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FIRM-SPECIFIC DETERMINANTS OF ENVIRONMENTAL REPORTING: EMPIRICAL EVIDENCE FROM THE LISTED READY MADE GARMENTS OF BANGLADESH

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Abstract

This study aims at finding the determinants of environmental reporting in the Ready-made Garments (RMG) of Bangladesh. It considers firms size, sales revenue, debt, return on equity, institutional shareholding and paid up capital of 2018 of selected RMGs as independent variables. It uses legitimacy and stakeholder as theoretical underpinning. It applies content analysis and self-made index based on previous literature to find the score of the companies in environmental reporting. It uses the regression analysis to analyze the data. Findings show a significant positive association of institutional share ownership and paid-up capital with environmental reporting. A positive but insignificant association between size of business and environmental reporting is found. On the other hand, a significantly negative relationship is found between leverage and environmental reporting where the association of growth and financial performance with environmental reporting is found to be negative but insignificant.

Key Words: Determinants, Environmental Reporting, RMGs, Bangladesh

1. Introduction

Environmental reporting is defined as the communication of the environmental performance information of a company by itself to the stakeholders. It has a fundamental task of communicating environmental activities and encouraging dialogue between numerous and often diverse stakeholder groups (Jones and Walton, 1998). To be more specific, it means disclosing information regarding the impact of business on the environment, measures taken to prevent or cure that impact, usage of natural resources and restoration of the environment, mechanisms taken by the business to restore the environment and contribution to the environment.

The demand for information from a business has increased and transformed merely from financial information to others like the social, environmental i.e. focus of users of accounting information has been changing over the last few years (Blank et Al. 2009). On the other hand, in the current complex and ever power growing businesses are increasing the anxiety of the stakeholders regarding the proper utilization and no misuse of that power urging demand for non-financial disclosures in the annual report (Gray, 2001). So far, environmental reporting has been kept

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voluntary in both developed and developing countries. This kind of reporting certainly increases the cost of information for the business. As a business has to always behave within the bound of cost-benefit analysis, it may seem that environmental reporting is only costly bringing no visible benefit to the business. But, in reality, the benefit of environmental reporting is beyond digit based measurement. A business earns its legitimacy i.e. an invisible certificate to carry on business from the broader society and stakeholders through reporting environmental reporting (O'Donovan, 1999). That is why, more business nowadays are disclosing information regarding their environmental performance in response to stakeholder demands in environmental responsibility and accountability (Jose and Lee, 2007; Bae, 2003). This motivation on the other hands depends on several factors e.g. large business or businesses that are close to the market become more intend to voluntary environmental reporting than the small businesses (Haddok-Fraser and Fraser, 2008). Another major influence behind environmental reporting emergence from the constant pressure for the groups that provide funds to the business, such as IMF, WB etc. in order to provide institutional legitimating (Rahaman et al. 2004).

This article focuses on the analysis of the secondary data collected regarding the environmental reporting. It considered six independent variables, namely Institutional share Ownership (ISO), Paid up capital (PUC) used as a measure of, Total Asset (TA) used as a measure of size, Total Debt (TD) used as a measure of leverage and Total Sales Revenue (TSR) as a measure of business growth and Return on Equity (ROE) as a measure of financial performance as independent variables and Environmental reporting scores as dependent variables. The dependent variable used in this study is Environmental Disclosure Scores (EDS). Required data were collected from the annual report of the selected RMG companies of Bangladesh those are listed based on convenient sampling.

The paper is divided into 8 sections. Section 2 discusses literature review and justification of the article. Section 3 discusses different theoretical perspectives. Section 4 discusses Research methodology, population, and sample and data analysis in details. Later on in section 5, the article presents the objectives of this research and section 6 focuses on the hypothesis development and model development along with justification of selected variables. Section 7 explores the result and the findings of the study, and finally, in section 8, this article draws the concluding remarks and managerial implications of this study.

2. Literature Review

A good number of researches were conducted regarding environmental reporting both in and out of Bangladesh. A strong portfolio of background knowledge was developed from those researches that assist in this study.

Sulaiman et al. (2014) performed a study on the determinants of environmental reporting in 164 listed companies in Malaysia. They used legitimacy theory and resource-based view in their study. They used firm size, profitability and leverage and ownership distribution as their independent variables and performed content analysis to find the extent of environmental reporting in annual reports. They found a significant positive association of firm size and leverage with the extent of environmental reporting but found no significant association with profitability and ownership distribution resulting in support for legitimacy theory and no support for resource-based view. Ahmed et al. (2003) on a similar study came up with a conflicting result that found a significant negative correlation between firm size and environmental reporting. Jennifer and Taylor (2007) ended up with similar findings. According to them a higher size of firms, lower profitability and with membership in the manufacturing industry tends to provide more information in their annual reports regarding environmental disclosures. Toms (2016) found that environmental reporting is positively related to diverse institutional share ownership and low systematic risk, but they found no association between firm financial performance and environmental reporting.

