An Examination of the Relationship between Management Ownership and Corporate Social Responsibility Disclosure: A Study of Selected Firms in Nigeria

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Abstract

This study investigates of the relationship between management ownership and the level of corporate social responsibility disclosure of listed firms in Nigeria. Using the judgmental sampling technique, a total of 35 listed firms were selected for this study. Also, the annual reports for the periods 2006-2010 was utilized as the main source of data collection for the selected firms. In addition, the simple regression analysis was employed as a statistical technique for analyzing the data collected. The paper revealed that managerial ownership structure has a significant positive impact on the level of corporate social responsibility disclosures among firms. The paper therefore calls for the encouragement of more managerial investors to participate in the ownership of firms, since it would encourage them to participate more actively in monitoring and aligning management and pushing them to change to better ways in achieving higher standard of corporate social performance.

Keywords: Social Responsibility, Disclosures, Management ownership, Environmental

1 Introduction

Corporate social responsibility (CSR) disclosure has attracted much attention over the past three decades. It reduces the information gap between the firm and stakeholders and thus lowers the firm's cost of capital (Dhaliwal et al., 2009; Cormier et al., 2009) and enhances firm value (Orlitzky et al., 2003; Margolis and Walsh, 2003). The current globalization trend and the growing demand from stakeholders towards companies to adopt corporate social responsibilities practices encourages the involvements of companies in corporate social responsibilities practices (Chapple and Moon, 2005). Corporate social responsibilities practices has emerged as an important issue in companies activities (Yoon, Giirhan-Canli and Schwarz, 2006). It is a general statement indicating a company's obligation to utilize its economic resources in its business activities to provide and contribute to its internal and external stakeholders (Kolk et al., 2001). Since the publication of the first separate corporate environmental reports in 1989, the number of companies that has started to publish information on its environmental, social or sustainability policies has increased substantially. However, corporate scandals at Enron and WorldCom etc. have thrust debates concerning corporate governance and corporate social performance to the forefront of the minds of shareholders, managers, and public policy makers. Environmental problems have become major headlines of political, economic and corporate discussion due to the negative effects they bring to the stability of the ecosystem. Thus, the increased awareness of social responsibility or, specifically, environmental concern is now a challenge facing the corporate world. Analysis of prior research has shown that in the last two decades, there has been an increasing global concern for the harmful long-term impact of industrial activities on the environment. These uncontrolled impacts of industrial activities on the environment have created critical ecological challenges on the planet; which has aggravated phenomena like climate change, ozone depletion, over-exploitation of natural resources, air pollution & increase in radioactive water pollution that has resulted to the continues destruction of the water marines thereby disrupting the sustainable development of such environment. These phenomena have invariably increased external pressure from many stakeholders such as government, financial institutions, social responsible investors and most especially community lobby groups whose activities have constantly created continuous social unrest. This crisis has also led to the continuous decrease in the operating performance of firms while at the same time increase their cost of production due to the increase in environmental cost and liabilities associated with corporate environmental sustainability issues. To this end, this study will basically examine

the relationship between management ownership and corporate social responsibility disclosure among listed firms in Nigeria.

In the light of the aforementioned objective, the remaining part of this paper is structured as follows. Following the introductory section is the review of relevant literature and hypothesis development. The next section then presents our econometric model and preliminary empirical evidence. Finally, the last section summarizes the main findings of the study with discussion of the conclusion.

1.1 Scope of Study

This study basically seeks to investigate the relationship between management ownership and corporate social responsibility disclosure among listed firms in Nigeria. To achieve this objective, the corporate annual reports for the period 2006-2010 were analyzed. In addition, using the judgmental sampling technique, the study considered a total of 35 listed firms in the Nigerian stock exchange market. The choice of these industries arises based on their direct or indirect contribution to environmental pollution.

