent with the studies conducted by Habbas and Haddad (2019) and Moratis and Egmond (2018), the following model was used to test the hypotheses:

$$\text{M-Score}_{it} = \alpha + \beta_0 CSRD_{it} + \beta_1 LEV_{it} + \beta_2 ROA_{it} + \beta_3 FSIZE_{it} + \beta_4 FAGE_{it} + \varepsilon_{it} \quad (3)$$

The definitions of variables are presented in Table 4.

Table 4: Definition of Variables

Variables	Description	Notation	Expected Relationship	Reference
Dependent Variable				
M-Score	Value derived from Beneish M-Score model	IRI		
Explanatory Variable				
CSR Disclosure	Index value using content analysis	CSRD	+/-	Muttakin et al. (2015)
Control Variables				
Leverage	The ratio of total book value of debt to total book value of asset.	LEV	+/-	Becker et al. (1998)
Profitability	The ratio of profit before tax to total asset	ROA	+/-	Dechow et al. (1995)
Firm Size	Natural logarithm of total book value of asset	FSIZE	+/-	Lee and Choi (2002)
Firm Age	Natural logarithm of firm's age since inception	FSIZE	+	(Yunietha & Palupi, 2017)

5. FINDINGS AND DISCUSSION

5.1. Descriptive Statistics

5.1.1. Descriptive Statistics of Dependent Variable (Earnings Management)

Table 5 presents annual descriptive data pertaining to the mean of the dependent variable (M-score) across the time span from 2017 to 2022. It has been observed that the average values of DSRI, GMI, AQI, SGI, DEPI, TATA, and LVGI showed a decline in the initial three years. However, in 2020, these average values have shown an upward trend, resulting in a rise in the average value of the M-score. Following the year 2019, there has been a discernible upward trend in the average M-score value. This observation implies a corresponding increase in the prevalence of earnings manipulation throughout successive years. In contrast to the initial three-year period, the average value of the M-score exhibited a downward trend.

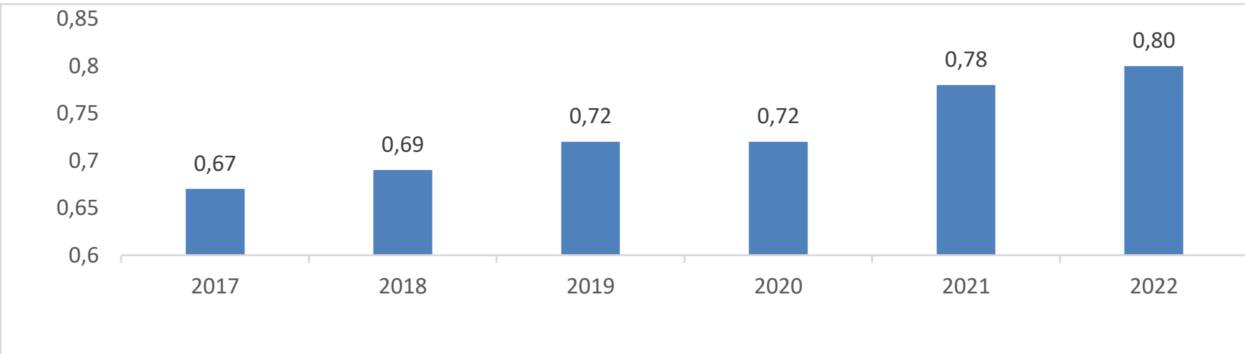
Table 5: Component-wise Beneish M-Score (Annual Average)

Year	M-Score	DSRI	GMI	AQI	SGI	DEPI	SGAI	TATA	LVGI
2017	-1.26	1.91	0.34	1.05	1.17	1.23	1.11	0.11	0.92
2018	-1.52	1.43	0.31	1.97	1.15	1.27	1.02	0.08	0.97
2019	-1.90	1.42	0.28	1.64	1.15	1.23	1.16	0.04	1.04
2020	1.27	1.30	0.27	9.96	1.22	1.19	1.15	0.02	1.05
2021	0.65	1.27	0.26	8.62	1.25	1.19	1.16	0.00	1.05
2022	2.62	2.73	0.94	7.13	2.48	4.31	2.66	-0.08	0.91

5.1.2. Descriptive Statistics of Independent Variable (CSRD)

Figure 1 shows the year-wise index value of CSR disclosure by the sample firms. It can be seen that the level of disclosure has increased over the years, particularly during the COVID period and post-COVID period. This is a positive sign particularly for a developing country like Bangladesh. The major rise during 2021 and 2022 suggests that the SOEs became more involved in CSR activities due to pandemic and thus disclosed more information in the annual reports to demonstrate their contribution to the community.

