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APPRAISAL OF ENVIRONMENTAL ACCOUNTING INFORMATION IN THE FINANCIAL STATEMENTS OF CONSUMER GOODS MANUFACTURING COMPANIES IN NIGERIA

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Abstract

The main objective of this study is to appraise environmental accounting information in the financial statements of consumer goods manufacturing companies in Nigeria. The study shall specifically, determine if there is a significant difference in the environmental disclosure themes of the firms; and, the effect of environmental disclosure theme on total asset turnover, cash flow ratio, current ratio, return on equity, and return on assets of consumer goods manufacturing companies in Nigeria. The study made use of descriptive research design. The study was centered on Consumer Goods Companies, a total of 28 companies were identified in that category. However, the study only made use of twenty-two companies whose annual report were readily available as at the time of this research. The study finds that there is a significant difference in the environmental disclosure themes of consumer goods manufacturing firms. Also, there is a significant effect of environmental disclosure on total asset turnover and returns on equity, however no significant effect was found for cash flow ratio, current ratio, and returns on assets of the manufacturing companies. The study recommends a detailed and well spelt out environmental disclosure theme and evidence must be established to provide firm foundation for corporate social and environmental disclosures among companies. Also there is need for standard setting bodies to set up guidelines or principles or accounting standards in other to improve the financial and non-financial environmental disclosures of companies in Nigeria. The study also calls for more efforts to be taken on the part of government to encourage managers on the need to embrace environmentally friendly practices in order to restore and guarantee a conflict free corporate atmosphere needed by managers and workers for maximum productivity. More so, funds expended in settling disputes could be applied to enhance corporate liquidity while management is able to plan better and make decisions when it is not engrossed in disputes.

Introduction

Environmental problems has become a global issue, one which cuts across every country and business organizations. Mostly, environmental problems arise when the productive activities of firms' results in negative consequences for the natural environment and in the long run causes damages, which also affects the society. According to Hasan and Hakan (2012) nowadays, companies cause a lot of environmental problems because of profit maximization, the endless needs, rapidly advancing technological developments, unconscious consumption of natural resources, as they execute their operations. Salvioni and Bosetti (2014) opined that for a long time corporate governance was directed at satisfying shareholder expectations concerning profit maximization, sometimes with differences among sub-categories of stockholders according to their importance. In this regard, the financial information contained in the financial statements and, if necessary, the consolidated ones used to be considered essential (Salvioni, 1990).

However, the last quarter of the twentieth century, has seen the need for firms to recognize the value of interacting with all major stakeholders (Salvioni & Bosetti, 2014). The severity of environmental problems as a global phenomenon has its adverse impact on the quality of our lives. Accounting has an instrumental role in disclosing environmental responsibility for different entities whether industrial or commercial services, and at all levels whether micro, meso and macro. Thus, accounting became concerned with achieving new goals such as measuring and evaluating potential or actual environmental impacts of projects and organizations (Asuquo, 2012). Environmental accounting helps in accurate assessment of costs and benefits of environmental preservation measures of companies (Schaltegger & Burritt, 2000). It provides a common framework for organizations to identify and account for past, present and future environmental costs to support managerial decision-making, control and public disclosure (KPMG & United Nations Environment Programme [UNEP], 2006). Measures are being taken both at the national and international level to reduce, prevent and mitigate its impact on social, economic and political spheres (Global Reporting Initiative [GRI], 2002; GR1, 2006).

Presently, corporations wishing to survive in this new dispensation have to adopt a broader concept of responsibility, which stresses the strong interdependencies among economic, social and environmental goals (Salvioni & Bosetti, 2014). This has necessitated the disclosure of social and environmental information in addition to financial information for meeting the needs of a variety of stakeholder groups. Environmental accounting generates reports for both internal use, providing environmental information to help make management decisions on controlling overhead, capital budgeting and pricing, and external use, and the disclosure of environmental information of interest to the government, public and to the financial community (Eze, Nweze, & Enekwe, 2016).

Statement of the Problem

Ijeoma (2015) observed that the global business environment has been facing increased competitive, regulatory and community pressures. Presently firms need to be assessed not just with financial indicators, but environmental and social costs of operation are also among factors taken into consideration (Macve, 1997). This has led to a series of enactments aimed at safeguarding the environmental (Ijeoma, 2015). However, most profit oriented firms in Nigeria are mainly interested in the enormous amounts of profit they make without considering the environmental implications of their actions (Enahoro, 2009). Although the environmental pollution is a common problem of all countries, the importance of environment has been understood in recent years. Industries are becoming progressively more aware of the environmental and social liabilities pertaining to their operations and products. In addition to social pressure, accounting and especially environmental costs are critically important to form this environmental awareness (Hasan & Hakan, 2012).

The operational activities of manufacturing companies especially oil companies have caused extensive hazard to the environment. This spans from destruction of wildlife and biodiversity pollution of air, water, farmland to damage of aquatic ecosystem (Ijeoma, 2015). Yakhou & Dorweiler (2004) stressed that the impact of business activity on the environment is found in several forms: air, water, underground pollution, drinking water, land and habitat for endangered and threatened species, oceans, atmosphere, land, mass etc. Organisations are now expected to be able to demonstrate that they are aware and addressing the impact of their operations on the environment and society in general. Despite some variations among countries in different regions, corporate environmental disclosures have increased globally in both size and complexity over the past two decades (Uwuigbe & Jimoh, 2012).

Presently in Nigeria, there is no definite accounting standard to ensure the uniform reporting of environmental information, but guidelines have been issued by some organizations (Bassey, Effiok, & Eton, 2013). These guidelines are advisory and not mandatory in nature, firms therefore chose whether to apply or not to. Companies tend to disclose this information to conform to industry practices, pressures from environmental activist and advocates, relationship with parent company (Multinational Corporations), ownership structure of the company, size and level of profitability etc. (Jerry, Teru, & Musa, 2014).