1.2 **Literature Review**

The current globalization demand companies to be more involved in corporate social responsibility practices (Chapple and Moon, 2005). In the period of increasing corporate financial scandals corporate social responsibility has become an important strategy for companies worldwide to improve their image as these activities can potentially create a brand image for companies and develop positive relations with stakeholders (Yoon et al., 2006). During the last two decades, the concept of corporate social responsibility has been progressively rationalized and become associated with broader organizational goals such as reputation and stakeholder management (Lee, 2008). The voluntary disclosure of social and environmental information by business firms has been the subject of substantial academic interest for the past several decades. Prior research on corporate social responsibility mainly focused on conceptualizing as well as empirically assessing its impact on business performance. A number of studies have been conducted in an attempt to link corporate social responsibility with financial performance (Aupperle et al., 1985; Russo and Fouts, 1997; Waddock and Graves, 1997). In addition to corporate performance, recent studies also examined the impact of corporate social responsibility on other stakeholders of the companies. For example, Mohr et al. (2001) looked the impact of CSR on the customer buying behavior while Turban and Greening (1996) examined the impact of CSR on the organizational attractiveness to employees. Compared with the growing body of literature on the nature and consequences of corporate social responsibility, however, the issue of how to improve the companies' level of corporate social responsibility, or what factors determine CSR level, has received relatively limited attention, especially in the emerging market setting. Jones (1999) establishes an institutional framework for the determinants of CSR, suggesting that institutional structure, such as socio-cultural, national economy, industry, firm and individual, mainly determines CSR. Following the logic of Jones (1999), a numbers of studies document several factors affecting the level of corporate social responsibility based on the context of developed countries. For example, Stanwick and Stanwick (2006) find evidence of a positive relationship between corporate social performance and organization size, financial performance, and environmental performance. Johnson and Greening (1999) examine the effects of corporate governance and institutional ownership type on CSP, which indicates that ownership structure is correlated to CSP. Although several studies have shed light on the determinants of corporate social responsibility in developed countries, research on this area is still quite limited in developing countries. Only a few recent papers have addressed this area and none of them to the authors best knowledge, examines the relationship between managerial ownership and corporate social performance. To this end therefore, this study intends to fill this gap in literature by examining the relationship between managerial ownership and the level of corporate social responsibility disclosure among listed firms in Nigeria.

1.2.1 Research Hypothesis

With the dearth of literature in this area of accounting, the hypothesis for this study is stated below as:

H₀: there is no relationship between managerial ownership and the level of corporate social responsibility disclosure among listed firms in Nigerian.

H₁: there is a relationship between managerial ownership and the level of corporate social responsibility disclosure among listed firms in Nigerian.

1.3 Research Methodology

In order to achieve the objectives of this research, the study has adopted the use of corporate annual reports of listed firms as our main source of data. This is due to the fact that annual reports are readily available and accessible. The annual reports for period 2006-2010 were used due to the increased level of awareness and pressure from stakeholders within these periods. The population for this study is comprised of all firms listed on the floor of the Nigerian Stock Exchange as at 40 December 2010. However, the selected sample size for this study includes listed firms both in the financial and non-financial sectors of the economy which sums up to a total of 40 firms. This represents 20% percent of the total population and, thus, is consistent with the minimum sample size as suggested by either the conventional sample size table proposed by Krejcie & Morgan (1970). In addition, the study further adopts the use of content analysis method of data collection in eliciting data from the annual report. This is due to the fact that the content analysis method is the most commonly used method of measuring corporate social environmental disclosure in annual reports (Milne & Adler, 1999). Also, it allows corporate environmental information to be systematically classified and compared. However, this study attempts to measure the environmental disclosure in terms of themes and evidence, using Hackston & Milne's (1996) operational definitions and framework for corporate environmental disclosure index. Theme is measured in the categories of environment, energy, product, community, and employee health. Evidence is measured in the categories of monetary quantitative and non-monetary quantitative disclosures. The corporate environmental disclosure 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 functional 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, in order to measure the relationships between the independent variable (i.e. managerial ownership) and the dependent variable (corporate social responsibility disclosure); the ordinary least square regression model was adopted. Furthermore, managerial ownership in this study is proxied by the percentage of director's equity ownership.

Model Specification

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CSRD_t = f(DEI_bU)_t (1)

This can be written in explicit form as:

CSRD_t = \beta_0 + \beta_1 DEI_t + U_t (2)
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Where:

CSRD = Corporate social responsibility disclosure (Dependent variable).

DEI = Percentage of director's equity interest (Independent variable).

