

Corporate Social Responsibility Disclosures by Environmentally Visible Corporations: A Study of Selected Firms in Nigeria

Uwuigbe, Uwalomwa
Dept. of Accounting, School of Business
College of College of Development Studies
Covenant University, Ota, Ogun State; Nigeria
Email: alaiwu2003@yahoo.com

Uwuigbe, Olubukunola
Dept. of Accounting, School of Business
College of College of Development Studies
Covenant University, Ota, Ogun State; Nigeria
Email: bukkyoau@yahoo.com

Ajayi, Anijesushola .O.
Dept. of Accounting, School of Business
College of College of Development Studies
Covenant University, Ota, Ogun State; Nigeria
Email: anijrebranded@gmail.com

Abstract

This study basically investigates the association between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria. The attribute or proxy used as a measure for environmental visibility in this study is size and it is measured by the total asset of the selected firms. To achieve the objective of this study, a total of 30 selected listed firms in the Nigerian stock exchange market were used. Also, the study critically developed and utilized a disclosure index to measure the extent of corporate social responsibility disclosure made by companies in their corporate annual reports for the period 2006-2010. The simple regression analysis was used to test the research propositions in this study. The study observed that there is a significant association between the corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria. This finding further revealed that environmentally visible firms disclose more environmental information in their annual reports in order to legitimate their operations and to avoid political costs derived from public scrutiny.

Keywords: corporate disclosure, Environmental visibility, corporate social responsibility, Size

1 Introduction

Firms' participation in Corporate Social Responsibility (CSR) can be explained using various motivational bases. These motivations can be broadly classified into strategic and altruistic (Campbell et al., 1999), thereby positioning the economic motives for CSR involvement (Donaldson and Preston, 1995), alongside moral ones. In practical terms both scientific evidence (Orlitzky et al., 2003), and consumer reaction have signalled to firms that their participation in CSR is likely to be rewarded, resulting in improved performance. CSR participation can enhance various stakeholder relations (McWilliams and Siegel, 2001), thereby reducing the firm's business risk (Boutin-Dufresne and Savaria, 2004). For these reasons, the strategic value of CSR is becoming increasingly recognized.

The concept of corporate social responsibility emerged in the early 20th century in the U.S. It is mainly about whether a corporation should be responsible for its stakeholders, including its customers, shareholders, employees, suppliers and the community. Although the subject of CSR was proposed in the early 20th century, it was never attached with great importance until an outbreak of a series of events, including the Enron fraud, at the end of 2001, which highlighted the issue of corporate governance, as well as the Coca-cola bottle pollution incident in India highlighting environmental issues of water resource

protection and the tainted milk incident involving the Japanese Snow Brand Dairy Company in 2000. Such scandals involving major enterprises suggest that more stakeholders will suffer if CSR is not sufficiently recognized. In addition, various firm-level attributes are likely to affect firm CSR participation, and understanding these effects is essential, as firms attempt to derive strategic value from CSR.

To this end, therefore this study aims to extend the body of existing literature by examining the relationship between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria. In the light of this objective, the remaining part of this study is organized as follows: following the theoretical framework is the literature review and hypothesis development. This is closely followed the methodology section which presents our econometric model and preliminary empirical evidence. Finally, the last section summarizes the main findings of the study with discussion of implications for future research.

1.1 Scope of Study

This study basically investigates the association between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria. Some of the attributes of environmental visibility used in this study include: size of firms, profitability and board size. To achieve this objective, the corporate annual reports for the period 2006-2010 were analyzed. In addition, the study considered a total of 30 listed firms in the aforementioned industries. The choice of these industries arises based on their direct or indirect contribution to environmental pollution.

