CORPORATE SOCIAL ENVIRONMENTAL SUSTAINABILITY REPORTING AND FIRMS' PERFORMANCE: A STUDY OF SELECTED FIRMS IN NIGERIA

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Abstract

Environmental issues have emerged as a major aspect of the discussion of the problems of economic growth and development. Such issues have taken, inter alia, the form of global warming; atmospheric, soil and water pollution caused by industrial activities. However, while there is an extensive research on the role of the Global Reporting Initiative and the International Organization for Standardization (ISO) guidelines in determining corporate environmental performance indicators and the extent of disclosures in annual report in developed economies, in contrast, there is a considerable paucity of studies conducted in the context of developing economies. To this end, this research investigates the relationship between the performance of firms and the level of corporate social environmental sustainability reporting among firms in the selected industries. To achieve this, the study critically developed and utilized a disclosure index to measure the extent of sustainability disclosure made by companies in their corporate annual reports. The multiple regression analysis was used to test the research propositions in this study. The study observed that there is a significant relationship between the performance of firms and the level of corporate social environmental sustainability reporting. The paper therefore recommends that environmental disclosure themes and evidence must be established to provide foundation for improving corporate social environmental sustainability disclosures among companies in Nigeria.

Keywords: Corporate, Environmental Issues, Social, Sustainability, Disclosures, Performance, Stakeholders, ecosystems.

I Introduction

The acknowledgement of corporate social responsibility implies the need to recognize the importance of disclosure of information on companies' activities related to such responsibility. The concept of social accountability, which only arises if a company is social responsible (Gray et al., 1996:56), concerns both the responsibility to undertake actions or refrain from doing so and provide an account of such actions. The increase in global environmental awareness and the campaign for sustainable economic development is redirecting the attention of firms towards environmental sensitivity. The quest for sustainability has caused an emergence of many global institutions enunciating varying norms that guide human interaction with the environment. More so, the expansion of knowledge about ecosystems has resulted in concerns about the environmental effects of production processes, product performances and business practices (Sahay, 2004 cited in Dutta and Bose, 2008). Since the publication of the Bruntdland Commission Report entitled 'Our Common Future' in 1987 and the Earth Summit in Rio de Janeiro in 1992, governments of different countries have started putting the environment at the top of their agenda by setting up regulatory, voluntary, incentive-based, informational and cooperative instruments of policy geared towards promoting sustainable development (Li, 2001). This policy trend has heightened concern about corporate social environmental disclosure theory and practice worldwide.

Over the past decade, developing economies has witnessed tremendous economic and social changes especially in the Niger-Delta region of Nigeria were incessant social unrest among youth in the region has become a way of life due to the high level of environmental degradation and poor state of social infrastructure. As a result, the business environment is also becoming more complex and demanding. One of the emerging issues that confront modern-day businesses is that of corporate social responsibility. Due to the heightened interest in the concept of corporate social environmental reporting and what it entails, much research has been done in this area, particularly in the developed countries. In contrast, the developing countries are slower in responding to the increased concern about the issue of corporate social environmental disclosures. Despite some increase in research, studies in this area in the developing countries are still scarce (Abu-Baker & Naser, 2000; Imam, 2000 and Belal, 2001).

To this end, this study aims to extend the body of existing literature by examining the relationship between the performance corporate social environmental sustainability reporting and of listed firms' in the agricultural/Agro-Allied and manufacturing industry in Nigeria.

Scope of Study

This study basically investigates the relationship between corporate social environmental sustainability reporting and performance of listed firms' in the agricultural and manufacturing industry of Nigerian Stock Exchange. To achieve this objective, the corporate annual reports for the period 2004-2008 was be analysed. In addition, the study considered a total of 30 listed firms in the aforementioned industries. The choice of these industries arises based on their nature of production, the level of industrial operations and their direct impact on the environment.

