Pacific Accounting Review

Firm characteristics, board diversity and corporate social responsibility: Evidence from Bangladesh

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Abstract

Purpose – This study aims to purport to investigate the relationship between firm size, profitability, board diversity (namely, director gender and nationality) and the extent of corporate social responsibility (CSR) disclosures within a developing nation context.

Design/methodology/approach – The dataset comprises 116 listed Bangladeshi non-financial companies for the period of 2005-2009. A CSR disclosure checklist was used to measure the extent of CSR disclosures in the annual reports and a multiple regression analysis to examine its association with firm characteristics and two board diversity features – female and foreign directorship.

Findings – Results indicate that large and more profitable firms provide more CSR disclosures. It was also found that female directorship has a negative association with CSR disclosures, while foreign directorship has a positive impact on such disclosures. This paper documents that CSR disclosures decrease further when family ownership is higher and there are more female directors on the board.

Originality/value – This study extends empirical evidence on the association between firm characteristics, board diversity and CSR disclosure practices from a developing nation context. Furthermore, this study also reveals that female directors' impact on firm disclosures may differ between developing and developed nations, and somewhat impeded in the latter. This paper also provides empirical evidence on the importance of appointment of foreign nationals on the boards of developing countries to influence CSR practices.

Keywords Corporate social responsibility, Disclosure, Board diversity, Signalling theory

Paper type Research paper

1. Introduction

There has been an escalation in the scrutiny of the business practices of firms in developing countries in recent years, with increasing demands for better corporate social responsibility (CSR). This is largely related to growing stakeholder awareness and activism as more and more firms from emerging economies become part of the larger global supply chain, and the differences in employee working conditions between firms in developed and developing nations are becoming more apparent. In particular, global outcry has been fervent with numerous high-profile environmental, health and safety corporate disasters in various developing countries claiming hundreds of lives (Manik and Yardley, 2012) and the Savar factory in Dhaka, Bangladesh fire in 2013 (Washington Post, 2013). Consequently, foreign investment and industry contracts are

Pacific Accounting Review
Vol. 27 No. 3, 2015
pp. 353-372

0114-0582
DOI 10.1108/PAR-01-2013-0007

under serious threat in developing countries as a result of the pressure on firms to demonstrate greater accountability towards CSR.

Prior research indicates that voluntary disclosure is one way in which firms tend to manage their reputations and seek to inform stakeholders on their commitment to CSR (Barnett, 2007; Kolk, 2003). Some of the theoretical perspectives offered for CSR disclosures include stakeholder theory, where disclosure is arguably to meet various stakeholders' information needs (Freeman, 1984); legitimacy theory, which proposes voluntary disclosures as a means for organisations to legitimise their presence and activities (Lindblom, 1994) and agency theory, where agents or directors are likely to voluntarily disclose if there are sufficient incentives (Haniffa and Cooke, 2002). Empirical evidence on CSR disclosures suggests that the number of firms undertaking voluntary CSR activities has also grown in recent years (Kolk, 2003). However, much of the extant evidence is from a developed nation setting where markets and institutional structures are mature and corporate governance is strong (Purushothaman *et al.*, 2000; Post *et al.*, 2011). When considering the motivations of CSR disclosures from a developing nation stance, where there is little social and environmental awareness and markets are still nascent, it can be argued that neither stakeholder appeasement nor legitimacy is likely to be a strong motivation for disclosures. Instead, in this study, we explore signalling theory as an alternate perspective for explaining CSR disclosures behaviour in a developing nation setting. According to signalling theory (Spence, 1973), under information asymmetry, corporations with superior resources and outcomes are likely to signal better corporate performance to make a positive impression on the receiver of the information. In other words, large and successful firms that tend to have more resources will be better able to commit to CSR initiatives and thus such firms would voluntarily disclose their activities to send a positive signal to the market as a superior performer. Thus, our first research question in this study is:

RQ1. Do large and more profitable firms exhibit greater levels of CSR disclosure?

In addition, in this study, we also focus on the effect of corporate governance mechanisms on CSR disclosures from a developing nation context. This is because prior studies have found that the quality of corporate governance mechanisms, namely, board characteristics, have implications for signalling and reporting behaviour (Haniffa and Cooke, 2005). In general, an agency perspective is invoked to explain how higher-quality boards would be willing to be more transparent and accountable through greater voluntary disclosures, so as to reduce information asymmetry arising from the difference in ownership and management. Board diversity in particular is increasingly seen as a desirable characteristic of board structure because greater diversity in the type of directors, such as having female and foreign directorships, is touted to bring, in broader sets of expertise, knowledge and resources that will enable a wider set of stakeholder needs and issues to be addressed, leading to better decision-making (Mateos de Cobo *et al.*, 2012). However, the role of the directors in a developing nation setting has also come under increasing criticism in recent years, as it is contended that governance structures and processes that apply in developed nations may not be appropriate in environments where the legal and institutional infrastructure are nascent (Prowse, 1999). Thus, the question"Do board composition characteristics, namely, female and foreign directorships, have a significant impact on the extent of CSR disclosures (i.e. increased transparency and accountability) within a developing nation context?"

remains a critical one, with little empirical insight. In particular, if certain characteristics of the board, such as female and foreign directorships, are prone to cultural or other idiosyncratic factors related to developing economies, and if such features do not have any effect on CSR disclosures, then the presence of board diversity may not always equate to more transparent accountability and disclosures in such settings.