Several researches found an association between the legitimacy of firm with the extent of the environmental disclosures (Braam et al. 2016; Sulaiman et al.2014). On the other hand many research found an association between environmental reporting and stakeholder perspective meaning the existence of powerful stakeholders(like government, environmental agencies) creates a pressure on the companies to disclose more information regarding their environmental performance (Elijido-Ten,2004;Chan, 1996; Clarkson, 1995).

It seems that no research work was previously conducted on the determinants of environmental reporting of the RMG industry of Bangladesh. Several studies were conducted in past on environmental reporting of different sectors other than RMG. Thus the present study has been undertaken to fill the existing research gap and contributes to the existing body of knowledge.

3. Theoretical Perspective:

3.1 Legitimacy Theory

Legitimacy is all about legitimizing actions and behaviors. It is a theory that supports the organizations to implement and develop social and environmental reporting disclosures in their annual reports. The main dictation of this theory is that a corporation or a business should behave within the bound of the socially accepted code of behaviour to continue its operation in the long run by legitimizing its actions otherwise its future existence and profitability will be threatened (O'Donovan, 1999; Guthrie and Parker, 1989). It also suggests that social and environmental disclosure

in corporate reporting can be viewed as the response to the changing perception of society (Preston & Post, 1975). Based on the rising concern and demand of the society corporations do increase the extent of the environmental disclosure (Brown and Deegan, 1998; Haddock Fraser and Fraser, 2008). As a business collects its necessary resources for sustenance from the boarder society, it should be able to fulfill the demand of boarder society in terms of social and environmental reporting. Many previous researches found support in favor of legitimacy theory as a backdrop motivation for environmental reporting (see, for example, Braam et al. 2016; Pattern, 1992; O'Donovan, 2002; Deegan et al. 2002; Wilmshurst and Frost, 2000; Magness, 2006). It has been a very popular theory since 1980 to explain the increase in the extent and quality of environmental reporting by the corporation (O'Donovan, 2002).

3.2 Stakeholder Perspective

Stakeholder theory, first described by Dr. F. Edward Freeman, describe the responsibilities of an organization to broader stakeholders rather than a single stakeholder who make a profit from their stock i.e. shareholders. Where shareholder view, posited by Milton Friedman in 20th century, is a narrower perspective whereas stakeholder theory is a much broader view. The main dictation of this theory is that a business organization should remain responsible to satisfy all of its stakeholders for gaining real success that will sustain. Now a days businesses are more inclined to report and disclose what their diverse stakeholders expect them to do (Sweeney and Coughlan, 2008). Freeman et al. argue that stakeholder theory starts with a canon that values are vitally a part of carrying business and urges management to the depiction of a shared sense of values that they develop, what mingles its main stakeholders together. Many previous researches used stakeholder perspective as theoretical underpinning behind the environmental reporting by organizations (see, for example, Mahadeo et al. 2011; Prado-Lorenzo et al. 2009; Bebbington et al. 2008; Buysse and Verbeke, 2003 etc.). Ullmman's conceptual framework (1985) thus rightly described social and environmental reporting as an outcome of stakeholders' power where he argued that power of the stakeholders is a function of the resources they control and essential for the business.

4. Research Methodology

4.1 Population and Sample

The population of this study consists of the listed RMG companies in Dhaka Stock Exchange (DSE) Limited. This article considers a total 19 listed RMG companies selected based on convenient random sampling.

4.2 Data Source and Data collection

Data used in this study are secondary data. Required data were collected from annual published report of the selected RMG companies. A self-developed index

based on previous literature was used containing a total 18 questions regarding environmental reporting (given in Annexure-1) to collect the data regarding the dependent variable i.e. score of environmental reporting. To collect scores on environmental disclosures, content analysis of the annual report was performed (Hsieh and Shannon 2005).

4.3 Data Analysis

This article at first discusses the percentage extent of disclosures of the selected variables in table 1. Then it analyzes the correlation among the variables to check for multicollinearity among them as given in table 2. Finally, it analyzes the relationship between the dependent variable and the independent variables through regression analysis as given in table 3. Results of the tests performed have been derived by using statistical software "Excel".

5. Research Objectives

The core objective of this research is to identify the determinants of environmental reporting in the RMG companies those are listed in the DSE Ltd. and the extent of the impact of those determinants on environmental reporting. It is also the purpose of the study to identify the extent to which the RMG companies of Bangladesh are motivated to report environmental performance that is a voluntary issue.