Figure 01: CSR Disclosure Index over the Years



5.1.2. Descriptive Statistics of the Model

Table 6 presents the descriptive statistics of the dependent, independent, and control variables used in the study. The mean value of the M-score, which serves as the dependent variable, is 1.036 percent. The range of values spans from -22.4 to 42.19. The standard deviation, which is calculated to be 4.811, represents the extent of variation from the mean value. In a similar vein, the mean value of the independent variable CSRD is observed to be 0.7289, with a corresponding standard deviation of 0.156. The lower bound of the range is 0.35, while the upper bound is 1, implying a full disclosure of checklist items by a firm. The average values of the control variables are as follows: 2.0289% for leverage (LEV), -0.1868% for return on asset (ROA), BDT 49613 million for firm size (FSIZE), and 44 years for firm age (FAGE). The minimum values observed in the dataset are as follows: 0.07% for the variable LEV, -7.06% for the variable ROA, BDT 233 million for the variable FSIZE, and 9 years for the variable FAGE. Likewise, the maximum are: 26.3% for LEV, 1.2% for ROA, BDT 431868 million for FSIZE, and 63 years for FAGE. A negative mean value of ROA implies the poor level of performance by the listed SOEs in Bangladesh.

Table 6: Descriptive Statistics of the Variables

Variable	Observation	Mean	Std. Dev.	Minimum	Maximum
M-score (%)	102	1.036	4.8113	-22.41	42.19
CSRD (%)	102	.7289	0.1558	.35	1
LEV (%)	102	2.0292	4.5959	.07	26.3
ROA (%)	102	-.1869	.8331	-7.06	1.2
FSIZE (in million)	102	49613	79386	233	431868
FAGE (in years)	102	44	13.3848	9	63

5.2. Bivariate Analysis

5.2.1. Correlation Matrix

Table 7 shows the correlation matrix of the dependent and independent variables used in the study at 10%, 5%, and 1% significance levels. The analysis of the correlation matrix shows that CSRD has a positive and significant correlation with earnings management (r =.1166, p< 0.1, p< 0.05). Which gives a good indication that increasing CSR disclosure has a significant impact on earnings manipulation. Correlation between leverage and ROA has the highest value (-0.6140). According to Gujarati (2003), the highest acceptable value is 0.7. So, the problem of multicollinearity is not an issue for the study.

Table 7: Pearson Correlation Matrix

	mscore	csrd	lev	roa	fsize	fage
mscore	1					
csrd	0.1166**	1				
lev	-0.03	-0.2971***	1			
roa	-0.0351*	0.2888***	-0.6140***	1		
fsize	-0.0383	0.3914***	-0.4645**	0.3488***	1	
fage	-0.0065	0.4289***	-0.0462	-0.0587	-0.0351	1

Note: ***, **, and * indicate level of significance at 1%, 5% and 10% respectively. For definition of variables, refer to table 4.

5.2.2. Multicollinearity

Variance inflation factor (VIF) is a powerful quantitative indicator for analyzing the existence and magnitude of multicollinearity in the context of regression research. If the VIF value is more than 10, it suggests that there is a multicollinearity problem in the model. And if the VIF value is less than 1, it suggests that biases are present in the regression equation (Gujarati, 2003). Table 8 shows the VIF values of the independent and control variables used in the study. As the mean VIF is 1.6 (less than 10) and values of each VIF is in between 1.35 to 1.84 (less than 2), it can be said that no multicollinearity exists among the variables of the research model.