We undertake this study using data from Bangladeshi firms during the period from 2005 to 2009. Bangladesh is an appropriate setting for our study, as it is a developing nation that has attracted significant foreign investment, but its legal and regulatory markets and institutions remain nascent and weak (Uddin and Choudhury, 2008). Given that some of the most appalling corporate accidents and disasters have occurred in Bangladesh, Bangladeshi firms are under tremendous pressure to demonstrate CSR accountability and good corporate governance to the global community. The relationship between firm characteristics and board diversity and the extent of CSR disclosures have not been fully assessed[1].

The justification for our choice of the two director characteristics is based on the following reasons. First, it has been argued that greater representation of females on boards potentially leads to better team or group-based decision-making (Luckerath-Rovers, 2013). However, it can also be asserted that, in the case of female directors in developing nations, there are likely to be several impediments, such as lack of capabilities and expertise. Second, our focus on the impact of foreign directors on CSR disclosure is due to the escalating numbers of such directorships in developing nations, which is often a result of increased trade and investment. For example, foreign directors are becoming increasingly common on Bangladeshi firm boards (Haque *et al.*, 2006). It is proposed that foreign directors are generally more independent, and are likely to bring additional resources through their international knowledge, experience and contacts (Oxelheim and Randey, 2003). They are also likely to demand greater firm activity disclosures, given that they may not have as much knowledge as the local directors in terms of local issues.

The results of the data analysis reveal that firm size and profitability are positive and significantly associated with CSR disclosures, indicating that more successful firms with larger resources are more likely to signal higher-quality governance and performance through CSR disclosures. Further, we find that the extent of female directorship is negatively associated with CSR disclosures. This is in contrast to the findings of previous US studies (Williams, 2003; Bear *et al.*, 2010). Additional analysis was also undertaken in relation to firm ownership and female board composition, as companies in Bangladesh are commonly owner-managed (Farooque *et al.*, 2007), and family members, including female relatives, often make up a large proportion of the governing board. Our results indicate that female directors in family-owned firms tend to report fewer CSR disclosures. By contrast, in the case of foreign directors, we find a significant and positive relation between foreign directorship and CSR disclosures.

Our study makes a number of important contributions to the existing literature. We extend the literature by demonstrating that CSR disclosures are one way in which large and successful firms may signal their higher-quality governance and performance. However, unlike in developed countries, our results suggest that female directors, particularly in family-owned firms, have a negative impact on CSR disclosures. This result supports the view that board characteristics may function differently within a developing nation context. By contrast, our study suggests that foreign directors have a positive effect on providing CSR disclosures. This result emphasises the influence foreign directors might have in transferring CSR disclosure practices from their home country or that they have greater incentives to minimise information asymmetry. It is also possible that having foreign nationals on a board might signal the improvement of governance of the company. Finally, we also extend the CSR literature, in general, by providing much needed empirical evidence of determinants of CSR disclosures from an emerging economy context.

The remainder of the paper is structured as follows. Section 2 elaborates the institutional background and CSR practices in Bangladesh. Section 3 provides the theoretical framework for CSR disclosures. Section 4 reviews related literature and develops hypotheses. Section 5 describes research design. Section 6 presents empirical results. Section 7 concludes the paper.

2. Institutional background and CSR practices in Bangladesh

Bangladesh is a developing country which is currently focusing on a private sector-led industrial development policy for rapid industrialisation through foreign investment. Although such a strategy is important from an economic perspective, it has created many adverse social, ethical and environmental effects, leading to increasing demands for better corporate accountability and transparency (Belal and Owen, 2007). The labour policy of Bangladesh emphasises the improvement of working conditions of employees by providing linkage with productivity; quick resolution of industrial disputes; preventing child labour; and ensuring education, training and a safe and healthy working environment (Belal, 2001). The Bangladesh Companies Act (1994) has no provision for publicly listed companies to disclose CSR-related activities. However, in 2008, the government issued a statutory regulatory order that allowed companies to claim a 10 per cent tax rebate on the actual amount spent on CSR activities (GoB, 2008). According to the tax exemption plan, economic, environmental and social development activities will be brought within CSR purview. Agricultural production, crop diversification, employment generation, education and training will be considered as CSR areas under the economic sector, while issues such as ecological balance, pure water management, carbon emission and waste management will fall under environmental activities. Companies will also be given a tax waiver facility for social development programmes such as donations to HIV–AIDS campaign agencies, welfare activities for disabled and grassroots children and relief activities after natural calamities.

Previous studies on Bangladesh have found CSR disclosures to be descriptive in nature, mostly reporting positive news (Imam, 2000) and CSR uptake by public-listed firms is still low but growing. Belal (2001) reports that a significant portion of the CSR-related disclosures involve information regarding employees. Belal and Cooper (2011) find that Bangladeshi companies largely stay away from more compelling CSR activities such as child labour, equal opportunities and poverty alleviation. In a recent study, Khan *et al.* (2013) document that corporate governance attributes such as managerial ownership, public ownership, foreign ownership, board independence, CEO duality and the presence of an audit committee play vital roles in ensuring organisational legitimacy through CSR disclosures. They do not investigate the effects of board diversity on CSR disclosures in their study.