II Literature Review and Development of Hypothesis

To the author's best knowledge, there are very few known documented research work on corporate social sustainability reporting and firm performance in Nigeria. However, some research similar to that undertaken by this study may be found in international accounting literature. For example, Clause and Rikhardsson (2008) studied the effect of environmental investment on investment decisions. The results suggest that environmental information disclosure influences investment allocation decisions. This finding would imply that companies that are apathetic to their environmental responsibility might experience eventual crashes on their stock price. That is, if their investors are rational in considering the future value of the firm based on its present state of environmental responsibility. Lars and Henrik (2005) investigated the effects of environmental information on the market value of listed companies in Sweden using a residual income valuation model. The results show that environmental responsibility as disclosed by sampled companies has value relevance, since it is expected to affect the future earnings of the listed companies. Their finding has implications for companies that pollute the environment –

their future solvency may be eroded with gradual depletion in earnings. Markowitz (1972) finds a positive relationship between socially responsible business practices and corporate equity returns. Related studies conducted by Balabanis *et al., (1998)* and Tsoutsoura (2007) using indicators such as return on capital employed and return on assets, reveal a positive relationship between the social responsibility of companies and the selected indicators of performance.

Lankoski (2009) in his doctoral dissertation analysed at firm level, the relationship between environmental performance and economic performance. His data shows a correlation between environmental performance and economic performance.

Mackinlay (1997) finds no strong relationship between economic performance and corporate social and environmental investment. While some companies may start reaping benefits within a short period, others may experience economic gain only after a long period.

McWilliams and Siegel (2000) arrived at an informative finding, showing statistically that research and development expenditure tends to erode the immediate financial benefits of a company's environmental investment. It is possible that this finding may have led other researchers such as Teoh *et al., (1999)* to find no relationship between corporate financial performance and social expenditure. The motivation for many firms is that corporate social and environmental responsibility opens the door of corporate strategy to other benefits that might accrue from being socially responsible. For instance, Burke and Logsdon (1996) findings shows that, while some firms fail to seek competitive advantage through social responsibility, in most instances those firms that do voluntarily decide to go beyond legal and social demands find that this creates value both within the firm and from customers' perspective. This type of competitive value places a firm above its competitors, who may find it difficult to understand their success. Companies that struggle to remain socially responsible add brand value to their products and services (Canon, 1994). Regulation has been found to ginger cooperate environmental and social responsibility; for instance Porter and Linde (2009) found legal regulation as a factor that engenders corporate innovation among firms in their bid to remain environmentally sustainable according to regulation. It is therefore possible that weak environmental regulation in developing countries may contribute to low level sustainable corporate behaviour in these countries.

In the Nigerian content, the findings derived from existing prior studies are mixed. Amaeshi et.al, (2006) explored four key sectors of the Nigerian economy and came up with the findings that firms are socially constructed and their behaviour must reflect on the society in which they are embedded and thus must have to be socially responsible to the environment in which it operates. Also, Ngwakwe (2009) in his study titled environmental responsibility and firms' performance in Nigeria; investigated the relationship between firms social responsibility practices and their performance. The study while focusing only on the manufacturing industry concluded that a positive relationship exist between the social responsibility practice of firms and their performance. In addition, prior studies by (Guobadia, 2000; Minga, 2010) also reported a similar finding on the state of corporate social responsibility in Nigeria. Nonetheless, due to the difference in methodology and the scope, it is difficult to compare the findings of these studies. Also, in addition to the increasing pressure from stakeholders arising from the increasing levels of education and heightened awareness on issues related to the social and environmental responsibility; neither of these studies attempted to address the issue of size as it impact on the level of social environmental disclosure. 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 firms' performance within the Nigerian context.

Research Hypothesis

Based on the mixed result provided in prior research coupled with the dearth of literature in this area of accounting in a developing country (e.g. Nigeria); the following hypothesis are stated below in there null form.

H_1 there is no significant relationship between the performance of firms and the level of corporate social environmental sustainability reporting among firms in the selected industries.

H_2: there is no significant relationship between the financial leverage of firms and the level of corporate social environmental sustainability reporting among firms in the selected industries.