6. Hypothesis Building and Model Development

6.1 Institutional Share Ownership (ISO)

Institutional Share Ownership means the presence of party playing an important role in the corporate governance of a firm that significantly affects the reporting aspect of that firm. Diverse institutional share ownership is expected to be positively related to the environmental reporting of a firm (Toms, 2002)

H_0: There is no association between Institutional Share Ownership and environmental reporting.

H_1: There is a significant association between Institutional Share Ownership and environmental reporting.

6.2 Total Debt (TD)

Debt as a measure of leverage of a business brings about more monitoring cost for the business as a conflict of interest arises between shareholders interest and debt holders interest in the case of rising debt (Jensen and Meckling, 1976; Meyers 1977) A firm with higher debt is expected to disclose a higher amount of environmental information in their annual report (Jennifer and Taylor, 2007).

H_0: There is no association between Debt and environmental reporting.

H_1: There is a significant association between Debt and environmental reporting

6.3 Total Assets (TA)

Total assets of a business represent the size of that business. The bigger a firm becomes, the more becomes the information need and demand of the users putting pressure on management to provide more information to the users (Latridis, 2013). That is why a positive association between the sizes of a firm, measured by the total assets, the extent of environmental disclosure exists (Sulaiman, 2014; Jennifer and Taylor, 2007).

H_0: There is no association between Asset and environmental reporting.

H_1: There is a significant association between Asset and environmental reporting

6.4 Total Sales Revenue (TSRS)

Sales of business represent its growth meaning a higher propensity of the subject to attention by different stakeholders implying higher motivation to disclose information regarding the environmental performance of a business (Hart and Oultn, 1996). Therefore, it is expected to have an association between environmental reporting and total sales of a business.

6.5 Paid-up Capital (PUC)

As like asset, paid-up capital of a business represents the size of a business and like the debt, it represents a strong stakeholder group named equity holders. A relationship between paid capital and environmental reporting is, thus, expected to exist.

H_0: There is no association between paid-up capital and environmental reporting.

H_1: There is a significant association between paid-upcapital and environmental reporting

6.6 Return on Equity (ROE)

Return on Equity is popular and commonly used measure of the financial performance of a business that highly impacts on the wealth of the shareholders of a business (De Wet and Du Toit, 2007). Smith et al. (2007) found that the financial performance of a business is negatively associated with the extent of environmental reporting. It is expected that a higher amount of earnings will make the business subject to pressure from different groups urging the necessity to disclose social and environmental performance

H_0: There is no association between return on equity and environmental reporting.

H_1: There is a significant association between return on equity and environmental reporting

6.7 Model Development

Based on the theoretical discussions given above, the following mathematical model can be developed to establish a relation between the dependent and independent variables.

$$EDS_{it} = \alpha + \beta_1 ISO_{it} + \beta_2 TA_{it} + \beta_3 TD_{it} + \beta_4 TSR_{it} + \beta_5 PUC_{it} + \beta_6 ROE_{it} + \varepsilon$$

Where,

EDS_{it} means the environmental disclosure score of company i in year t

TA_{it} means the total asset score of company i in year t

TD_{it} means the total debt score of company i in year t

SR_{it} means the total sales revenue score of company i in year t

PUC_{it} means the total paid-up capital of company i in year t

ROE_{it} means the return on equity of company i in year t

ε is the error term, α constant term and β is the coefficient of independent variable

7. Finding and Analysis

7.1 Extent of Disclosures

Table 1 given below presents the extent of environmental disclosures compared to the expected disclosures by the selected RMG companies in their annual report related to the index used in this study compared. As given, the average number of disclosure score by the selected companies is approximately 6 and in total the sampled companies disclose only 32.46% of information as asked by the developed index. It seems that being a voluntary disclosure practice companies in Bangladesh don't feel enough pressure and motivation to disclose their environmental performance.

Table 1: Extent of Environmental Disclosures by the Selected Companies

Total Expected Scores(19 companies*18 disclosures)	342
Total actual scores	111
Percentage of scores	32.46%
Averagedisclosure score (out of 18)	5.84

7.2 Correlation Analysis

Table 2 given below depicts the correlation matrix among the variables used in this study. As seen, the correlation between institutional share ownership and environmental disclosure score is significant at the level of 10% significance and between total sales

revenue and total asset is significant at 1% level of significance. None of the other relations is found to be significant, be it 1% or 5% or 10% level of significance. As no value in the correlation matrix exceeds 0.85, no multicollinearity is found among the variables as shown by the correlation matrix in table 2 (Schroeder et al. 1990).