3. Theoretical background

Organisations undertake voluntary disclosures for the following key reasons:

- meeting reporting accountability;
- minimising information asymmetry; and
- impression management.

Stakeholder theory suggests that a company is obligated to answer to a variety of stakeholders including shareholders, suppliers, customers, government agencies, employees and many more (Freeman, 1984). Compliance with such an obligation (or social responsibility) ranges from profit maximisation to social awareness and community service (Lantos, 2001). Legitimacy theory, on the other hand, assumes the notion of a "social contract" which limits the activities of an organisation within the boundaries set by the society (Lindblom, 1994). Lindblom, (1994) suggests that according to this theory, the survival of an organisation is established both by market forces and community expectations, and thus an organisation through its management leadership and CSR disclosures, is expected to seek congruency between organisational actions and the values of its general and relevant stakeholders (Lindblom, 1994).

Signalling theory, by contrast, suggests that to minimise the information gap between a company and its stakeholders, it will need to supply the most credible or widely accepted information of its operations that it possibly can (Spence, 1973). Thus, firm characteristics associated with firm resources, governance and success can function to signal the expectation of superior firm performance. Kanagaretnam *et al.* (2007) find that better governed firms are likely to improve voluntary disclosures to reduce information asymmetry problems between managers and investors around quarterly management earnings forecasts announcements. Agency theory proposes that agents will aim to address the information asymmetry problem with principals by better monitoring and by providing more disclosures. Some support for the agency theory exists based on prior studies linking corporate governance features to voluntary disclosure (Gul and Leung, 2004).

In the next section, we develop three hypotheses linking firm characteristics, gender diversity and foreign directorship with extent of CSR disclosures, while taking into consideration a developing nation context.

4. Literature review and hypotheses development

4.1 Firm size and profitability

Signalling theory suggests that firm characteristics such as size and profitability could be related to the level of voluntary disclosures (Watson *et al.*, 2002; Choi *et al.*, 2013; Kaur and Lodhia, 2014; Ho and Taylor, 2013). Higher profitability may motivate management to disclose more information to signal the overall financial position of the company (Singhvi and Desai, 1971). Firms with higher profitability are motivated to disclose information to favourably distinguish themselves from other firms (Verrecchia, 1983; Dye, 1985). Accordingly, when firms have good profit performance, they signal their quality to the investors in the market by providing more voluntary disclosures through CSR. Lang and Lundholm (1993) investigate the determinants of voluntary disclosures choice and find that disclosure scores are higher for firms that perform well. This positive relation between disclosures and profitability has been confirmed by Haniffa and Cooke (2002) and Wang *et al.* (2008).

From the signalling viewpoint, it is generally agreed that the larger the company, the greater the information asymmetry with current and prospective fund providers (Prencipe, 2004). Larger firms usually expect to have greater marketability of their securities. They have more resources and need to distinguish their quality from their smaller counterparts. Therefore, large companies may disclose more CSR information to signal high-quality information to their investors. Research investigating financial indicators highlights a positive relation between firm size and voluntary disclosures (Watson *et al.*, 2002). Larger companies are also subject to greater scrutiny by various groups in society and therefore would be under greater pressure to disclose their CSR-related activities in relation to their businesses (Cowen *et al.*, 1987). Consequently, larger firms should resort more to signalling strategies than smaller firms.

The corporate disclosure practices in Bangladesh, however, are characterised by inadequacy, lack of reliability, transparency and accountability. In Bangladesh, the disclosure practices by corporate body is mainly influenced by the provisions of the Companies Act and the regulations of the Security Exchange Commission, which do not require the Bangladeshi companies to provide CSR disclosures. Furthermore, most of the investors are unaware of the corporate social as well as financial disclosures (Muttakin and Khan, 2014). Thus, because of the institutional characteristics, Bangladeshi firms may not provide high levels of voluntary disclosures, unlike their large and profitable counterparts in developed countries.

Based on the above discussion, we propose the following hypothesis in alternative form:

H1. Firm profitability and size are positively associated with the extent of CSR disclosures.

4.2 Female directorship

From an agency theory perspective, directors as agents of the firm may be motivated to voluntarily disclose more of the firm's activities to reduce information asymmetry (Gul and Leung, 2004). However, directors also vary in their information needs, expertise, communication styles, decision-making approaches and goals. In general, female participation on boards is seen to be favourable for several reasons, such as females (relative to males) are more sensitive to charitable and community matters, have a wider educational and work experience background and communicate in a more participatory manner which often encourages a broader perspective and inclusion of stakeholder needs (Srinidhi *et al.*, 2011). Letendre (2004) argues that women's communication styles tend to be more participative, often inciting lively boardroom discussions, while Kramer *et al.* (2006) find that female directors are more prepared than male directors to push "tough issues" on the board that others were reluctant to tackle. Nielsen and Huse (2010) suggest that females may be particularly sensitive to certain organisational practices, such as CSR and environmental politics. Likewise, Post *et al.* (2011) find that firms with a higher percentage of female board members are associated with higher levels of environmental CSR disclosures. Bear *et al.* (2010) report a positive relation between female directors and "institutional strength CSR" but no connection was found with "technical strength CSR"[2]. Collectively, the findings of these studies suggest that female directors are likely to play unique roles in enhancing a firm's moral legitimacy through CSR activities. Nevertheless, the impact of female directors on CSR disclosures from a developing country remains questionable.