U = Stochastic or disturbance term. t = Time dimension of the Variables

 β_0 = Constant or Intercept.

 β_1 = Coefficients to be estimated or the Coefficients of slope parameters.

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1.4 **Discussion of Findings**

Findings from our descriptive statistics as presented in table (2) shows that while a mean corporate social responsibility disclosure level of about 22% was observed among the selected firms; on the other hand, the average director's equity interest level (managerial ownership) among the selected firms was about 1%. This implies that majority of firms shareholdings are held by the public other than the managers of the firms

A marathon review of the empirical findings from the Pearson Correlation analysis on the relationship between management ownership (proxied as the percentage of director's equity interest) and the level of corporate social responsibility disclosure as depicted in table (3) shows that there is a positive correlation between managerial ownership and the level of corporate social responsibility disclosure. This is evident with a correlation coefficient (r = .487) and it is significant at 1% probability level.

Furthermore, results on the goodness of fit-test as shown in table (4) present an adjusted R² value of about 21%. This in a nutshell indicates that the value of the dependent variable can be explained by about 21% of the independent variables. This value thus can be considered as sufficient because a firm's behaviour towards corporate social responsibility issues is also influenced by other factors beside management ownership. Nevertheless, while the result for the Fisher's test (Analysis of Variance) with a p-value 0.03 (i.e. p-value < 0.05) as reflected in table (5) suggests clearly that simultaneously the explanatory variable (i.e. management ownership) is significantly associated with the dependent variable (corporate social responsibility disclosure); on the other hand, the regression analysis results as presented in table (6) indicates that consistent with our a priori expectation, a significant positive association does exist between management ownership (proxied by the Percentage of director's equity interest) and the level of corporate social responsibility disclosure among the selected firms. This result implies that the higher the level of managerial ownership in a firm, the more such firms will be willing to be environmentally friendly to its environment, since they also have stake in the long-term survival of a firm. This further implies that there is a positive relationship between management ownership and the level of corporate social performance, given that these managers' monitors firm's activities and align them toward attaining a higher level of corporate social responsibility which will in the long-run bring about improved firm performance. Accordingly, this result corroborates the findings in provided (Leung & Horwitz, 2004 and Norita & Shamsul-Nahar, 2004) were they found out that management ownership has a positive and significant association with voluntary disclosure. However, the findings of this paper contradict those provided by Halme & Huse (1997) and Nagar et al., (2003).

1.5 Conclusions and Recommendations

This study basically examined the relationship between management ownership and the level of corporate social responsibility disclosure of firms in Nigeria using 35 listed firms on the floor of the Nigerian Stock Exchange over a period of 5 years (i.e. 2006-2010). Based on the empirical findings provided above; it was observed that the there is a direct relationship between management ownership and the level of corporate social responsibility disclosure among the selected firms. That is, the higher the proportion of director's equity interest in a firm, the more they will be socially friendly to the environment in which they operate. In addition, the greater the managerial ownership, the less inclined the managers are to divert resources away from value maximization. Consequently, the firm's performance increases uniformly. To this end therefore, the paper calls for the encouragement of more managerial investors to participate in the ownership of firms, since it would encourage them to participate more actively in monitoring and aligning management and pushing them to change to better ways in achieving higher standard of corporate social performance.

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Appendices

Table (1): Proxies and Predicted Signs for Explanatory Variables

| Variable | Predicted Sign | Type | Data Type | Scale | | | |
|----------|----------------|-------------|------------|--|--|--|--|
| DEI | + | Independent | Continuous | Percentage of director's equity interest | | | |

Table (2): Descriptive Statistics of Variables CSRD DEI 22.6000 Mean 1.0437 Median 22.2000 .8000 Maximum 39.20 2.60 Minimum 5.40 .02 Std. Dev. 23.513 .99534 Observations

Note: CSRD represents corporate social responsibility disclosure; DEI represents the proxy for management ownership (Percentage of director's equity interest).