H_3: there is no significant relationship between firms' size and the level of corporate social environmental sustainability reporting among firms in the selected industries.

III Research Methodology

This study basically adopts the use of corporate annual reports of companies as its main source of data. This is due to the fact that annual reports are readily available and accessible. According to Gray, Kouhy, and Lavers (1995), annual reports should be used in determing environmental disclosures because such information is produced regularly and will be in the public domain. The annual reports of the selected companies within the period 2004-2008 were used due to heighted interest and increased awareness noticed within these periods. Results elicited from the annual reports will be used in determining whether the level of social environmental sustainability disclosure affects the performance firms. To achieve this purpose, the content analysis method of data analysis was used. This is due to the fact that the content analysis method is the most commonly used method of measuring a company's social environmental disclosure in annual reports (Ng, 1985; Milne and Adler, 1999). In addition, this method was adopted because there are substantial previous literatures available on measuring corporate social environmental disclosure using content analysis. Also, it allows corporate social disclosure to be systematically classified and compared, which is useful for determining trends. Content analysis relies on the assumption that the extent of disclosure can be taken as some indication of the importance of an issue to the reporting entity (Krippendorf, 1980). Content analysis requires objectivity and the specification of variables so that any item may be consistently judged as falling or not falling into a particular category (Guthrie and Mathews, 1985). Categories are defined as precisely as possible, requiring detailed specifications for the operational definitions and decision rules used.

However, this research measured the corporate social environmental sustainability reporting in terms of themes and evidence, using Hackston and Milne's (1996) operational definitions and framework for environmental disclosure index. Nonetheless, while theme was measured in the categories of environment, energy, product, community, and employee health; evidence was measured in the categories of monetary quantitative and non-monetary quantitative disclosures. The EDI framework contained 28 attributes. Consequently, a firm could score a maximum of 28 points and a minimum of 0. The formula for calculating the reporting scores by using the environmental disclosure index (attributes) is expressed in a function form:

$$RS = \sum_{i=1}^{28} d_i$$

Where:

RS = Reporting Score

d_i = 1 if the item is reported and 0 if the item is not reported

i = 1, 2, 3... 28.

Also, for the purpose of this study, performance was be measured by return on total assets (ROTA), which is profit before interest and tax divided by total assets. This is preferred in this research because the researcher believes it is more comprehensive in measuring performance. However, for us to measure the relationship between operating performance and environmental disclosure, a linear regression model will be adopted as shown below in functional form:

EDI = f (ROTA, DE, SIZE, U) -- (1)

This can be written in explicit form as:

$EDI = \beta_0 + \beta_1\ ROTA_t + \beta_2 DE_t + \beta_3 SIZE_t + U$--- (2)

Where:

EDISC = Environmental Disclosure Index.

SIZE = Size as a proxy for performance, is seen as the logarithm of total assets.

ROTA = Return on total assets as one of the proxy for performance is defined as the profit before interest and tax divided by total assets as at the end of the fiscal year under consideration.

DE = Debt to equity ratio which is also a performance proxy represent the nature of the industry. It is defined as the total debt divided by the total equity.

U = Stochastic or disturbance term.

t = Time dimension of the Variables

β_0 = Constant or Intercept.

β_{1-3} = Coefficients to be estimated or the Coefficients of slope parameters.

The expected signs of the coefficients (apriori expectations) are such that β_1 and $\beta_3 > 0$.

Sample Choice

For the purpose of this study, a total of 30 listed firms from both the agriculture/agro-allied and the manufacturing industry were selected. The choice of these firms arises because of the nature of their operations as it affects the environment. In addition, these firms are more amenable to the regulations than the extractive industries whose defiance of regulations has caused armed confrontations in the Niger Delta region of Nigeria.

IV. **Empirical Results and Discussion**

Table (1) below using a multiple regression model as presented above shows the descriptive statistics results of all the variables used in this study.