First, the educational qualification and expertise of female directors in developed countries is likely to be higher than those from developing nations. In Bangladesh, the literacy rates for females are much lower than they are in developed countries (UNESCO, 2009). Second, from a cultural perspective, the role of female directors can be constricted in developing nations. For instance, Bangladesh is a country where society is dominated by a patrilineal and patrilocal kinship system. Hence, it is likely that views and opinions held by a female director may be viewed as being either not important or given less attention (Quisumbing and Maluccio, 2000). This, in turn, raises the issue as to whether female board membership is really a sign of tokenism. In particular, given that the ownership of firms in many developing countries is family dominated, it is also possible that female members occupy directorship positions for firm control, and that they are neither fully engaged with firm affairs nor do they bring the necessary skills or business nuance (Uddin and Choudhury, 2008).

Based on the above discussion, we propose the following hypotheses in the null form:

H2. There is no significant association between the proportion of female directors and the extent of CSR disclosures.

H2a. There is no significant association between the proportion of female directors in family-owned firms and the extent of CSR disclosures.

4.3 Foreign directorship

Having foreign directors on boards entails various potential advantages (Randoy *et al.*, 2006). First, a larger stock of qualified candidates would be available for the board (i.e. with broader global industry experience). Second, because of their different backgrounds, foreign members can add valuable and diverse expertise which domestic board members do not possess. Oxelheim and Randey (2003) further argue that having a foreign member on the board may also signal a higher commitment to corporate monitoring and transparency and enhance the firm's reputation in the financial market. The demands for disclosures can also be generally higher when foreigners hold board positions due to the geographic separation between management and owners (Schipper, 1981). For instance, foreign directors, who are often expected to also capitalise on their international connections to improve strategic planning and export markets, are likely to want to showcase the firm's social responsibility activities (Zahra and Filatotchev, 2004). Thus, a company with more foreign directors can be expected to disclose more CSR-related information.

Masulis *et al.* (2012), on the other hand, suggest that firms with foreign independent directors exhibit poorer performance, as the costs of foreign independent directors' ineffective monitoring may outweigh the benefits from their expertise. They contend that foreign directors who are geographically removed from their home countries are cut off from the local networks that could provide them valuable information. Furthermore, foreign directors could be less likely to be familiar with local accounting rules, laws and regulations, making it more difficult for them to monitor and evaluate managerial decisions accordingly.

In Bangladesh, foreign directors are becoming increasingly common because of the growth in multinational ventures. Therefore, board diversity has become an important element of corporate governance structure in recent years, as foreign representation on boards is now being practised (Haque *et al.*, 2006). Local directors in Bangladeshi firms may not be as exposed or sensitised to the need for social responsibility. Foreign directors, however, because of their international exposure and knowledge, are more likely to be aware of the need for more transparent accountability for the firm's social impact at large, and hence may better champion and promote more CSR disclosures. Companies may also appoint foreign directors to enhance reputation and provide positive signals to the market. On the other hand, foreign board members, who are offered board positions to merely symbolise board diversity, may be less engaged with domestic affairs and therefore less concerned about CSR disclosures.

Based on the preceding discussion, we propose the following hypothesis in the null form:

H3. There is no significant association between the proportion of foreign directors and the extent of CSR disclosures.

5. Research design

5.1 Sample

The sample selection procedure is reported in Table I. The sample consists of all 135 manufacturing companies listed with Dhaka Stock Exchange (DSE) in Bangladesh from 2005 to 2009[3]. We exclude 19 companies due to missing or incomplete information. The final sample comprises the remaining companies (116) with a total of 580 firm-year observations. The data for our analysis come from multiple sources of secondary data. We collect the financial and board data from the annual reports of the sample companies listed on the DSE. Social responsibility information was hand-collected from the CSR disclosures, corporate governance disclosures, directors' report, Chairman's statement and notes to the financial statement contained in annual reports.

Firms	No.
Panel A	
Number of firms	135
Less	
Companies without necessary information	19
Total	116

Sector	No. of firms
Panel B	
Cement	7
Ceramics	4
Engineering	19
Food	21
Jute	3
Paper and printing	2
Miscellaneous	11
Pharmaceuticals	21
Tannery	5
Textile	23
Total	116

Table I.
Sample description

The sample consists of various sectors such as: cement (7), ceramics (4), engineering (19), food (21), jute (3), paper and printing (2), miscellaneous (11), pharmaceuticals (21), tannery (5), paper and printing (2) and textile (23).