Table (3): Pearson Correlations for Selected Firms in Nigeria

| | | CSRD | DEI |
|------|---------------------|----------|----------|
| CSRD | Pearson Correlation | 1 | .487(**) |
| | Sig. (2-tailed) | | .000 |
| | N | 35 | 35 |
| DEI | Pearson Correlation | .487(**) | 1 |
| | Sig. (2-tailed) | .003 | |
| | N | 35 | 35 |

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

Table (4): Model Summary

| | | | | | Change Statistics | | | | |
|-------|-------------------|-------------|----------------------|----------------------------|--------------------|----------|-----|-----|-----------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F change | df1 | df2 | Sig F Change |
| 1 | .487 ^a | .237 | .214 | 8.18603 | .237 | 10.273 | 1 | 33 | .003 |

a. Predictors: (Constant), DEI

Table (5): ANOVA^b

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|-----------------------------------|---------------------------------|---------------|-------------------|--------|-------------------|
| 1 Regression Residual Total | 688.414 2211.366 2899.780 | 1 33 34 | 688.414 67.011 | 10.273 | .003 ^a |

a. Predictors: (Constant), DEI,

b. Dependent Variable: CSRD

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

Table (6):

Coefficients^a

| | | Unstandardized Coefficients | | Standardized Coefficients | | |
|-----|------------|-----------------------------|------------|---------------------------|-------|------|
| Mod | lel | В | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 17.882 | 2.020 | | 8.851 | .000 |
| | | 2899.780 | 1.410 | 487 | 3.205 | .003 |
| | DEI | | | | | |

a. Dependent Variable: CSRD

Table 7: Listed Companies and Averaged CSRD and Directors equity interest for the Period 2006-2010