1.1.1 Corporate Social Responsibility Literature

Engaging in business activities today is not like doing it in the past ten or twenty years ago. With the rapid advances in information and technology, globalization and liberalization; businesses are faced with stiff challenges to survive and maintain a competitive edge. CSR is a concept that has attracted worldwide attention and acquired a new resonance in the global economy (Jamali, 2006). Heightened interest in CSR in recent years has stemmed from the advent of globalization and international trade, which have reflected in increased business complexity and new demands for enhanced transparency and corporate citizenship. Moreover, while governments have traditionally assumed sole responsibility for the improvement of the living conditions of the population, society's needs have exceeded the capabilities of governments to fulfill them (Jamali, 2006). In this context, the spotlight is turning to focus on the role of business in society, and companies are seeking to differentiate themselves through engagement in what is referred to as CSR. Corporate social responsibility according to the World Business Council for Sustainable Development (2001) is defined as the commitment of business to contribute to sustainable economic development, working with employees, their families and the local communities. It is described as a set of policies, practices, and programs that are integrated throughout business operations and decision-making processes, and intended to ensure the company maximizes the positive impacts of its operations on society (Business for Social Responsibility, 2003). This concept assumes that an entity is influenced by and, in turn, has influence upon the society in which it operates (Deegan 2002). It is seen as a mechanism whereby companies disclose the corporate social and environmental aspects of their corporate activities to their stakeholders.

1.1.2 Theoretical Framework

Businesses in the form of corporations operate within the framework of a social systems (Gray, Owen and Adams, 1995); and thus despite the limited mandatory reporting requirements, literatures on corporate social disclosures suggests that an increasing number of companies in developed economies are now providing corporate social responsibility disclosures at varying levels. There are different theoretical frameworks used as a motivation to explain why companies may provide voluntary disclosure. In an influential review of the corporate environmental reporting literatures, Gray, Kouhy and Lavers (1995a) categorized much of the extant research literatures on corporation environmental reporting into three overlapping theoretical perspectives which includes the stakeholder theory, legitimacy theory and the political economy theory take a system perspective, recognizing that businesses interact with and affect entities beyond their artificial boundaries. Gray et al. (1995a:67) argued that these theories should be seen not as a competitive explanation but as a source of interpretation of different factors at different levels of resolution. To this end therefore, this paper adopts the assumptions of stakeholder theorist as the most

useful framework in explaining the association between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria since this theory provides an avenue for organisations to show a good corporate image to its stakeholders. This theory according to Watts & Zimmerman (1978) assumes that disclosure on social and environmental information by an organisation is as a result of the pressure from stakeholders such as communities, customers, employees, environment, shareholders and suppliers. The basic proposition of this stakeholder theory is that a firm's success is dependent upon the successful management of all the relationships that a firm has with its stakeholders. The stakeholder theory asserts that corporation's continued existence requires the support of the stakeholders and their approval must be sought and the activities of the corporation adjusted to gain that approval (Chan, 1996). The more powerful the stakeholders, the more the company must adapt. This theory concludes that CSR is a way to show a good image to these stakeholders to boost long-term profits because it would help to retain existing customers and attract new ones.

1.2 Literature Review and Development of Hypothesis

To the author's best knowledge, there is a dearth of literature that looked that the association between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria. However, some research similar to that undertaken by this study may be found in international accounting literature. For example, Gray et al (1987) claim that profitability is not related to CSR in the same period, but may be related to lagged profits. Other earlier studies that failed to find any positive relationship between profitability and amount disclosed include Hackston and Milne (1996); Pattern (1991); In Malaysia, it is also found that the relationship between social involvement and profitability is not significant (Mohamed, 1999; Mohamad & Ahmad, 2001) In contrast, Abbot and Monsen (1979), indicate that there is positive correlation between amount of disclosure and profitability. This means that companies are more likely to disclose social responsibility expenditures when their financial statements indicate favorable financial performance. In addition, Inchausti (1997) argues that managers of very profitable companies would use external information in order to obtain personal advantages such as continuance of their positions and compensation arrangements, which provides some agency notion in this variable. On the other hand, Holmes (1976) observed that profitability was not an important feature in the thinking of management in social involvement. He argues that corporate involvement in social responsibility is because of three main reasons; matching of social need to corporate skill, need or ability to help, the seriousness of the social need and the interest of top executives.