This has led to most financial statements issued by quoted companies in the country to be deficient, in the sense that they lack the needed information on environmental and social issues (Wallace, 1988; Adeyemi, 2006; Nzekwe, 2009). Studies which seem to support this view include studies done by Wallace (1988), Okike (2000), Adeyemi (2006) and Ofoegbu and Okoye (2006), which conclude that financial statements by Nigerian companies are information deficient on sustainability issues.

The study by Owolabi (2008) using content analysis on 20 listed companies in the Nigerian Stock Exchange, covering 10 sectors of the economy from 2002 to 2006, found that only 35% of companies show social disclosure in their annual reports. This study though carried out 10 years ago, Jerry, Teru, and Musa (2014) assert that the current position of environmental accounting reporting and disclosures might best be described as confusing and full of ambiguity.

Also, studies have shown a lacuna on the subject of environmental accounting in developing nations, despite the increased attention on environmental issues (Abu-Baker & Naser, 2000; Imam, 2000; Belal, 2001; Uwuigbe & Jimoh 2012). In Nigeria, Arong, Ezugwu, and Egbere (2014) identified paucity in the awareness of environmental costing principles and methodology in the country. Mostly studies have focused on companies in the Oil & Gas sector, while others on a randomly selection of companies from different sectors of the economy. The study by Asuquo (2012) on a sample of Oil and Gas companies in the Niger Delta Region of Nigeria revealed that the cost of ensuring environmental friendly policies as well as firm competitiveness have significant relationship with the firms' profitability (Corporate performance). The study by Uwuigbe and Uadiale (2011) on the level of corporate social environmental disclosure among listed companies in the brewery and building material industry in Nigeria revealed a significant difference in the level of corporate social environmental disclosures between the selected industries. Another, study by Uwuigbe and Jimoh (2012) on a sample of Cement Manufacturing Companies in the country found that there is a significant relationship in the level of corporate environmental disclosure practices among firms in the Nigerian manufacturing industries.

The seeming problem tackled in this study is the dearth of research on companies in the consumer goods sector of the Nigerian economy. Also, the addition of ratios in the classification of activity and cash flow may provide insights on the relationship between corporate environmental disclosure and performance of firms in the sector. Moreover, the spate of conflict which has grown in the country calls for a justification on the need to examine the legitimacy of shareholder orientation on corporate survival. Consequently, this study intends to appraise environmental reporting disclosure by consumer goods manufacturing companies in Nigeria.

Objective of the Study

The main objective of this study is to appraise environmental accounting information in the financial statements of consumer goods manufacturing companies in Nigeria. The specific objectives of the study are:

1. To determine if there is a significant difference in the environmental disclosure themes of consumer goods manufacturing firms.
2. To ascertain the effect of environmental disclosure theme on total asset turnover of consumer goods manufacturing companies in Nigeria.
3. To determine the effect of environmental disclosure theme on cash flow ratio of consumer goods manufacturing companies in Nigeria.
4. To ascertain the effect of environmental disclosure theme on current ratio of consumer goods manufacturing companies in Nigeria.
5. To determine the effect of environmental disclosure theme on return on equity of consumer goods manufacturing companies in Nigeria.
6. To evaluate the effect of environmental disclosure theme on return on assets of consumer goods manufacturing companies in Nigeria.

Review of Related Literature

Conceptual Review

Historical Development of Environmental Accounting

The awareness of the environment and man's ability to cause damage to it could be traced back to the fifties of the 19th century (Asuquo, 2012). This concern had been repeatedly expressed in series of international summits and consensus right from the sixties. The starting point that comprised an organized thought proves on a large scale the celebrated public action of the club of Rome entitled "Limits to Growth" that initiated a worldwide debate of economic growth at the expense of natural environment (Shil & Iqbal, 2005). The world conference held in Stockholm on global environment in 1972 (June), where the heads of the states all over the world came together for the first time, was the pivotal event in the growth of the global environment movement (Asuquo, 2012).

In the mid-eighties, on the basis of changing situation and becoming the environmental issues, a world-wide phenomenon on the developed and developing countries, "World Commission on Environment and Development (WCED), known as "Bruntland Commission" headed by Norway's Prime Minister, Mrs. Gro Haslem Bruntland, was established by the UN. The commission published a report called "Our Common Future," in 1987, with the proposed concept of "sustainable Development." The concept received worldwide acceptance and led to the convening of the UN conference on "Earth and Development (UNCED), in Rio de Janerio, Brazil known as Earth Summit. In this conference, heads of different states signed four documents including the "Agenda 21."

The Agenda – 21 contains a checklist of do's and don'ts to protect the environment throughout the next century. Particularly, the role of corporate entities in respect of overall management of the environment has been duly recognized in the conference (Touche, 1996).

Definition of Environmental Accounting

The importance of environmental accounting is increasing because of increasing of environment problems, economic, social and technological developments (Hassan & Hakan, 2012). Several authors and institutions, have defined the term 'Environmental Accounting [EA]' in a variety of ways.

According to UK Environmental Agency (2006), EA is defined as "the collection, analysis and assessment of environmental and financial performance data obtained from business management and financial accounting systems". Environmental accounting can support national income accounting, financial accounting, or internal business managerial accounting (US EPA, 1995).

According to Graff, Reiskin, White, & Bidwell (1998) EA is defined as a broad based term that refers to the incorporation of environmental costs and information into variety of accounting practices. EA is a broad term which can be used in various contexts such as (International Federation of Accountants [IFAC], 2005):

- The evaluation and disclosure of environment-related financial information for financial accounting and reporting purposes;
- The evaluation and use of environment-related monetary and physical information, that is, EMA;
- Full Cost Accounting (FCA) which involves the estimation of external environmental impacts;
- Natural Resource Accounting (NRA) which is accounting for the monetary and physical flows and stocks of natural resources;
- The aggregation and reporting of accounting information, including natural resource accounting and other information, at the organization-level for natural accounting purposes;
- In the broader context of sustainability accounting which requires consideration of environment-related monetary and physical information.