Table 8: Variance Inflation Factor

Variable	Symbol	VIF	1/VIF
Leverage	LEV	1.84	0.544126
Return on assets	ROA	1.7	0.587858
CSR disclosure	CSRD	1.62	0.616507
Firm size	FSIZE	1.48	0.677162
Firm age	FAGE	1.35	0.740777
Mean VIF		**1.6**	

5.3. Multivariate Analysis

Table 9 demonstrates the regression result of the models used in the study. Pooled-OLS method was used to estimate the equation in Model-1 and random effects method was used to estimate the equation in Model-2. The selection of random effects model was confirmed by using Huasman test.

The results show a positive and significant association between CSR disclosure and earnings management practice by the sample companies in both models. The relationship is significant at 10%, 5% and 1% level respectively. This implies that SOEs that make more disclosures regarding CSR activities are involved in earnings management practices. This is in consistent with the findings of the studies conducted by Habbash and Haddad (2019), Uyagu and Dabor (2017), Prior et al. (2008), Goel and Thakor (2003) etc. The implementation of CSR may intensify agency issues by increasing the incentives for insiders to participate in earnings management. This is driven by the motivation to conceal rent-seeking activities from external stakeholders (Jensen, 2001). Participation in CSR activities by managers may mask their opportunistic actions. Based on agency theory, it is expected that managers who engage in earnings manipulation will disclose more information about their companies in order to further their own goals (Habbash & Haddad, 2019). This result is in variance with the ethical perspective, which expects CSR and earnings management to be negatively correlated. SOEs extensively involved in earnings management practices often seek to conceal such activities through increased CSR disclosure. This situation is particularly pertinent in markets characterized by a lack of stringent regulations and investor protection measures like Bangladesh.

Among the control variables, only ROA has a negative and significant relationship with earnings management. Firms with strong financial performance have less tendency to manipulate earnings compared to the poor performing firms. Leverage, firm size and firm age did not have any significant impact on earnings management.

Table 9: Regression Results Using the Pooled-OLS model and Random Effects Model

Independent Variables	Model-1	Model-2
	(Coefficients)	(Coefficients)
CSRD	2.4930***	2.3769***
	(0.3770)	(0.2751)
LEV	-0.2430	-0.2431
	(0.7578)	(0.4561)
ROA	-0.2390***	-0.2391**
	(0.9030)	(0.1532)
FSIZE	-1.5440	-1.5449
	(0.3558)	(0.5152)
FAGE	-2.0540	-6.0057
	(0.9185)	(0.7175)
CONSTANT	0.5204*	0.4157*
	(0.1758)	(0.2316)
Year Dummy	Yes	Yes
Observations	102.0000	102
R-squared	0.3308	0.2915

This table represents the result of the relationship between earnings management and CSR disclosure using equation 3. Model 1 is estimated by using the Pooled OLS Model with Driscoll–Kraay standard errors and Model 2 is estimated by using Random Effects Model. Standard errors are in parentheses. ***, **, and * indicate level of significance at 1%, 5% and 10% respectively. For definition of variables, refer to table 4.

7. ROBUSTNESS TEST

Table 10 presents the results of the regression equation using the lag model and the pooled-OLS model with panel corrected standard errors (PCSE). The results of all these models are in consistent with the results of Model 1 and Model 2. The consistency of results of the lag model used in Model 3 and main two models ensure that there is no endogeneity problem among the variables. The findings suggest that whether a firm is involved in earnings management or not can also be predicted by its CSR disclosure of last year. Model 4(a) is estimated by using PCSE model with independent autocorrelation structure whereas Model 4(b) is estimated by using PCSE model with first-order autocorrelation structure. So, both the probability of endogeneity and autocorrelation problems have been addressed in this study.

Table 10: Regression Results Using the Lag model and Pooled-OLS with PCSE Model

Independent Variables	Model-3	Model-4(a)	Model-4(b)
	(Coefficients)	(Coefficients)	(Coefficients)
CSRD	3.4130**	2.4930***	2.2327***
	(0.1099)	(0.3992)	(0.9018)
LEV	-0.3414	-0.2430	-0.0705

	(0.8632)	(0.5316)	(0.6203)
ROA	-0.3445**	-0.2390**	-0.2629*
	(0.3787)	(0.3426)	(0.9159)
FSIZE	-1.8173	-1.5440	-0.1045
	(0.6696)	(0.8307)	(0.5186)
FAGE	-6.6918	-2.0540	-3.5877
	(0.6211)	(0.8114)	(0.0494)
CONSTANT	0.6383	0.5204	0.8882
	(0.8615)	(0.9914)	(0.0523)
Observations	85	102	102
R-squared	0.2538	0.3308	0.2915