Table 2: Correlation Analysis

	EDS	ISO	TA	TD	TSR	PUC	ROE
EDS	1						
ISO	0.361541**[3]	1					
TA	-0.06163	0.343072	1				
TD	-0.19505	0.12753	0.282445	1			
TSR	-0.0487	0.342318	0.554701***[4]	0.164466	1		
PUC	0.331502	0.04459	0.081142	0.227448	0.172779	1	
ROE	-0.23701	0.11293	-0.0764	-0.12718	-0.01937	-0.04669	1

7.3 Regression Analysis

Table 3 presents the result of the regression model used to analyze the relationship between the dependent variable and the independent variables. As seen in the table 3, institutional share ownership and paid-up capital are positive significant determinants of the environmental disclosure score in the RMG of Bangladesh where the size of business as measured by total asset is positively but insignificantly associated with the environmental disclosure scores as evident by their respective P values. On the other hand, financial leverage of a business is significant negative determinants of environmental reporting disclosures where financial performance as measured by return on equity and growth of the business as measured by total sales revenue are negatively but insignificantly associated with environmental disclosure score as evident by their respective P values shown in table 3.

Table 3: Regression Analysis

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	3.760554	1.26	2.99	0.01
ISO	0.12	0.049	2.46	0.03
TA	6.20	3.82	1.62	0.13
TD	-7.90	3.29	-2.42	0.03
TSR	-9.70	5.43	-1.78	0.10
PUC	4.72	1.77	2.67	0.02
ROE	-0.026	0.023	-1.11	0.29
F	2.68774	P	0.05	
R	58			

[3] means correlation is significant a level of 10% significance
[4] means significant at a level of 1% significance

Value of R-squared is 58 that means out model can explain 58 of changes in dependent variable occurred by the independent variables. The P value of F statistics is 0.05 that this explanatory power of the model used is statistically significant.

8. Conclusion

This study aims at finding the relations of firm size, financial performance, firm's leverage, institutional ownership paid-up, capital and growth of firm with environmental reporting in the RMG of Bangladesh. Its main objective is to determine the determinants of the environmental reporting in the RMG of Bangladesh and the extent of their impact on the same.

It appears that institutional shareholdings and paid-up capital have a significant positive association with the disclosure regarding environmental performance where firm size has a positive but insignificant association with the same. It also appears that a firm's leverage has a significant negative association with the environmental performance disclosure where a firm's growth and financial performance have a negative but insignificant association with the same. This research provides sufficient evidence to support legitimacy theory and stakeholder theory that were used as the theoretical underpinning of this study. It means that RMG in Bangladesh discloses information regarding their environmental performance to legitimize their actions and behaviours and acquire the license to continue operation in the long run as well as to satisfy all of its stakeholders broadly. This study also finds that the extent of disclosures regarding the environmental performance in the RMG of Bangladesh is relatively lower, may be due to it is being a voluntary issue.

This study is not free from limitations. Firstly, it considers only a single sector and only listed companies in that sector that is why findings cannot be generalized to other sectors. Secondly, it considers only the data found in the annual report. It doesn't consider other sources of data like managerial interviews or personal observation relating to environmental performance. Thirdly, the independent variables selected may not contain a complete set of variables required to explain the disclosures regarding environmental performance. Fourthly, it considers only the firm-specific factors rather than broader economic factors. Nevertheless, it is expected that this study brings about an outcome that is of great value for the policy-makers and future researchers in this issue.

9. Recommendations

Considering the extent of urgency about the environmental reporting in our country we think Bangladesh government should make the disclosures of environmental issues mandatory for all or at least for RMG sectors. Bangladesh government should undertake a scheme to encourage the prepares of the report or the

company management of the organizations to willingly incorporate the corporate environmental issues. A summary of specific recommendations for determinants of environmental reporting on empirical evidence from the listed readymade garments of Bangladesh is mentioned below:

1. RMG sector industries in Bangladesh should be asked to submission the detailed environmental information to the government regarding the emissions of the specific toxic chemicals, pollutants, effluents, damage to the environment and the community health.
2. It is recommended that professional accounting bodies at national level (ICMAB, ICAB) should develop a separate conceptual framework on environmental reporting specifying objectives, general assumptions and guidelines for the companies.
3. More Research and studies should be incorporate in the field of Environmental reporting.
4. Companies should maintain the huge provisions for environmental liability in the RMG sectors.
5. RMG sector industries should show data on environmental expenditure, environmental costs charged to income in the notes to the accounts in their annual reports.
6. RMG sector industries should show fines and penalties paid by the companies, environmental liabilities of the companies, environmental costs, and environmental provisions capitalized in the notes to the accounts in their corporate annual reports.
7. It is strongly recommended that environmental reporting should be made mandatory in Bangladesh.
8. Regulatory bodies should develop a standard to guide the practices of environmental reporting.

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