Environmental accounting is defined as the process of environment-based categorization of business activities, collecting, analyzing and then monitoring this environment-related activities, then put all these information into business balance sheet to help an organization's decision making (Tüsiad, 2005).

Table 2.1: Initiatives to Promote Integrated Reporting

Year	Country	Initiative
2006	United Kingdom	Launch of the *Accounting for Sustainability Project*. The project was completed in 2009 with the issue of a framework recommending a clear and concise presentation of sustainability information in the annual report.
2007	Malaysia	It was announced that all listed companies would be required to publish CSR information within their annual reports.
2007	Sweden	All state-owned firms had to publish sustainability reports in accordance with the GRI Guidelines.
2008	China	The publication of CSR information by state-owned companies was encouraged.
2008	Argentina	A law required large listed companies to produce a GRI sustainability report.
2009	South Africa	The listing rules based on the *King Code of Governance* imposed all listed companies to issue an integrated report, beginning in 2010, or to explain the reasons why they do not so.
2009	Denmark	Large firms, state-owned companies and investors were required to describe their corporate responsibility policies and practices in the annual report.
2010	United States	The SEC issued an interpretative guidance in order to clarify how to disclose on climate change and greenhouse gas emissions.
2010	France	*Grenelle II Act* imposed large listed and private companies to provide non-financial information in their annual report, beginning in 2012.

Source: Salvioni and Bosetti (2014)

Integrated reporting is currently encouraged by the valuable activity of the *International Integrated Reporting Council*, whose foundation was initially discussed in 2009, during a meeting of the Prince of Wales's *Accounting for Sustainability Project*.

Reasons for Environmental Reporting

The reasons for measuring, evaluating and disclosing environmental information in firms' financial statements are as follows (Ali, 2002, cited in Asuquo, 2012):

- Many environmental costs can be significantly reduced or eliminated as a result of business decisions, ranging from operational and housekeeping changes to investment in cleaner production, to redesign of processes.
- Environmental cost (and, thus, potential cost savings) may be obscured in overhead accounts or otherwise overlooked.
- Many organizations have discovered that environmental costs can be offset by generating revenues though sales of waste by-products, for examples.
- Accounting for environmental cost and performance can support an organization's development and operation in an overall Environmental Management System (EMS).
- Environmental expenditures whether capital or operating costs increase dramatically day after day.
- Management needs financial data about these expenditures.
- For strategic cost leadership (driving cost).
- There is need to prioritize these expenditures.
- There are increasing needs from different stakeholders (government, investors, lenders, banks, non-governmental organizations, etc.) to have financial data on environmental performance of different organizations.
- If accounting does not provide financial data on the environmental performance or organizations that will help non complying organizations to pollute environment and spoil resources and yet appear more economic efficient than other which incur costs to protect the environment.
- Naturally any entity has a main output and a secondary output of which mainly polluters can destroy and if the entity does not incur costs to mitigate or prevent it a third party in the society may have to bear it.
- Environmental risks may result in huge environmental liabilities and subsequently the organization may be obliged to outlay payments which may affect seriously the liquidity and the financial position of the organization.
- Managing resources properly in an environmentally friendly way will result in a competitive advantage for such organizations.
- There is a general trend to evaluate the organization's performance according to its social and environmental effectiveness and not only on its economic effectiveness.
- Current practices demonstrate that, no track for environmental costs was available as it was charged randomly. Therefore, there is a need for proper charging and allocation. Distinguishing between environmental costs and other costs will lead to a proper cost allocation of these costs and thus precise pricing and will help to develop sustainability indicators.

Scope & Domain of Environmental Accounting

According to Coopers and Lybrand (1998) environmental accounting can be expressed within the context of global environmental accounting, national environmental accounting and corporate environmental accounting. It includes corporate level, national & international level (Hassan & Hakan, 2012). The following aspects are included in EA (Chauhan, 2005):

1. From Internal point of view investment made by the business sector for minimization of losses to environment. It includes investment made into the environment saving equipment/devices. This type of accounting is easy as Money measurement is possible.
2. From external point of view all types of loss indirectly due to business operation/activities. It mainly includes:
    - Degradation and destruction like soil erosion, loss of bio diversity, air pollution, water pollution, voice pollution, problem of solid waste, coastal & marine pollution.
    - Depletion of nonrenewable natural resources i.e. loss emerged due to over exploitation of nonrenewable natural resources like minerals, water, gas, etc.
    - Deforestation and Land uses. This type of accounting is not easy, as losses to environment cannot be measured exactly in monetary value.

Emeakponuzo and Udih (2010) divided EA into three disciplines. They are as follows:

i) Global Environmental Accounting
ii) National Environmental Accounting
iii) Corporate Environmental Accounting
   a. Environmental Management Accounting
   b. Environmental Financial Accounting