This table represents the result of the relationship between earnings management and CSR disclosure using equation 3. Model 3 is estimated by using Lag Model whereas Model 4(a) is estimated by using PCSE model with independent autocorrelation structure and Model 4(b) is estimated by using PCSE model with first-order autocorrelation structure. Standard errors are in parentheses. ***, **, and * indicate level of significance at 1%, 5% and 10% respectively. For definition of variables, refer to table 4.

7. CONCLUSION AND IMPLICATIONS

The aim of the research is to investigate the relationship between CSR disclosure and earnings management practices by listed SOEs of Bangladesh. The study used all 17 listed SOEs in DSE for the years 2017-2022 which resulted in a sample size of 102 firm-years. The study has used Beneish M-Score as a proxy of earnings management practice. Content analysis has been conducted using a checklist to measure the extent of CSR reporting by the firms. Finally, leverage, ROA, firm size and firm age have been used as the control variables in the study. Multivariate analysis using pooled-OLS model and random effect model have been conducted to assess the relationship among the variables.

The study found a positive and significant association between CSR disclosure and earnings management practices by the SOEs. This lends credence to the argument that managers may be tempted to take advantage of situations and utilize CSR reporting to divert attention away from more pressing issues like earnings manipulation. The findings are in line with the agency theory suggesting that managers engaged in earnings manipulations are anticipated to augment corporate disclosures as a strategic maneuver to pursue personal gains. To garner stakeholder support, managers who manipulate revenues are motivated to project a positive social image. As a result, there is less chance of a manager being fired, which presents CSR disclosure as a means of entrenchment (Habbash & Haddad, 2019).

The study has several implications for the regulators, policy-makers, practitioners and investors. It is advisable for investors to refrain from making assumptions on the engagement of firms in CSR initiatives, ethical behavior, or the disclosure of pertinent information in their financial reports. The evaluation of firms' CSR programs should be approached with care, given our research findings that indicate the potential for certain corporations to manipulate earnings and provide shareholders with less open financial disclosures. Managers may be further motivated to engage in opportunistic activities by the implementation of policies that promote socially responsible practices, rather than just relying on coercive measures to encourage desirable actions. Hence, it is imperative for regulators to exercise caution about this opportunistic behavior and intensify monitoring measures in order to uphold social conformity. CSR disclosures should be based on genuine implementation rather than serving as superficial statements aimed at deceiving stakeholders. To achieve this, it is advisable to establish criteria that can be used to verify the authenticity and sincerity of CSR disclosures. Effective corporate governance structure and strict monitoring and auditing can play vital role to prevent the opportunistic behavior of management and meaningful reporting of CSR related information.

There are some limitations to this study. The study used unweighted method for content analysis which prevented the deeper investigation of disclosure of each item in the checklist. A larger sample size could have provided a better result. Finally, the study used only two models for assessing earnings management. Using other models could have provided more comprehensive results.

The study paves the way for future research in different ways. A comparative analysis can be conducted using cross-country samples for a broader understanding of the nature of relationship between CSR reporting and earnings management. Corporate governance variables like board characteristics and ownership structure can be used as moderators to observe their role in such regard. Finally, in-person interviews with management, stakeholders and regulators can provide valuable insights on the probable reasons behind such outcome.

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APPENDIX

CSR disclosure items:

(1) Community involvement:
- Charitable donations and subscriptions.
- Sponsorships and advertising.
  - Community program (health and education)

(2) Environmental:
- Environmental policies.

(3) Employee information:
- Number of employees/human resources.
- Employee relations.
- Employee welfare.
- Employee education.
- Employee training and development.
- Employee profit sharing.
- Managerial remuneration.
- Workers' occupational health and safety.
  - Child labor and related actions.

(4) Product and service information:
- Types of products disclosed.
- Product development and research.
- Product quality and safety.
- Discussion of marketing networks.
- Focus on customer service and satisfaction.
  - Customer award/rating received.

(5) Value-added information:
- Value-added statement.

Source: Muttakin et al. (2015)