Table (1): Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean	Std Deviation
EDISC	30	31.40	41.40	72.80	1774.10	59.1367	8.64337
ROTA	30	3.1266	.0193	3.1459	28.9004	.963347	.9198370
DE	30	4.6927	.0589	4.7516	30.6493	1.021642	1.3346245
SIZE	30	4.3064	5.5342	9.8406	226.8709	7.562364	1.1667642
Valid N (listwise)	30	31.40	41.40	72.80	1774.10	59.1367	8.64337

Table (2): Regression results and Discussion

		EDISC	ROTA	D/E RATIO	SIZE
EDISC Correlation	Pearson	1	.640**	.439*	.101
			.000	.015	.595
	Sig. (2-tailed) N	30	30	30	30
ROTA Correlation	Pearson	.640**	1	.687**	.123
		.000		.000	.519
	Sig. (2-tailed) N	30	30	30	30
D/E RATIO Correlation	Pearson	.439*	.687**	1	.168
		.015	.000		.374

	Sig. (2-tailed) N	30	30	30	30
SIZE Correlation	Pearson	.101	.123	.168	1
		.595	.519	.374	
	Sig. (2-tailed) N	30	30	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 Squared	Std. Error of the Estimate	R Squared Change	F Change	df1	df2	Sig. F.change
1	.640[a]	.410	.342	7.01357	6.015	.410	3	26	.003

a Predictors: (Constant), SIZE, ROTA, DE

Table (4): Anova[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	887.587	3	295.862	6.015	.003[a]
Residual	1278.943	26	49.190		
Total	2166.530	29			

a Predictors: (Constant), SIZE, ROTA, DE

b Dependent Variable: EDISC

Table (5): Coefficients [a]

MODEL		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	52.060	8.591		6.060	.000
	ROTA	6.021	1.949	.641	3.089	.005
	D/E RATIO	-.037	1.353	-.006	-.027	.978
	SIZE	.174	1.132	.023	.154	.879

a: Dependent Variable: EDISC

Analysis of table (2) above using the Pearson correlation indicates that there is a strong positive correlation between EDISC and ROTA; and it is significant. Also, the result from the table shows a positive but weak correlation between EDISC and DE which is significant only at 0.05. However, the relationship between the size of firms and the EDISC level is positive but very low and it is not significant even at the 10% level.

Furthermore, the Coefficient of determination result from table (3) depicts that 41% of the variation noticed in EDISC is can be explained by ROTA, DE and SIZE; while 59% of variations in EDISC is determined by other factors not captured by the model. In addition, the coefficient of determination result which indicates the percentage variation explained by the regression equation is complemented by the Adjusted R-squared result of 34%.

Finally, results in table (5) clearly indicate that from the accounting proxies adopted as a measure for performance (ROTA, DE and SIZE); there is a significant relationship between the performance of firms (proxied by ROTA) and the extent of disclosure. However, the same cannot be said about the other two variables (DE & SIZE) because they do not represent significant explanatory factors of the behaviour of EDISC over time. In essence they cannot be conveniently relied upon.

V **Conclusion and Recommendations**

Consistent with finding provided by Markowitz (1972) and Mackinlay (1997), this study observed that there is a significant relationship between the performance of firms and the level of corporate social environmental sustainability reporting. However, the relationships in the other two independent variables (DE and SIZE) as it relates with the extent of environmental sustainability disclosures (EDISC) are not significant. The paper also observed that there are no existing corporate social environmental sustainability reporting standards as far as environmental disclosure is concerned in the country. Moreover, there are no mandatory requirements for companies to undergo environmental audit. The paper consequently concludes that given the historical foundation of environmental regulation in Nigeria, it is understandable that sustainable business practice is relatively new in terms of enforceable regulatory principles. However, responses elicited from some sampled agricultural and manufacturing firms show that proactive firms had established a culture of being environmentally friendly even before the existence of regulations in Nigeria.