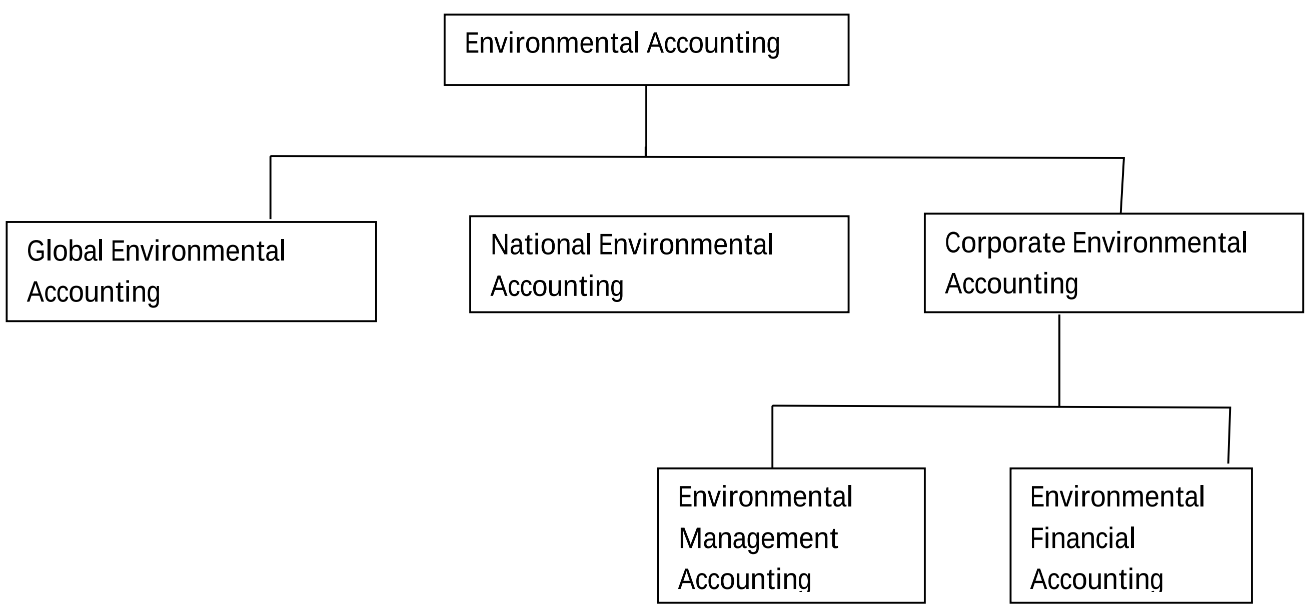

Figure 2.1: Environmental Accounting Disciplines
Source: Graff, Reiskin, White, & Bidwell (1998)

Theoretical Framework
The study relied on Legitimacy Theory (LT) in explaining the reason and need for environmental accounting and reporting by firms. Legitimacy theory was selected because it provides an understanding for voluntary environmental disclosure by firms.

Legitimacy Theory
Gray (2000) observed that since the 90s, there has been significant growth in environmental and social reporting. Researchers have agreed to prime dominance of legitimacy theory as a factor for

the increase in corporate social and environmental reporting (O'Donovan, 1999; Walden & Schwartz, 1997, Gray, Kouhy, & Lavers, 1995; Hooghiemstra, 2000; Wilmshurt & Frost, 2000; Uwuigbe & Uadiale, 2011).

There is always a social contract that is binding on an organization. A social contract shows the expectations society expects from the organizations operations. Organizations try to make sure they try to operate within the bounds and norms of their respective society. Legitimacy theory suggests that businesses operate in a society according to the social contract upon which their survival and growth are dependent. Legitimacy theory posits that a social contract or agreement exists between an enterprise and its constituents due to which business agrees to perform various socially desired actions in return for approval of its objectives, other rewards and ultimate survival (Gutherie & Parker, 1989).

Other theories necessitating the need for social and environmental accounting include:

Stakeholders theory: This theory focuses more on meeting stakeholders demands so as to achieve strategic firm objectives. It considers the different stakeholder groups within the society and how they could best be managed. It looks at the relationship between an organization and others in its internal and external environment. It also takes into cognizance how these relationships affect the way the organization.

Empirical Review

Within the domain of environmental accounting and reporting literature, several studies have been done in both developed and developing countries, each with its focus on a particular industry. The studies are briefly presented below:

Jerry, Teru, and Musa (2014) conducted a study on "Environmental Accounting Disclosure Practice of Nigerian Quoted Firms: A Case Study of Some Selected Quoted Consumer Goods Companies". The study analyzed the environmental accounting disclosures practices of Nigerian quoted firms, to see how it varies from one company to another since there are no mandatory disclosure guidelines. A sample of 8 quoted companies was selected from the consumer goods companies listed on the Nigerian Stock Exchange. Content analysis was used to obtain data from published annual reports of 2013 of the selected firms. And the data obtained were analyzed using one way analysis of variance to test the hypothesis. It was discovered that the non-existence of standard leads to lack of uniformity in disclosure and variations among companies.

Arong, Ezugwu, and Egbere, (2014) carried out a study on "Environmental Cost Management and Profitability of Oil Sector in Nigeria". The aim of the study was to ascertain the effects of environmental cost management on the profitability of oil sector in Nigeria from 2004 to 2013. Data were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin. The secondary data obtained was analysed with multiple regression technique. The result revealed that there exist a significant relationship between environmental cost management and profitability of Oil Sector in Nigeria. It was also discovered that there are established standards in Nigeria guiding environmental cost management in the Oil & Gas Sector in Nigeria. However, there is a lacuna in external reporting of environmental cost data in Nigeria.

Ibanichuka and Oyadonghan (2014) conducted a study on "The Relevance of Environmental Cost Classification and Financial Reporting: A Review of Standards". Using a content analysis, the researchers discovered that firms report their environmental cost with no specific classification of, to enable them report in the either the income statement or the statement of financial position. As a result, firms only give a descriptive disclosure of environmental cost with no monetary value in the chairman's or director's report.

The study by Onyali, Okafor and Egolum (2014) titled “An Assessment of Environmental Information Disclosure Practices of Selected Nigerian Manufacturing Companies” was designed to assess the extent, nature and quality of environmental information disclosure practices by manufacturing firms in Nigeria. Content analysis was adopted in analyzing the annual report of the selected firms with regards to their environmental disclosure practices. In addition, a survey was carried out in order to ascertain whether the environmental disclosure practice of firms in Nigeria has improved. The findings of the study indicated that the environmental disclosure practices of firms in Nigeria is still adhoc and contains little or no quantifiable data.

Makori and Jagongo (2013) conducted a study on “Environmental Accounting and Firm Profitability: An Empirical Analysis of Selected Firms Listed in Bombay Stock Exchange, India”. The data for the study were collected from annual reports and accounts of 14 randomly selected quoted companies in Bombay Stock Exchange in India. The data were analyzed using multiple regression models. The key findings of the study shows that there is significant negative relationship between Environmental Accounting and Return on Capital Employed (ROCE) and Earnings per Share (EPS) and a significant positive relationship between Environmental Accounting and Net Profit Margin and Dividend per Share.