5.2 Model specification

We use regression analysis to test the relation between the corporate governance variables and disclosure (CSRD). The assumptions underlying the regression model were tested for multicollinearity based on the correlation matrix as well as the variance inflation factor (VIF)[4]. We also conducted normality tests based on skewness, kurtosis and Kolmogorov-Smirnov Lilliefors. These are consistent with previous studies (Haniffa and Cooke, 2002, 2005). The regression[5] models are as follows:

$$CSRD = \alpha + \beta_1 FSIZE + \beta_2 ROA + \beta_3 BIND + \beta_4 CEODU + \beta_5 FAGE + \beta_6 LEV + \beta_7 INDUSTRY\ DUMMIES + \beta_8 YEAR\ DUMMIES \tag{1}$$

$$CSRD = \alpha + \beta_1 FSIZE + \beta_2 ROA + \beta_3 BGD + \beta_4 BIND + \beta_5 CEODU + \beta_6 FAGE + \beta_7 LEV + \beta_8 INDUSTRY\ DUMMIES + \beta_9 YEAR\ DUMMIES \tag{2}$$

$$CSRD = \alpha + \beta_1 FSIZE + \beta_2 ROA + \beta_3 BGD + \beta_4 BIND + \beta_5 CEODU + \beta_6 FOWN + \beta_7 BGD \times FOWN + \beta_8 FAGE + \beta_9 LEV + \beta_{10} INDUSTRY\ DUMMIES + \beta_{11} YEAR\ DUMMIES \tag{3}$$

$$CSRD = \alpha + \beta_1 FSIZE + \beta_2 ROA + \beta_3 BND + \beta_4 BIND + \beta_5 CEODU + \beta_6 FAGE + \beta_7 LEV + \beta_8 INDUSTRY\ DUMMIES + \beta_9 YEAR\ DUMMIES \tag{4}$$

$$CSRD = \alpha + \beta_1 FSIZE + \beta_2 ROA + \beta_3 FOWN + \beta_4 BGD + \beta_5 BGD \times FOWN + \beta_6 BND + \beta_7 BIND + \beta_8 CEODU + \beta_9 FAGE + \beta_{10} LEV + \beta_{11} INDUSTRY\ DUMMIES + \beta_{12} YEAR\ DUMMIES + \varepsilon \tag{5}$$

Where,

CSRD = corporate social responsibility disclosure score/index;
FSIZE = natural logarithm of total assets;
ROA = ratio of earnings before interest and taxes and total assets;
FOWN = proportion of shares held by the chief executive officer (CEO)'s family;
BGD = proportion of female directors on the board;
BND = proportion of foreign directors on the board;
BIND = proportion of independent directors on the board;
CEODU = dummy variable equals 1 if same person holds the positions of CEO and chairman in a firm;
FAGE = natural log of the number of years since the firm's inception; and
LEV = ratio of book value of total debt and total assets.

The key variables are firm size (FSIZE), profitability (ROA), female directorship (BGD), foreign directorship (BND) and family ownership (FOWN) variables. The control variables included are board independence (BIND), CEO duality (CEODU), firm age (FAGE) and leverage (LEV). CEO duality is more likely to be associated with lower levels of CSR disclosures, as this may provide a greater degree of CEO discretion and enable him/her less accountable for the greater interest of stakeholders (Haniffa and Cooke, 2002; Gul and Leung, 2004). A more mature firm could be concerned about its reputation and may disclose more social responsibility information (Khan *et al.*, 2013). Purushothaman *et al.* (2000) predict a negative relation between leverage and CSR disclosures, in that companies with high leverage may have closer relations with their creditors and use other means to disclose social responsibility information.

5.3 Dependent variable – CSR disclosure index

The CSRD index represents the dependent variable in this study. To assess the extent of CSR disclosures in annual reports, a checklist containing 20 items was constructed (Appendix). We follow Khan *et al.* (2013) to construct this checklist. A dichotomous procedure is applied, whereby a company is awarded 1 if an item included in the checklist is disclosed and 0 if it is not disclosed. Accordingly, the CSRD index is derived by computing the ratio of actual scores awarded to the maximum score attainable (20) by that company. Following Haniffa and Cooke (2002, 2005) and Khan *et al.* (2013), the CSRD index is calculated as follows:

$$\text{CSRDj Index} = \frac{\sum_{t=1}^{n_j} X_{ij}}{n_j}$$

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

So that, $0 \leq CSRD_j \leq 1$

Following prior disclosure index studies (Botosan, 1997; Gul and Leung, 2004), we use the Cronbach's coefficient alpha (Cronbach, 1951) to assess the internal consistency of our disclosure index. Internal consistency refers to the degree to which the items in a test measure the same construct. The coefficient alpha for the five information categories in our disclosure index is 0.679[6].

6. Results and discussion

Table II provides the descriptive statistics for the variables used in this study. The average disclosure score is 0.223 (median = 0.20). The average number of directors is around 7. The average proportion female directors (BGD) are 17.38 per cent and foreign directors (BND) are 5.94 per cent. The average level of firm size (FSIZE) is 8.70. The average board independence (BIND) of our sample is 7.10, and 24.70 per cent of the CEOs in our sample firms are also the chairman of the board (CEODU). The average family ownership is 29.9 per cent.

Table III presents the correlation matrix among variables. The CSRD score is negatively correlated with female directorship (BGD) ($p = -0.86$). However, CSRD is

Variables	Mean	Median	SD
CSRD	0.223	0.200	0.173
FSIZE	8.700	8.705	0.661
ROA	0.075	0.071	0.095
BSIZE	6.697	6.00	1.962
FOWN	0.2991	0.343	0.221
BGD	0.173	0.143	0.189
BND	0.059	0.000	0.165
CEODU	0.247	0.000	0.432
BIND	0.071	0.000	0.084
LEV	0.776	0.626	0.807
FAGE	23.659	24.000	10.709