| S/NList of selected listed companies1BCN PLC19Okitipupa Oil Palm Plc2Evans Medical Plc20Presco Plc3G S K Consumer Plc21Okomu Oil Palm Plc4May and Baker Nig. Plc22Ellah - Lakes Plc5Pharma - Deko Plc23Livestock Feeds Plc6Guinness Nigeria Plc24Ashaka Cement Company Plc7Nigerian Breweries Plc25Benue Cement Company Plc (BCC)8Jos International Breweries Plc26Lafarge West African Portland Cement Plc9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc18Chemical & Allied Products Plc | I abic | 7. Listeu Companies and Averaged CSN | D allu I | Directors equity interest for the reriou 2000-2010 |
|---|--------|--------------------------------------|----------|--|
| 2Evans Medical Plc20Presco Plc3G S K Consumer Plc21Okomu Oil Palm Plc4May and Baker Nig. Plc22Ellah - Lakes Plc5Pharma - Deko Plc23Livestock Feeds Plc6Guinness Nigeria Plc24Ashaka Cement Company Plc7Nigerian Breweries Plc25Benue Cement Company Plc (BCC)8Jos International Breweries Plc26Lafarge West African Portland Cement Plc9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | S/N | List of selected listed companies | S/N | List of selected listed companies |
| 3 G S K Consumer Plc 4 May and Baker Nig. Plc 5 Pharma - Deko Plc 6 Guinness Nigeria Plc 7 Nigerian Breweries Plc 8 Jos International Breweries Plc 9 Champion Breweries Plc 10 International Breweries Plc 11 African Petroleum Plc 12 Chevron Oil Nigeria Plc 13 Mobile Oil Nigeria Plc 14 Oando Plc 15 Total Nigeria) Plc 16 African Paints (Nigeria) Plc 17 Berger Paints Plc 28 Clabar Dokomu Oil Palm Plc 29 Ellah - Lakes Plc 20 Livestock Feeds Plc 24 Ashaka Cement Company Plc 25 Benue Cement Company Plc 26 Lafarge West African Portland Cement Plc 27 Cement Company of Northern (Nigeria) Plc 28 Ceramic Manufacturers Nigeria Plc 29 Union Bank Plc 30 Zenith Bank Plc 31 Eco Bank 32 Sterling Bank Plc 33 Stanbic IBTC Bank Plc 34 D N Meyer Plc 35 Nigerian - German Chemical Plc | 1 | BCN PLC | 19 | Okitipupa Oil Palm Plc |
| 4May and Baker Nig. Plc22Ellah - Lakes Plc5Pharma - Deko Plc23Livestock Feeds Plc6Guinness Nigeria Plc24Ashaka Cement Company Plc7Nigerian Breweries Plc25Benue Cement Company Plc (BCC)8Jos International Breweries Plc26Lafarge West African Portland Cement Plc9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 2 | Evans Medical Plc | 20 | Presco Plc |
| 5 Pharma - Deko Plc 6 Guinness Nigeria Plc 7 Nigerian Breweries Plc 8 Jos International Breweries Plc 9 Champion Breweries Plc 10 International Breweries Plc 11 African Petroleum Plc 12 Chevron Oil Nigeria Plc 13 Mobile Oil Nigeria Plc 14 Oando Plc 15 Total Nigeria Plc 16 African Paints (Nigeria) Plc 17 Berger Paints Plc 28 Livestock Feeds Plc 29 Enue Cement Company Plc 26 Lafarge West African Portland Cement Plc 27 Cement Company of Northern (Nigeria) Plc 28 Ceramic Manufacturers Nigeria Plc 29 Union Bank Plc 30 Zenith Bank Plc 31 Eco Bank 32 Sterling Bank Plc 33 Stanbic IBTC Bank Plc 34 D N Meyer Plc 35 Nigerian - German Chemical Plc | 3 | G S K Consumer Plc | 21 | Okomu Oil Palm Plc |
| 6Guinness Nigeria Plc24Ashaka Cement Company Plc7Nigerian Breweries Plc25Benue Cement Company Plc (BCC)8Jos International Breweries Plc26Lafarge West African Portland Cement Plc9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 4 | May and Baker Nig. Plc | 22 | Ellah - Lakes Plc |
| 7Nigerian Breweries Plc25Benue Cement Company Plc (BCC)8Jos International Breweries Plc26Lafarge West African Portland Cement Plc9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 5 | Pharma - Deko Plc | 23 | Livestock Feeds Plc |
| 8Jos International Breweries Plc26Lafarge West African Portland Cement Plc9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 6 | Guinness Nigeria Plc | 24 | Ashaka Cement Company Plc |
| 9Champion Breweries Plc27Cement Company of Northern (Nigeria) Plc10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 7 | Nigerian Breweries Plc | 25 | Benue Cement Company Plc (BCC) |
| 10International Breweries Plc28Ceramic Manufacturers Nigeria Plc11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 8 | Jos International Breweries Plc | 26 | Lafarge West African Portland Cement Plc |
| 11African Petroleum Plc29Union Bank Plc12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 9 | Champion Breweries Plc | 27 | Cement Company of Northern (Nigeria) Plc |
| 12Chevron Oil Nigeria Plc30Zenith Bank Plc13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 10 | International Breweries Plc | 28 | Ceramic Manufacturers Nigeria Plc |
| 13Mobile Oil Nigeria Plc31Eco Bank14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 11 | African Petroleum Plc | 29 | Union Bank Plc |
| 14Oando Plc32Sterling Bank Plc15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 12 | Chevron Oil Nigeria Plc | 30 | Zenith Bank Plc |
| 15Total Nigeria Plc33Stanbic IBTC Bank Plc16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 13 | Mobile Oil Nigeria Plc | 31 | Eco Bank |
| 16African Paints (Nigeria) Plc34D N Meyer Plc17Berger Paints Plc35Nigerian - German Chemical Plc | 14 | Oando Plc | 32 | Sterling Bank Plc |
| 17 Berger Paints Plc 35 Nigerian - German Chemical Plc | 15 | Total Nigeria Plc | 33 | Stanbic IBTC Bank Plc |
| ŭ | 16 | African Paints (Nigeria) Plc | 34 | D N Meyer Plc |
| 18 Chemical & Allied Products Plc | 17 | Berger Paints Plc | 35 | Nigerian - German Chemical Plc |
| | 18 | Chemical & Allied Products Plc | | |

Sources: Annual Report (2006-2010)

 Table 8:
 Twenty Eight 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 | 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. |
| 6 | Environmental policies or company concern for the environment | Conservation of energy in the conduct of business operations | Providing information for conducting safety research on the company's products | Health and Safety Arrangements |
| 7 | Installation of effluent treatment plant | Discussion of the company's efforts to reduce energy consumption | Information on research projects set up by the company to improve its product in any way | Establishment of Educational Institution |

Source: Hackston and Milne, 1996; Milne and Adler, 1999

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