Bassey, Effiok and Eton (2013) carried out a study on “The Impact of Environmental Accounting and Reporting on Organizational Performance of Selected Oil and Gas Companies in Niger Delta Region of Nigeria”. The study was conducted using the Pearson’s product moment correlation co-efficient. Data were gathered from both primary and secondary sources. It was found from the study that environmental costs have a satisfied relationship with firm’s profitability. It was concluded that environmentally friendly firms will significantly disclose environmental related information in financial statements and reports.

Okafor, Okaro and Egbunike (2013), conducted a study on “Environmental Cost Accounting and Cost Allocation (a Study of Selected Manufacturing Companies in Nigeria)”. The study sought to determine the extent to which Nigerian firms have embraced Environmental cost accounting in cost allocation. The study relied on a survey of 105 Accountants from twenty-five (25) quoted manufacturing companies. The study revealed that majority of the firms have not embraced environmental cost accounting, they still lump all indirect costs under overhead. It also revealed that significant differences exist among firms on the method of allocating environmental costs to products/processes.

Asuquo (2012) carried out a study on “Environmental Friendly Policies and Their Financial Effects on Corporate Performance of Selected Oil & Gas Companies in Niger Delta Region of Nigeria”. Data were collected from both primary and secondary sources. Thereafter, the data were analyzed using simple ordinary least square regression method and the study hypothesis was also validated. The study revealed that the cost of ensuring environmental friendly policies as well as firm competitiveness have significant relationship with the firms’ profitability (Corporate performance). Thus it was concluded that the related cost of environmental protection and management positively influences a firm’s profitability; and environmental friendly organization enjoy high level of corporate competitiveness resulting in high performance.

Beredugo and Mefor (2012) conducted a study on “The Impact of Environmental Accounting and Reporting on Sustainable Development in Nigeria”. The study adopted the survey research design and data were drawn from both primary and secondary sources. The primary data were elicited form respondents drawn from Rivers State and Lagos State, while the secondary data were from previous researchers’ contributions. Hypothesis were developed which linked Environmental Accounting and Reporting to sustainable development in Nigeria. The results indicate that

Environmental Accounting and Reporting is positively related to sustainable development and there are consequences to non-compliance.

Ahmad (2012) carried out a study on “Environmental Accounting and Reporting practices: Significance and issues-A Case from Bangladeshi Companies”. The study was based on both primary and secondary data. The primary data were collected from the total number of 40 chief accountants and senior accountants, taking one from each company while the secondary data collected from the Annual reports – 2010 of the companies. The findings of the study showed that Environmental Accounting and Reporting practices in the selected companies have been far from satisfactory and hence poor in real sense of the term.

Uwuigbe and Jimoh (2012) conducted a research on “Corporate Environmental Disclosures in the Nigerian Manufacturing Industry: A study of selected Firms”. The study was based on the stakeholders’ theory and the selected firms were manufacturing firms listed on the Nigerian Stock Exchange. The study as part of its findings observed that the level of environmental disclosure practices in the industry is still very low and is still at its embryonic stage in Nigeria.

Uwuigbe and Uadiale (2011) carried out a study on “Corporate Social and Environmental Disclosure in Nigeria: A Comparative Study of Building Material and Brewery Industry”. This study investigates the level of corporate social environmental disclosure among listed companies in the brewery and building material industry in Nigeria. The corporate annual reports for the periods 2004-2008 were utilized as the main source of secondary data. While the content analysis technique was used as a basis of eliciting data from the annual report, the student t-test statistics was used in the process of analyzing if there was a significant difference in the level of corporate social environmental disclosure between the sampled industries. The paper as part of its findings revealed that there is a significant difference in the level of corporate social environmental disclosures between the selected industries.

Enahoro (2009) conducted a study on the ‘Design and Bases of Environmental Accounting in Oil & Gas/Manufacturing Sectors in Nigeria’. The data for this study were from both primary and secondary sources. For this purpose, both cross-sectional content analyses (within and across sector companies) and longitudinal (ten year annual reports and financial statements) content analyses of 132 companies in their sub-sectors as in Nigeria Stock Exchange were employed.

Methodology

Research Design

The design of this study is descriptive research design. Descriptive design seeks to find out the conditions and relationship that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing (Akuezuilo & Agu, 2003). The descriptive design is suitable for this study because we are interested in appraising environmental accounting disclosure by Consumer Goods Manufacturing Firms.

Population of the Study

The population of the study was drawn from companies in the Consumer Goods Section of the Nigerian Stock Exchange (NSE) as shown in the NSE Fact Book 2012/2013-2014. A total of Twenty eight Companies were shown in that category.

Sample Size Determination

The study was centred on Consumer Goods Companies, a total of 28 companies were identified in that category. However, the study only made use of twenty-two companies whose annual report were readily available as at the time of this research. The selected companies are shown below:

Table 3.1: Classification of Sample Size	
CONSUMER GOODS	**DATE OF INCORPORATION**
1. 7-UP BOTTLING	25th June 1959
2. INTERNATIONAL BREWERIES PLC.	22nd December 1971
3. GOLDEN GUINEA BREW. PLC	26th September 1962
4. MULTI-TREX INTEGRATED PLC.	30th October 1999
5. NASCO ALLIED INDUSTRIES	30th April 1973
6. NIG. ENAMELWARE PLC.	21st May 1960
7. PS. MANDRIDES&CO. PLC.	9th July 1949
8. PREMIER BREWERIES PLC.	23rd January 1976
9. UTC NIG. PLC.	8th August 1969
10. FLOUR MILLS OF NIGERIA	November 1978 as Public company
11. DANGOTE FLOUR MILLS	January 2006
12. GUINNESS NIGERIA PLC	29th April 1950
13. UNILEVER NIG PLC	11th April 1923
14. DANGOTE SUGAR	4th January 2005
15. PZ CUSSONS	4th December 1948
16. CHAMPION BREWERIES	31st July 1974
17. CADBURY NIGERIA PLC	9th January 1965
18. NESTLE NIG PLC.	25th September 1961
19. NIGERIAN BREWERIES	16th November 1946
20. HONEYWELL FLOUR MILLS	2008 as Public Company
21. VITAFOAM	4th August 1962
22. BETA GLASS	26th June 1974