Notes: CSRD = corporate social responsibility disclosure score/index; FSIZE = natural logarithm of total assets; ROA = ratio of earnings before interest and taxes and total assets; BGD = proportion of female directors on the board; BSIZE = the number of directors on the board; FOWN = Proportion of firm's share held by the CEO's family; BND = proportion of foreign directors on the board; BIND = proportionate independent directors on the board; FEMDIR = proportion of female directors on the board; CEODU = dummy variable equals 1 if same person holds the positions of CEO and chairman in a firm; LEV = ratio of book value of total debt and total assets; FAGE the number of years since the firm's inception

Table II. Descriptive statistics for the dependent and independent variables

positively correlated with foreign directorship (BND) ($p = 0.249$). CSRD is also negatively correlated with family ownership (FOWN) ($p = -0.182$). There is a strong positive correlation between family ownership (FOWN) and female directorship (BGD) ($p = 0.527$). CSRD is also correlated with the control variables such as firm size (FSIZE) ($p = 0.558$), board independence (BIND) ($p = 0.269$), CEO duality (CEODU) ($p = 0.003$), firm age (FAGE) ($p = 0.231$), leverage (LEV) ($p = -0.192$) and profitability measured by return on assets (ROA) ($p = 0.371$).

Table IV reports the mean values of the explanatory variables under analysis across the CSR disclosure scores for both firms with a score higher than the median, and for those with a score lower than the median. To test the statistical significance of the mean differences in the variables between both groups of firms, we perform a *t*-test. We document that firms with a CSRD score that is higher than the median have a lower proportion of female directors (BGD) and a higher proportion of foreign directors (BND) and profitability (ROA) compared to those firms with a CSRD score that is lower than the median. Our analysis also shows that several control variables differ significantly between both groups of firms, such as age (FAGE), board independence (BIND), CEO duality (CEODU) and leverage (LEV).

Table V reports the results of regressing the explanatory variables on the CSRD score. In Model 1, we examine the impact of firm characteristics, namely, firm size (FSIZE) and profitability (ROA), on CSR disclosures. We document positive and significant coefficients ($\beta = 0.121, p < 0.01$ and $\beta = 0.383, p < 0.01$) of firm size (FSIZE) and profitability (ROA). These findings suggest that larger and profitable firms in Bangladesh provide more CSR disclosures. This supports *H1*. Although prior studies (Belal and Owen, 2007) contend and document that firms in Bangladesh provide CSR disclosures to legitimise their activities due to stakeholder pressure, our findings suggest that another possible reason for Bangladeshi

Table III.
Correlation between variables used in the study

Variables	CSDR	FOWN	BGD	BND	FSIZE	BIND	CEODU	LEV	FAGE	ROA
CSDR	1.000									
FOWN	−0.182***	1.000								
BGD	−0.086**	0.527***	1.000							
BND	0.249***	−0.221***	−0.150***	1.000						
FSIZE	0.558***	−0.148***	−0.199***	0.286***	1.000					
BIND	0.269***	−0.056	−0.057	0.180***	0.130***	1.000				
CEODU	0.003**	0.152***	0.064	0.024	−0.032	−0.136***	1.000			
LEV	−0.192***	−0.108**	−0.110***	−0.093**	−0.209***	−0.125***	−0.001	1.000		
FAGE	0.231***	−0.198***	−0.020	−0.135***	−0.073*	0.061	−0.010	0.240***	1.000	
ROA	0.371***	0.111**	0.090**	0.186***	0.158***	0.186***	0.029	−0.401***	0.070*	1.000

Notes: CSRD = corporate social responsibility disclosure score/index; FOWN = Proportion of firms share held by the CEO's family; FSIZE = natural logarithm of total assets; ROA = ratio of earnings before interest and taxes and total assets; BGD = proportion of female directors on the board; BND = proportion of foreign directors on the board; BIND = proportionate independent directors on the board; FEMDIR = proportion of female directors on the board; CEODU = dummy variable equals 1 if same person holds the positions of CEO and chairman in a firm; LEV = ratio of book value of total debt and total assets; FAGE = natural log of the number of years since the firm's inception; *, ** and *** = statistically significant at less than 0.10, 0.05 and 0.01 levels, respectively

Variables	CSRD > Median	CSRD < Median	Difference
FSIZE	8.99	8.37	0.272
ROA	0.10	0.04	0.026**
BGD	0.163	0.182	0.010**
BND	0.10	0.04	0.000***
CEODU	0.28	0.21	0.040**
BIND	0.08	0.06	0.059**
BSIZE	7.32	6.38	0.000***
FOWN	0.246	0.321	0.003***
LEV	0.63	0.94	0.000***
FAGE	24.6	22.57	0.027**

Notes: CSRD = corporate social responsibility disclosure score/index; FSIZE = natural logarithm of total assets; ROA = ratio of earnings before interest and taxes and total assets; BGD = proportion of female directors on the board; BND = proportion of foreign directors on the board; BIND = proportion of independent directors on the board; FEMDIR = proportion of female directors on the board; CEODU = dummy variable equals 1 if same person holds the positions of CEO and chairman in a firm; FOWN = Proportion of firm's share held by the CEO's family; LEV = ratio of book value of total debt and total assets; FAGE = natural log of the number of years since the firm's inception; ** and *** = statistically significant at less than 0.05 and 0.01 levels, respectively

Table IV. The mean values of the explanatory variables for firms with a CSRD higher and lower than the median

firms to provide CSR disclosures could be to signal the investors about the profitability and marketability of the securities.