Similarly relating to firms' visibility, Spicer (1978) suggests firm size as a factor influencing pollution control, as larger companies had a better record in this regard than smaller firms. Watts and Zimmerman (1978) argue that because political costs reduce management wealth, companies attempt to reduce costs by such devices as social disclosure campaigns. Cowen, Ferreri and Parker (1987) found out that larger corporations tend to disclose more information because larger corporations are highly visible, make greater impact to the society, and have more shareholders who might be concerned with social activities undertaken by corporations. Other studies which found similar findings include: Trotman and Bradley (1981); Cowen et.al. (1987); Hackston and Milne (1996) which concluded that size is an explanatory variable, insomuch as their findings indicated that firms supplying information on social responsibility are of a larger size, are more concerned with longer-term events, and have a positive systematic risk. However, the findings of the above studies are contradicted by environmental disclosure. Halme and Huse (1997) conducted a study on annual report for the year 1992 from Scandinavian countries (Sweden, Finland, Spain and Norway) and found no significant relationship between environmental reporting and companies' size. Based on these prior studies identified above, it is observed that there is a dearth of literature that investigated corporate social environmental sustainability reporting and firm performance within the Nigerian context. To this end, guided by the stakeholder theory this research is therefore a humble attempt to fill this gap.

1.2.1 Hypothesis Development

With the mixed result provided by prior researches and the persistent call for more research in this area of study; coupled with the dearth of literature in this area of accounting in a developing country like Nigeria, the research hypothesis for this study is stated below.

H₀: *there is no significant association between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria.*

H₁: *there is a significant association between corporate environmental visibility and the level of corporate social responsibility disclosures among listed firms in Nigeria.*

Measuring Corporate Social Responsibility Disclosure and Corporate Environmental Visibility

This study in order to measure corporate social responsibility disclosure employs the Kinder Lydenberg Domini (KLD) scoring scheme and the content analysis method of data collection. For this study, a score of (1) was awarded if an item was reported; otherwise a score of (0) was awarded. Finally, an environmental disclosure index (EDI) was developed with 20 attributes. Consequently, a firm could score a maximum of 20 points and a minimum of 0. The formula for calculating the reporting scores by using the environmental disclosure index (attributes) is expressed in a functional form below:

$$RS = \sum_{i=1}^{20} d_i$$

Where:

- RS = Reporting Score
- d_i = 1 if the item is reported and 0 if the item is not reported
- i = 1, 2, 3.... 20.

1.2.2 METHODOLOGY

Sample selection

This study is empirical in nature and it basically seek to investigate whether there is a significant association between corporate environmental visibility (proxied by size) and the level of corporate social responsibility disclosures among listed firms in Nigeria. To achieve this objective, the corporate annual reports for the period 2006-2010 were analyzed. In addition, in line with Kerjcie and Morgan (1970) in Amadi (2005:118), a minimum of 5% of a defined population is considered an appropriate sample size in making a generalization. To this end therefore, using the judgmental sampling technique; a total of 30 listed firms operating in high profile industries as identified by Sembiring, 2005; Henry, 2001; Utomo, 2001. This selection was also based on the nature in which the selected firms visibly pollute the environment in which they operate.

Model Specification:

The following model is used to examine association between corporate environmental visibility (proxied by size) and the level of corporate social responsibility disclosures among listed firms in Nigeria.

$$CSR D_t = f(SIZE_t, U_t) \text{-----} (1)$$

This can be written in explicit form as:

$$CSR D_t = \beta_0 + \beta_1 SIZE_t + U_t \text{-----} (2)$$

Where:

- CSR D = Corporate Social Responsibility Disclosure (which is the dependent variable)
- SIZE = It is the logarithm of total assets for each of the selected listed firms
- U = Stochastic or disturbance term.
- β₀ = Constant or Intercept.
- β₁ = Coefficients to be estimated or the Coefficients of slope parameters.
- t = Time dimension of the Variables

The expected signs of the coefficients (a priori expectations) are such that β₁ > 0. Furthermore to establish the relationship between the variables, correlation analysis was performed using the Pearson correlation. Also, regression analysis was used to perform: normality test, goodness of fit test, f- test and t-test.

1.3 Empirical Findings

Firstly, a marathon review of the findings in descriptive statistics as depicted in table (1) shows that from an industry perspective, firms in the brewery and building material industry have a high level of corporate social disclosure compared to other industries. This is due to their high compliance level to corporate social disclosure and commitment to a sustainable environment in which they operate. Secondly, analysis of the Pearson correlation analysis result as presented in table (2) indicates that there is a positive correlation between corporate environmental visibility (as proxied by size using total asset) and the level corporate social responsibility disclosure for the selected firms and it is significant at .001 level. This results indicates that firms size do play a very significant role in the level of corporate social responsibility disclosure. That is, environmentally visible corporations tend to be more environmental friendly.