Source: *NSE Fact book 2012/2013*

Other Classifications

The following are companies excluded from the above sample on the basis of unavailability of financial statements for some and unavailability of financial statements for the relevant year(s) for others. The companies are below listed:

REQUIRED YEAR UNAVAILABLE	**DATE OF INCORPORATION**
1. UNION DICON SALT PLC	7th May 1992
COMPLETELY UNAVAILABLE	
1. BIG TREAT PLC	NA
2. JOS INTERNATIONAL BREWERIES	NA
3. NORTHERN NIGERIA FLOUR MILL	NA
4. VONO PRODUCT PLC.	NA
5. DN TIRE & RUBBER PLC	NA

Sources of Data

The study made use of secondary data sources. Secondary data is one type of quantitative data that has already been collected by someone else for a different purpose to yours. The study made use of corporate annual reports of firms obtained from websites of the companies. Data for the study were obtained from the annual reports and accounts of the selected companies.

Procedure for Data Analysis

The study made use of multiple regression technique in testing the formulated hypotheses. Hair, Black, Babin, Anderson, and Tatham (2006) defined multiple regression technique 'as a statistical technique which analyses the relationship between a dependent variable and multiple independent variables by estimating coefficients for the equation on a straight line'. The variables used in the model are described below as follows:

Independent Variables:

1. Environmental Disclosure (ED): In measuring the corporate environmental disclosure, the study employed content analysis technique. This is a research technique for the objective, systematic and qualitative description of the manifest content of communication. It is clearly defined by as a method of coding the text or the content of a piece of writing into various groups or categories based on selected criteria.
2. Firm Size (LogTA): This is proxied using the *logarithm of the Total Assets* of the company for a financial year.
3. Leverage (Lev): This is measured as *Total Liabilities/Total Assets.*

Dependent Variables

The following variables serve as dependent variables of the study:

1. Total Asset Turnover (TAT): This is an **Activity Ratio**, measured as *Net Sales/Average Net Assets.* The asset turnover ratio is an efficiency ratio that measures a company's ability to generate sales from its assets by comparing net sales with average total assets.
2. Cash Flow Ratio: This is a **Cash Flow Ratio**, measured as *Cash Flow from Operations/Sales.* This ratio gives the analysts and investors indications about the ability of a company to generate cash from its sales.
3. Current Ratio (CR): This is a **Liquidity Ratio**, measured as *Current Assets/ Current Liabilities.* The current ratio is a liquidity and efficiency ratio that measures a firm's ability to pay off its short-term liabilities with its current assets.
4. Return on Equity (ROE): This is a **Profitability Ratio**, measured as *Net Profit/Equity.* The return on equity ratio or ROE is a profitability ratio that measures the ability of a firm to generate profits from its shareholders investments in the company.
5. Return on Assets (ROA): This is a **Profitability Ratio**, measured as *Net Profit/Total Assets.* The return on assets ratio, often called the return on total assets, is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets.

Model Specification

$TAT = \alpha + \beta x_1[ED]_{it} + \beta x_2\ [Log\ TA]_{it} + \beta x_3[Lev]_{it} + \mu$……1

$CFR = \alpha + \beta x_1[ED]_{it} + \beta x_2\ [Log\ TA]_{it} + \beta x_3[Lev]_{it} + \mu$……2

$CR = \alpha + \beta x_1[ED]_{it} + \beta x_2\ [Log\ TA]_{it} + \beta x_3[Lev]_{it} + \mu$……3

$ROA = \alpha + \beta x_1[ED]_{it} + \beta x_2\ [Log\ TA]_{it} + \beta x_3[Lev]_{it} + \mu$……4

$ROE = \alpha + \beta x_1[ED]_{it} + \beta x_2\ [Log\ TA]_{it} + \beta x_3[Lev]_{it} + \mu$……5

Decision Rule

The decision rule is to accept the null hypothesis if p-value is greater than the stipulated level of significance and reject null hypothesis if otherwise.

Data Presentation and Analysis

Financial information of various consumer goods manufacturing firms over a 4 year period from 2011 to 2014 was obtained (subject to its availability). The Financial information derived can be seen in Appendix1. Below is the descriptive statistic of the data

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ED	88	3	5	4.68	.635
Leverage	65	.02	57.04	4.2581	11.50157
Firm size	70	8.91	11.54	10.5832	.70747
Current ratio	74	.07	2.64	1.0712	.60810
Cashflow ratio	68	.01	35.12	2.4090	5.06869
Total asset turnover	48	-.47	43.65	2.5651	6.65980
Returns on equity	77	-.90	6.13	.3348	.91876
Returns on asset	66	-.29	1.85	.1080	.30922
Valid N (listwise)	40				

Source: *SPSS Ver. 20*

Table 4.1 shows the major variables forming the hypotheses of the study as they were descriptively presented in their minimum and maximum term. Shown above is the mean (a measure of central tendency) and standard deviation of the variables to be tested.

Test of Hypotheses

Hypothesis One:

H_1: There is a significant difference in the environmental disclosure themes of consumer goods manufacturing firms

Table 4.2: Frequencies

	Value	
	0	1
Community Involvement(CSR)	0	88
Employee health & Safety	0	88
Corporate Governance	0	88
Research and Development	12	76
Others: related to social or environmental info.	16	72

Source: *SPSS Ver. 20*

Table 4.3: Test Statistics

N	88
Cochran's Q	50.667[a]
Df	4
Asymp. Sig.	.000

a. 1 is treated as a success.