Finally, the paper recommends that since the return on total assets has a positive impact on the extent of sustainability reporting, government as part of their responsibility should put in place policies that will create a good business environment for firms operating in the country. Also, since the size of a firm is not a function for disclosure, the introduction of environmental tax should be encouraged on the part of government to help reduce the level of greenhouse emissions by these organisations. Furthermore, environmental disclosure themes and evidence must be established to provide foundation for improving corporate social environmental sustainability disclosures among companies. Finally, the paper calls for standard setting bodies to set guiding principles or accounting standards in order to improve the financial and non-financial environmental disclosures of listed companies. For future research, it would be remarkable to know if the quality and quantity of environmental disclosures in the same period are the same in order industries not selected.

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Appendix (1)*:* Averaged EDISC and ROTA in 30 selected firms drawn from the Agricultural and Manufacturing Industry.

S/N	Study Codes		EDISC	ROTA	DE	SIZE
1	A1	ELLAH LAKES PLC	68.80	.1804	.0794	7.4345
2	A2	GROMMAC INDUSTRIES PLC	64.20	.7956	.1646	9.5823
3	A3	LIVESTOCK FEEDS PLC	55.00	.3665	.1283	7.2158
4	A4	OKOMU OIL PALM PLC	62.20	.3991	.3526	6.7098
5	A5	PRESCO PLC	63.80	1.2050	.3597	5.5342
6	A6	ASHAKA CEMENT PLC	49.60	.1023	15.1107	9.8406
7	A7	BENUE CEMENT COMPANY PLC	49.80	.7981	.2081	7.5989
8	A8	CEMENT COMPANY OF NORTHERN NIGERIA PLC	63.60	.1003	.5205	8.1508
9	A9	WEST AFRICAN PORTLAND CEMENT COMPANY PLC	58.60	.0683	.0661	5.8254
10	A10	NIGERIAN CEMENT COMPANY PLC	51.80	.3010	.1122	6.3092
11	A11	BERGER PAINTS PLC	60.80	.5541		

					.4982	8.1400
12	A12	FERDINAND OIL MILLS PLC	54.40	.0867	1.194 2	8.8001
13	A13	7-UP BOTTLING COMPANY PLC	53.80	.2610	45.10 76	7.3228
14	A14	FLOUR MILLS OF NIGERIA PLC	53.00	.1744	.3194	5.7286
15	A15	NESTLE NIEGRIA PLC	50.00	.1471	.0589	8.0403
16	A16	PREMIER PAINTS PLC	67.20	.1597	.2311	8.0064
17	A17	NIGERIAN BOTTLING COMPANY PLC	70.20	.2280	.4951	9.2721
18	A18	NORTHERN NIGERIA FLOUR MILLS PLC	69.40	.2280	.4951	9.2721
19	A19	AFRICAN PAINTS (NIGERIA) PLC	65.20	.3718	22.92 66	7.4466
20	A20	PREMIER BREWERIES PLC	65.60	.2585	.2692	5.9024
21	A21	NIGERIAN BREWERIES PLC	60.60	.1767	.4264	6.2730
22	A22	JOS INTERNATIONAL BREWERIES PLC	49.20	.1254	1.703 8	7.1984
23	A23	GOLDEN GUINEA BREWERIES PLC	45.00	.0604	.3733	7.4669
24	A24	CHAMPION BREWERIES PLC	44.80	.0193		

					.2092	7.1841
25	A25	CHEMICAL & ALLIED PRODUCTS PLC	41.40	.6692	.0692	7.8463
26	A26	IPWA PLC	72.80	.4236	.1924	7.6771
27	A27	DN MEYER PLC	66.90	.2663	.0201	8.8694
28	A28	NIGERIA-GERMAN CHEMICALS PLC	63.80	.0979	.3468	8.5914
29	A29	INTERNATIONAL BREWERIES PLC	64.20	.3676	.6027	6.9691
30	A30	GUINNESS NIGERIS PLC	68.40	.2038	.8717	6.6626

Source: Nigerian Stock Exchange (2008)