Also, result for the goodness of fit test as shown in table (3) present an adjusted R^2 value of about 29%. This in a nutshell means that the value of the dependent variable can be explained by 29% of the independent variables. This value can be considered sufficient because corporate social responsibility disclosure is influenced by factors beside firms' size. However, while the result for the F- test as reflected in table (4) suggests clearly that simultaneously the explanatory variable (proxied by size) is significantly associated with the dependent variable (CSR). A marathon review of the of the regression analysis results as shown in table (5) below indicates that consistent with our a priori expectation, a significant positive association does exist between environmentally visible firms (as proxied by size using total asset) and the level of corporate social responsibility disclosure. This result particularly corroborates or supports the several previous researches done by Trotman and Bradley (1981), Hackston and Milne (1996), Adams et.al (1998), cited in Sembiring (2005) which stated that company size proxied in total asset will influence the level of company's social responsibility disclosure. The implication of this result is that the larger the size of a firm, the more they can afford to invest their resources into corporate environmental technologies and management that is environmentally friendly since they tend to be more concerned with the company's corporate environmental reputation and corporate image while at the same time being visible to external stakeholders who demand higher corporate social environmental performance. In addition, larger companies or corporations that are highly visible are more susceptible to inquiry from stakeholder groups since they are highly visible to external groups and are more vulnerable to adverse reactions among them. In essence, it is more likely that larger, more visible companies will consider corporate social responsibility activities and their disclosure as a way of enhancing their corporate reputation/corporate image. This result further supports the work of (Spicer, 1978; Freedman & Jaggi, 1986) and also with the positive accounting theory of Watts & Zimmerman (1986) which basically states that larger companies are more exposed to media attention and therefore is expected to act more socially responsible.

1.4 Conclusions and Recommendations

The empirical research shows that generally, the level of corporate social responsibility disclosures among the selected listed companies in Nigeria is to a large extent considered as low and is still at its embryonic stage. However, in line with the findings provided by (Spicer, 1978; Trotman and Bradley, 1981; Ullmann, 1985; Cowen, Ferreri and Parker, 1987 and Sarumpaet, 2005), this study observed that there is a significant positive relationship between the size of firms and the level of corporate social responsibility disclosures. That is the larger the size of a company, the more likely such a firm is willing to afford to invest in more environmentally friendly technology and management. The paper consequently concludes that the influence of company size to corporate social responsibility disclosures is quite predictable as it is argued that big companies can afford to invest in more environmentally friendly technology and management. Since they are more susceptible to inquiry from stakeholder groups and are highly visible to external groups and are more vulnerable to adverse reactions among them. Finally, to add to these findings this paper therefore calls for further longitudinal studies that will provide insights into some reporting patterns among listed firms in the country.

References

Abbott, W.F. and Monsen, R.J. (1979): On the Measurement of Corporate Social Responsibility: Self-reported Disclosures as a Method of Measuring Corporate Social Involvement, *Academy of Management Journal*, Vol. 22, No. 3, pp.501-515

Adams, C.A., Hill, W.Y. and Roberts, C.B. (1998): Corporate Social Reporting Practices in Western Europe: Legitimizing corporate behavior, *British Accounting Review*, Vol. 30, pp1-21.

Amadii, V.L. (2005): An Investigation into the Role of Private Sector in Nigerian Higher Education: A Study of the University of Abuja. *International Journal of Research in Education*; Vol. 2, No. 1&2, pp. 113-122.

Campbell, D.J. (1990): Legitimacy Theory or Managerial Reality Construction? Corporate Social Disclosure in Marks and Spencer Plc, Corporate Reports 1969-1997, *Accounting Forum*, Vol. 24, No.1, pp.80-100

Chan, (1996): A Stakeholder Theory Perspective to Corporate Environmental Disclosures, *Journal of Contemporary Business*, Vol. 3, No. 3, pp.27-33.

Cowen, S.S., Ferari, L.B., and Parker, L.D. (1987): The Impact of Corporate Characteristics on Social Responsibility Disclosure, *Accounting, Organisations and Society*, Vol.2 No2, pp.111-122

Deegan, C., (2002): The legitimizing effect of social and environmental disclosure: A theoretical foundation, *Accounting, Auditing and Accountability Journal*, Vol. 4, No. 1, pp.32-38.