Source: *SPSS Ver. 20*

The null hypothesis is rejected because the p-value (Asymptotic Sig = .000) is less than the stipulated level of significance of 5%. It is thus concluded that there is a significant difference in the environmental disclosure themes of consumer goods manufacturing firms.

Hypothesis Two:

H_1: There is a significant effect of environmental disclosure on total asset turnover of consumer goods manufacturing companies in Nigeria.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.799[a]	.638	.607	4.53214

a. Predictors: (Constant), Firm size, ED, Leverage

Source: *SPSS Ver. 20*

Table 4.4 shows the model summary results which sought to establish the explanatory power of the independent variables (ED, LEV, and FS) for explaining and predicting the dependent variable (TAT). R, the simple correlation coefficients, (i.e. the linear correlation between the observed and model predicted values of the dependent variable) showed a value of .799. R square, the coefficient of determination (i.e. the squared value of the simple correlation coefficients) showed a value of .638 (about 63.8%) of the variation in the dependent variable is explained by the model.

Table 4.5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1301.344	3	433.781	21.119	.000[b]
	Residual	739.451	36	20.540		
	Total	2040.795	39			

a. Dependent Variable: Total asset turnover

b. Predictors: (Constant), Firm size, ED, Leverage

Source: *SPSS Ver. 20*

Table 4.5 shows a statistically significant F statistic of 21.119 (more so, P value <.05). Thus, we reject the null hypotheses.

Table 4.6: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	136.366	24.871		5.483	.000
	ED	-26.278	3.331	-.969	-7.890	.000
	Leverage	-.255	.089	-.498	-2.875	.007
	Firm size	-.233	1.540	-.023	-.151	.880

a. Dependent Variable: Total asset turnover

Source: *SPSS Ver. 20*

Hypothesis Three:

H_1: There is a significant effect of environmental disclosure on cash flow ratio of consumer goods manufacturing companies in Nigeria.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.200[a]	.040	-.012	2.44907

a. Predictors: (Constant), Firm size, ED, Leverage

Source: *SPSS Ver. 20*

Table 4.7 shows the model summary results which sought to establish the explanatory power of the independent variables (ED, LEV, and FS) for explaining and predicting the dependent variable (CFR). R, the simple correlation coefficients, (i.e. the linear correlation between the observed and model predicted values of the dependent variable) showed a value of .200. R square, the coefficient of determination (i.e. the squared value of the simple correlation coefficients) showed a value of .040 (about 4%) of the variation in the dependent variable is explained by the model.

Table 4.8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.936	3	4.645	.775	.513[b]
	Residual	335.884	56	5.998		
	Total	349.820	59			

a. Dependent Variable: Cash flow ratio
b. Predictors: (Constant), Firm size, ED, Leverage
***Source:** SPSS Ver. 20*

Table 4.8 shows a statistically non-significant F statistic of .775 (more so, P value >.05). Thus, we accept the null hypotheses.

Table 4.9: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.143	8.500		1.664	.102
	ED	-.713	.686	-.141	-1.040	.303
	Leverage	-.041	.040	-.200	-1.029	.308
	Firm size	-.852	.677	-.239	-1.259	.213

Dependent Variable: Cash flow ratio
***Source:** SPSS Ver. 20*

Hypothesis Four:

H_1: There is a significant effect of environmental disclosure on current ratio of consumer goods manufacturing companies in Nigeria.

Table 4.10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.264[a]	.069	.018	.64524

a. Predictors: (Constant), Firm size, ED, Leverage
***Source:** SPSS Ver. 20*

Table 4.10 shows the model summary results which sought to establish the explanatory power of the independent variables (ED, LEV, and FS) for explaining and predicting the dependent variable (CR). R, the simple correlation coefficients, (i.e. the linear correlation between the observed and model predicted values of the dependent variable) showed a value of .264. R square, the coefficient of determination (i.e. the squared value of the simple correlation coefficients) showed a value of .069 (about 6.9%) of the variation in the dependent variable is explained by the model.

Table 4.11: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.677	3	.559	1.343	.270[b]
	Residual	22.482	54	.416		
	Total	24.160	57			

a. Dependent Variable: Current ratio
b. Predictors: (Constant), Firm size, ESD, Leverage
Source: *SPSS Ver. 20*

Table 4.11 shows a statistically non-significant F statistic of 1.343 (However, P value >.05). Thus, we accept the null hypotheses.

Table 4.12: Model Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.798	2.446		.735	.465
	Total ED	-.329	.236	-.191	-1.393	.169
	Leverage	-.009	.011	-.161	-.835	.408
	Firm size	.092	.191	.090	.482	.632

a. Dependent Variable: Current ratio
Source: *SPSS Ver. 20*

Hypothesis Five:

H_1: There is a significant effect of environmental disclosure on return on equity of consumer goods manufacturing companies in Nigeria.

Table 4.13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.605[a]	.367	.335	.77301

a. Predictors: (Constant), Firm size, ED, Leverage
Source: *SPSS Ver. 20*

Table 4.13 shows the model summary results which sought to establish the explanatory power of the independent variables (ED, LEV, and FS) for explaining and predicting the dependent variable (ROE). R, the simple correlation coefficients, (i.e. the linear correlation between the observed and model predicted values of the dependent variable) showed a value of .605. R square, the coefficient of determination (i.e. the squared value of the simple correlation coefficients) showed a value of .367 (about 33.5%) of the variation in the dependent variable is explained by the model.

Table 4.14: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.746	3	6.915	11.573	.000[b]
	Residual	35.852	60	.598		
	Total	56.599	63			

a. Dependent Variable: Returns on equity
b. Predictors: (Constant), Firm size, ESD, Leverage
***Source:** SPSS Ver. 20*

Table 4.14 shows a statistically significant F statistic of 11.573 (more so, P value <.05). Thus, we reject the null hypotheses.