In Model 2, we examine the impact of female directorship (BGD) on CSR disclosures. We find a negative and significant coefficient ($\beta = -0.066$, $p < 0.05$) of the female directorship (BGD) variable. This implies that having a higher proportion of female directors on board results in a lower extent of CSR disclosures, thus rejecting *H2*. Our result is contrasted with the findings of Wang and Coffey (1992) and Williams (2003) who document a positive relation between female directorship and CSR disclosures. There could be several possible reasons for such findings. Because of lack of educational qualifications and expertise, female directors in developing countries might not be able to realise the importance of voluntary disclosures, which may affect negatively on CSR disclosures. It is also possible that female directors who could have been appointed based on family ties, tend to protect family interests and care little about CSR.

In Model 3, we test whether the proportion of female directors in family-owned firms influences the extent of CSR disclosures. We introduce a new variable FOWN in our original model which captures the percentage of family ownership. Furthermore, we interact family ownership (FOWN) and the proportion of female directors on the board (BGD). We document an insignificant coefficient of BGD. We also document a negative and significant coefficient of family ownership (FOWN), implying a lower extent of CSR disclosures when there is a higher percentage of family ownership. However, the coefficient of the interaction variable (FOWN × BGD) is negative and significant ($\beta = -0.126$, $p < 0.05$). This suggests that the proportion of female directors on the board has a negative influence on the level of CSR disclosures in family-owned firms. Thus, null hypothesis *H2a* is rejected.

It is possible that family-owned firms with boards that have female directors are less challenged on undertaking a wider perspective in terms of CSR-related activities, as they

Table V.
Multiple regression results using CSRD index as the dependent variable

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
Intercept	−1.012	0.000***	−1.164	0.000***	−0.921	0.000	−1.178	0.000***	−0.893	0.000***
FSIZE	0.121	0.000***	0.125	0.000***	0.113	0.000***	0.122	0.000***	0.110	0.000***
ROA	0.383	0.000***	0.366	0.000***	0.419	0.000***	0.334	0.000***	0.402	0.000***
BGD			−0.066	0.024**	0.020	0.321			0.034	0.542
BND							0.108	0.002***	0.065	0.039**
BIND	0.349	0.000***	0.341	0.000***	0.320	0.000***	0.301	0.000***	0.294	0.000***
CEODU	0.028	0.024**	0.023	0.057**	0.033	0.036**	0.195	0.100*	0.032	0.008***
FOWN					−0.078	0.026**			−0.063	0.052**
FOWN × BGD					−0.086	0.012**			−0.126	0.016**
LEV	−0.009	0.278	−0.008	0.260	−0.009	0.215	−0.008	0.267	−0.010	0.177
FAGE	0.004	0.000***	0.177	0.000***	0.003	0.000***	0.193	0.000***	0.004	0.000***
Industry dummy	Yes		Yes		Yes		Yes		Yes	
Year dummy	Yes		Yes		Yes		Yes		Yes	
Adjusted R^2	0.506		0.516		0.527		0.520		0.544	
F stat	38.786		39.488		34.226		40.126		32.843	
Significance of F	0.000		0.000		0.000		0.000		0.000	

Notes: CSRD = corporate social responsibility disclosure score/index; FSIZE = natural logarithm of total assets; ROA = ratio of earnings before interest and taxes and total assets; BGD = proportion of female directors on the board; BND = proportion of foreign directors on the board; BIND = proportion of independent directors on the board; FOWN = Proportion of firm's share held by the CEO's family; CEODU = dummy variable equals 1 if same person holds the positions of CEO and chairman in a firm; LEV = ratio of book value of total debt and total assets; FAGE = natural log of the number of years since the firm's inception; *, ** and *** = statistically significant at less than 0.10, 0.05 and 0.01 level, respectively are more family oriented and may not involve actively in business affairs because of having inadequate business skills and experience. Such boards may reflect a general tendency to not only ignore CSR but to also save costs of reporting, which thus exhibit a negative association between female membership on family firm boards and CSR disclosures. The sign and significance levels of the coefficients of other variables are consistent with the main results.

In Model 4, we explore the impact of foreign directorship (BND) on the extent of CSR disclosures. We document a positive significant coefficient ($\beta = 0.108$, $p < 0.01$) of the foreign directorship (BND) variable. This suggests that a higher percentage of foreign directors on the board results in a higher level of CSR disclosures. Thus, *H3* is rejected. Foreign directors have international exposure and knowledge. They are more committed to protecting the interests of society and which ensures more reporting of CSR disclosures.

We regress CSR disclosures on all hypothesised and control variables in Model 5. Our results with respect to the coefficients of hypothesised variables are consistent with the main findings reported in the previous four models. In regards to control variables, our overall findings suggest that board independence (BIND), CEO duality (CEODU) and older firms (FAGE) are significantly related to greater extent of CSR disclosures. However, we document leverage to have no significant impact on the level of CSR disclosures. The results of our analysis, with respect to the control variables, are consistent with those of several previous studies (Haniffa and Cooke, 2005; Khan *et al.*, 2013).