Donaldson, T., & Preston, L. E. (1995): The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review*, 20(1):65–91.

Freedman, M. & Jaggi, B. (1986): An Analysis of the Impact of Corporate Pollution Disclosures included in Annual Financial Statements on Investors' Decisions, *Academy of Management Journal*. Vol. 28, pp. 122-141

Gray, R.H., Kouhy, R., and Lavers, S. (1995a): Corporate Social and Environmental Reporting: A Review of the Literature and a longitudinal study of United Kingdom Disclosure, *Accounting, Auditing, and Accountability Journal*, Vol. 8, No. 2, pp. 47-79.

Gray, R.H., Owen, D., & Maunders, K., (1987): Corporate Social Reporting: Accounting and Accountability. Prentice-Hall International, London.

Hackston, D., & Milne, M. J. (1996): Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal*, 9(1): 77.

Halme, M. and Huse, M. (1997): The Influence of Corporate Governance, Industry and Country Factors of Environmental Reporting, *Scandinavian Journal of Management*, Vol. 13, No. 2 pp.137-157.

Henry, M. (2001): Analisis Pengungkapan Pada Laporan Tahunan Media Riset Akuntansi, Auditing dan Informasin, Vol. No.2

Inchausti, B.G. (1997): The Influence of Company Characteristics and Accounting Regulation on Information Disclosed by Spanish Firms. *The European Accounting Review*, 6(1), 45-68.

Margolis, J. D., and James, P. Walsh (2001): Social Enterprise Series: Misery Loves Companies; Whither Social Initiatives by Business. Harvard Business School Working Paper Series, No. 01-058

McWilliams, A. & Siegel, D. (2000): "Corporate social responsibility and financial performance: correlation or misspecification?" *Strategic Management Journal*, Vol. 21, pp. 603-609

Mohammad, J. and Ahmad, Z. (2001): Determinants of Environmental Reporting in Malaysia, A positive Accounting Approach, *Journal of Accounting Research*, Vol. 32, No. 2, 38-60.

Mohammed (1999): Corporate Social Environmental in Malaysia: The Current State of the Art and Future Prospects. *Accountant Today*, May 2004, pp. 24-31.

Orlitzky, M, Schmidt, F & Rynes, S (2003): 'Corporate social and financial performance: A Meta analysis', *Organization Studies*, Vol. 24, No. 3, pp 403-11

Patten, D. M. (1991): Exposure, Legitimacy and Social Disclosure. *Journal of Accounting and Public Policy* 10(4): 297-308.

Sarumpaet S (2005): The Relationship between Financial Performance and Environmental of Indonesian Companies. *Jurnal Akuntansi & keuangan*, vol. 7, No. 2, Nopember 2005: pp. 89-98.

Spicer, B .H. (1978): Investors, Corporate Social Performance and Information Disclosure: An Empirical Study, *The Accounting Review*, Vol. LIII, No. 1, pp.94-111.

Trotman, K. T. and Bradley, G. W. (1981): Associations between Social Responsibility Disclosure and characteristics of companies, *Accounting, Organisations and Society*, Vol. 6, No. 4, pp.355–362.

Ullmann, A. (1985): Data in Search of a Theory: A Critical Examination of The Relationships among Social Performance, Social Disclosure, and Economic Performance of US firms, *Academy of Management Review*, Vol. 10, Issue 3, pp.540-557

Watt, R.L., and Zimmerman, J. (1978): Towards a Theory of the Determination of Accounting Standards. *The Accounting Review*, Vol.53, pp.112-134

Watts, R and Zimmerman, J. (1986): *Positive Accounting Theory*. Englewood Cliffs: Prentice Hall, London

Appendices:

Table 1 **Descriptive Statistics**

Selected Industry	N	Range	Minimum	Maximum	Mean	Std. Deviation
Health Care/Pharmaceutical	5	3.20	12.20	15.40	13.4800	1.37550
Breweries	5	25.80	30.60	56.40	45.3200	12.41982
Petroleum (Marketing)	5	12.00	17.60	29.60	22.5600	4.35293
Chemical & Paints	5	15.80	31.40	47.20	39.5200	6.01099
Agricultural /Agro-Allied	5	18.40	11.20	29.60	20.4400	6.74151
Building Material	5	11.20	37.60	48.80	42.0400	4.17229
Valid N (listwise)	5					