Table 4.15: Model Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.530	2.605		-.203	.840
	ED	-.944	.193	-.517	-4.883	.000
	Leverage	.014	.012	.176	1.169	.247
	Firm size	.498	.210	.352	2.374	.021

a. Dependent Variable: Returns on equity
***Source:** SPSS Ver. 20*

Hypothesis Six:
H_1: There is a significant effect of environmental disclosure on return on assets of consumer goods manufacturing companies in Nigeria.

Table 4.16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.485[a]	.235	.195	.16365

a. Predictors: (Constant), Firm size, ED, Leverage
***Source:** SPSS Ver. 20*

Table 4.16 shows the model summary results which sought to establish the explanatory power of the independent variables (ED, LEV, and FS) for explaining and predicting the dependent variable (ROA). R, the simple correlation coefficients, (i.e. the linear correlation between the observed and model predicted values of the dependent variable) showed a value of .485. R square, the coefficient of determination (i.e. the squared value of the simple correlation coefficients) showed a value of .235 (about 23.5%) of the variation in the dependent variable is explained by the model.

Table 4.17: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.477	3	.159	5.932	.001[b]
	Residual	1.553	58	.027		
	Total	2.030	61			

a. Dependent Variable: Returns on asset
b. Predictors: (Constant), Firm size, ED, Leverage
***Source:** SPSS Ver. 20*

Table 4.17 shows a statistically significant F statistic of 5.932 (more so, P value <.05). Thus, we reject the null hypotheses.

Table 4.18: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.109	.558		-1.987	.052
	ED	.057	.041	.165	1.397	.168
	Leverage	.010	.003	.658	3.914	.000
	Firm size	.080	.045	.297	1.791	.079

a. Dependent Variable: Returns on asset
Source: *SPSS Ver. 20*

Discussion of Findings

The findings of this study show a descriptive statistics with a mean (a measure of central tendency) of 4.68 and standard deviation of .635 for total environmental disclosure. This entails relatively high environmental disclosure amongst consumer goods category of the manufacturing companies in the Nigerian stock exchange as the data presentation showed a minimum of 3 and a maximum of 5 disclosure scores.

The study revealed that environmental disclosure (ED) has a negative relationship with total asset turnover (TAT). From Table 4.6 ED had a Beta value of -.969. Also from Table 4.9, ED had a Beta value of -1.040 with P-value equal to .303. Thus, ED shows a negative relationship with CFR. Table 4.12 revealed that environmental disclosure (ED) has a negative relationship with current ratio (CR), ED had a Beta value of -1.393 with P-value equal to .169. Table 4.15 revealed that environmental disclosure (ED) has a negative relationship with returns on equity (ROE). From the table, ED had a Beta value of -4.883 with P-value equal to .000. Finally, table 4.18 revealed that environmental disclosure (ED) has a positive relationship with returns on assets (ROA). From the table, ED had a Beta value of -1.397 with P-value equal to .168.

Thus, hypotheses 2 and 5, they revealed that there is a significant relationship between environmental disclosure (ED) and Total Asset Turnover (TAT) and Return on Equity (ROE) respectively, while, hypothesis 3, 4 and 6 revealed the contrary.

Summary of Findings, Conclusion and Recommendations

Summary of Findings

With the increasing trend in the demand from stakeholders for environmental accountability and transparency, this study, investigates the extent of environmental accounting disclosure among Nigerian firms. This research has also seen environmental accounting practices as a contributor to financial performance.

From the study, it was specifically revealed that;

1. There is a significant difference in the environmental disclosure themes of consumer goods manufacturing firms.
2. There is a significant effect of environmental disclosure on Total Asset Turnover of consumer goods manufacturing companies in Nigeria.
3. There is no significant effect of environmental disclosure on Cash Flow Ratio of consumer goods manufacturing companies in Nigeria.
4. There is a significant effect of environmental disclosure on Current Ratio of consumer goods manufacturing companies in Nigeria.

5. There is a significant effect of environmental disclosure on Return on Equity of consumer goods manufacturing companies in Nigeria.
6. There is no significant effect of environmental disclosure on Return on Assets of consumer goods manufacturing companies in Nigeria.

Conclusion

This study was carried out to appraise environmental disclosure themes in the financial statements of consumer goods manufacturing companies in Nigeria. The study also determines the effect of the disclosure theme on selected ratios of the companies. The study finds a positive relationship between some of the ratios, while others exhibit a negative relationship. Therefore from the above analysis, it is possible to conclude that environmental accounting disclosure practice in developing countries like Nigeria is still very ad-hoc, general, self-laudatory and voluntary in nature.

Besides, there are no existing corporate environmental sustainability reporting standards as far as corporate environmental disclosure practice is concerned in Nigeria. Moreover, there is no mandatory requirement for companies to undergo environmental audit, and there are no generally-accepted standards regulating the nature of audit work. This therefore provides some preliminary evidence of the possibility that corporate environmental reporting practice in Nigeria represents attempts by companies to improve their corporate image be seen as responsible corporate citizens. Consequently, it implies that without some form of regulatory intervention, reliance on voluntary corporate environmental disclosure alone is unlikely to result in either a high quality of disclosure or sufficient levels of disclosure among firms in Nigeria.

Recommendations

Based on the findings of this study, the following recommendations are hereby given:

1. A detailed and well spelt out environmental disclosure theme and evidence must be established to provide firm foundation for corporate social and environmental disclosures among companies. Also there is need for standard setting bodies to set up guidelines or principles or accounting standards in other to improve the financial and non-financial environmental disclosures of companies in Nigeria
2. The study also calls for more efforts to be taken on the part of government to encourage managers on the need to embrace environmentally friendly practices in order to restore and guarantee a conflict free corporate atmosphere needed by managers and workers for maximum productivity. More so, funds expended in settling disputes could be applied to enhance corporate liquidity while management is able to plan better and make decisions when it is not engrossed in disputes.
3. More so, adequate measures should be put in place to encourage companies to imbibe the culture of corporate environmental audit. This process (corporate environmental audits) systematically assesses how well a company's environmental management practices conforms to green production goals and help diffuse green production practices throughout the organization.

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