A series of tests were conducted to test the model's robustness. We have used fixed-effect regressions to check the robustness of the results, consistent with the panel data analysis technique. Whilst the results are not reported for brevity, our findings are not significantly different from the key findings which use pooled ordinary least square regression techniques. Furthermore, we partition our sample into two different sub-samples – from 2005 to 2006 and from 2007 to 2009 – and replicated the original analysis. The purpose of partitioning the sample is to test any impact of the "corporate governance notification 2006" that took place during our study period. The results that we document for the sub-sample periods are qualitatively similar to the results in respect of the whole sample. Because the time period of our study could be influenced by increasing interest about CSR matters in the global economy, we attempt to test the presence of such increasing trends in our analysis. We run our model separately for each year and use a Chow test to evaluate the shifts of independent variables over time. However, the cross-period Chow tests of the significance of all the explanatory variables suggest no significant shift of coefficients over time.

7. Conclusions

The objective of this paper was to investigate the influence of firm characteristics such as, firm size and profitability and board diversity on CSR disclosures in an emerging economy, namely, Bangladesh. We document that large and profitable firms provide more CSR disclosures. Consistent with the signalling theory, this implies that one preferred reason for Bangladeshi firms to make CSR disclosures could be to signal the investors about the performance and marketability of securities (Watson *et al.*, 2002).

We also document that board female directorship is negatively related to the extent of CSR disclosures. This is in contrast to the findings of prior studies from the context of developed nations which suggest that women may bring a number of strengths that can increase the board sensitivity to CSR practices and disclosures (Post *et al.*, 2011;

Williams 2003; Wang and Coffey, 1992). This may be consistent with two possible arguments that females who are board members in Bangladeshi firms might lack education and expertise. Furthermore, most of the time these female board members are appointed based on family ties. Accordingly, we also investigate the impact of female board members of family owned firms on CSR disclosures. We reveal that female board members in family firms tend to report lower CSR disclosures. This implies that female members, appointed on boards based on family ties to ensure family dominance in decision-making, are likely to care very little about the CSR issues. Thus, their presence on Bangladeshi boards tends to reduce the extent of CSR disclosures.

We also find that foreign directorship has a significantly positive influence on the levels of CSR disclosures. Our result implies that foreign directors with international exposure and knowledge are more committed to protecting the interests of society and may also influence CSR disclosures. Their presence on the board also signals higher commitment regarding transparency of information disclosures. It is also possible that foreign directors would like to reduce information asymmetry by ensuring more voluntary disclosures.

The results of this study should be of interest to the regulators and policy-makers of developing countries. Our results imply that because of historical family dominance, having female directors in developing countries may not be an effective governance mechanism to provide higher levels of voluntary disclosures, such as CSR disclosures. In this regard, regulatory institutions could adopt measures to discourage the appointment of female directors and prevent family dominance in a company. Our findings, in regards to the foreign directors, suggest that the regulators and policy-makers could encourage inclusion of foreign directors on the corporate boards, as they might improve the level of voluntary disclosures for the general shareholders.

The limitation of this study is that due to unavailability of data in the annual reports, we could not consider the impact of different characteristics of female board members such as age, qualifications and ethnicity. Possibly, a survey or an interview could be undertaken to obtain such data. Further, we use the CSR disclosures available in the company annual reports and ignore other media such as newspapers, the Internet, etc. Therefore, the CSRD index developed in this study may not fully capture the CSR practices. Future research may focus on CSR disclosures in other media to capture the proper CSR practices by Bangladeshi companies. Moreover, future studies may further investigate whether lack of knowledge, expertise, experience and/or cultural factors may individually, or in combination, impede female directors to behave differently in developing nations when compared to their counterparts in developed nations.

Notes

1. An exception is the recent study by Khan (2010) that examined the impact of corporate governance variables on CSR disclosure for Bangladeshi banking companies. Our study, however, uses a sample of non-financial companies as the governance impositions and regulatory requirements differ from the banking sector. As noted by Khan (2010), the banking sector often has additional regulatory and reporting requirements which makes the sector distinct in general. In addition, there are many more non-banking-listed firms (215) than banks (30). Furthermore, our study provides more robust results, as it uses a sample of 580 firm-year observations for 2005-2009 as opposed to Khan's study which uses a sample of 60 firm-year observations for 2006 and 2007.

2. "Institutional strength reflects the firm's ability to meet expectations of the community and diversity stakeholders through philanthropy, community support and hiring practices. Technical strength reflects positive exchanges with consumers, stockholders and employees through product quality, good governance, and employee compensation and benefits" (Bear *et al.*, 2010, p. 217).
3. None of these companies is listed on any international stock exchange.
4. None of the variables has a VIF value in excess of 10 (Neter *et al.*, 1983) which suggests that multicollinearity is not a problem in interpreting the regression results.
5. We use panel least square regression technique.
6. Botosan (1997) obtains a coefficient alpha computed on standardized data of 0.64. Gul and Leung (2004) computes a coefficient alpha of 0.51.

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Appendix

CSR disclosure items:

(1) Community involvement:
- Charitable donations and subscriptions;
- Sponsorships and advertising; and
- Community programme (Health and Education).

(2) Environmental:
- Environmental policies.

(3) Employee information:
- Number of Employees/Human resource;
- Employees' relations;
- Employees' welfare;
- Employees' education;
- Employees' training and development;
- Employees' profit-sharing;
- Managerial remuneration;
- Workers' occupational health and safety; and
- Child labour and related actions.

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

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

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