Source: (Annual Report, 2006-2010)

Table 2: **Pearson Correlations for Selected Listed Firms in Nigeria**

		CSR	Size
CSR	Pearson Correlation	1	.559(**)
	Sig. (2-tailed)		.001
	N	30	30
Size	Pearson Correlation	.559(**)	1
	Sig. (2-tailed)	.001	
	N	30	30

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3: **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F change	df1	df2	Sig F Change
1	.559 ^a	.313	.288	11.65788	.313	12.739	1	28	.001

a. Predictors: (Constant), Size

Table 4: ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1731.297	1	1731.297	12.739	.001 ^a
	Residual	3805.375	28	135.906		
	Total	5536.672	29			

- a. Predictors: (Constant), Size
 b. Dependent Variable: EDISC

Table 5: Coefficients^b

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.209	2.453		10.685	.000
	Size	2.333	.654	.559	3.569	.001

- a. Dependent Variable: CSRD

Table 6: Listed Companies and Averaged CSRD Total Assets and Turnover for the Period 2006-2010

S/N	List of selected listed companies	Selected Industry	CSRD	NLOG TA
1	BCN PLC	Health Care/Pharmaceutical	14.4	0.006718
2	Evans Medical Plc		12.4	0.0031885
3	G S K Consumer Plc		15.4	0.0428387
4	May and Baker Nig. Plc		12.2	0.0028588
5	Pharma - Deko Plc		13	0.0185419
6	Guinness Nigeria Plc	Breweries	56.4	1.1968124
7	Nigerian Breweries Plc		55	12.069921
8	Jos International Breweries Plc		51.4	3.0628616
9	Champion Breweries Plc		30.6	1.1296786
10	International Breweries Plc		33.2	1.5078015
11	African Petroleum Plc	Petroleum (Marketing)	29.6	1.2063954
12	Chevron Oil Nigeria Plc		21.6	0.1023528
13	Mobile Oil Nigeria Plc		22.2	0.4913282
14	Oando Plc		17.6	0.0582528
15	Total Nigeria Plc		21.8	0.1897778
16	African Paints (Nigeria) Plc	Chemical & Paints	31.4	0.1416767
17	Berger Paints Plc		36.8	1.5544212
18	Chemical & Allied Products Plc		43	0.4095688
19	D N Meyer Plc		39.2	0.2123398
20	Nigerian - German Chemical Plc		47.2	0.1212464
21	Okitipupa Oil Palm Plc	Agricultural /Agro-Allied	11.2	0.0872083
22	Presco Plc		29.6	1.1847695
23	Okomu Oil Palm Plc		21.6	1.2119428
24	Ellah - Lakes Plc		17.6	1.4289585
25	Livestock Feeds Plc		22.2	1.2382999
26	Ashaka Cement Company Plc	Building Material	48.8	10.613126
27	Benue Cement Company Plc (BCC)		37.6	0.1564444
28	Lafarge West African Portland Cement Plc		41.2	6.4197687
29	Cement Company of Northern (Nigeria) Plc		42.4	9.8785656

30	Ceramic Manufacturers Nigeria Plc		40.2	0.2012487
----	-----------------------------------	--	------	-----------

Sources: Annual Report (2006-2010)

Table 7: Twenty Testable Environmental Disclosure Items

S/ N	Environment	Energy	Research & Development	Employee Health and Safety
1	Environmental pollution	Firms energy policies	Investment in research on renewal technology	Disclosing accident statistics
2	Conservation of natural resources	Disclosing energy savings	Environmental education	Reducing or eliminating pollutants, irritants, or hazards in the work environment
3	Environmental management/ Environmental policies	Reduction in energy consumption	Environmental research	Promoting employee safety and physical or mental health
4	Recycling plant of waste products	Received awards or penalties	Waste management/reduction and recycling technology	Disclosing benefits from increased health and safety expenditure
5	Air emission information	Disclosing increased energy efficiency products	Research on new method of production	Complying with health and safety standards and regulations and Establishment of Educational Institution

Source: (Hackston & Milne, 1996; Milne & Adler, 1999)