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# ENVIRONMENTAL ACCOUNTING PRACTICES AND IMPLICATIONS ON CORPORATE SUSTAINABILITY

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**Abstract**

*The response of firms to environmental liabilities has brought about the reconfiguration of corporate performance indices in a larger context under the subtle influence of environmental and social factors, in order to develop a holistic view of an entity's performance. This study, therefore, examined the implication of environmental accounting practices on corporate sustainability in Nigeria. The study raised three hypotheses and adopted ex-post facto method, while 12 years (2007-2018) annual reports of 11 selected fast moving consumer goods manufacturing companies in Nigeria were analysed, using content analysis and Pearson product moment correlation coefficient, with the aid of the Statistical Package for Social Scientists (SPSS 23.0). The findings of the study revealed that there are significant relationships between environmental accounting practice and economic sustainability, social sustainability, and ecological sustainability in fast moving consumer goods manufacturing companies in Nigeria. This study, therefore, recommended among others that corporate organisations in Nigeria should extend their management accounting and financial reporting systems to environmental accounting as a way of ensuring long-run corporate sustainability.*

***Keywords: Corporate organisation, Environmental accounting practice, Fast moving consumer goods, Corporate sustainability***

## Introduction

Environmental challenges have become a global issue during the last few decades, attracting attention in a number of national and international arenas. Environmental problems are ingrained in economic and social policy; they emerge at all levels, from local to global, and need action over an extended period of time by a varied variety of stakeholders. The industrial revolution improved economic circumstances in practically every facet of our lives, delivering higher prosperity, improved health, and a more efficient way of doing things; indeed, it is synonymous with economic growth. While natural resource exploitation is necessary for economic progress, it has negative environmental repercussions such as environmental and atmospheric pollution, oil spillage, desertification, ozone layer depletion, global warming, and climate change, all of which threaten our life. As a developing country, Nigeria continues to rely on natural resources to fuel economic growth; hence, there is a correlation between Nigeria's GDP and natural resource use.

Global environmental awareness is growing, and the push for sustainable economic growth is refocusing corporations' emphasis on environmental sensitivity (Ngwakwe, 2008). The pursuit of sustainability has resulted in the creation of several worldwide agencies that promulgate a variety of standards governing human interaction with the environment. These standards are educating corporate firms about the potential of their strategic position in society to influence behaviour and impact the physical, social, and economic environment. Corporate sustainability and growth have resulted in increased need for stakeholder-based accounting and reporting. Every corporate organization's performance is 80 percent dependent on its operational environment, as no corporation can exist without it. The importance of the environment and its demonstrated enormous contribution to business organizations' sustained performance prompted the incorporation of environmental accounting into the corporate accounting system. According to Amedu, Iliemena, and Umaigba (2019), the majority of Nigerian industrial enterprises do not provide environmental information. Accounting for the environment enables businesses to accurately analyse the costs and benefits of environmental preservation efforts (Schaltegger, 2000). Environmental accounting is a component of sustainability accounting and reporting; as such, it provides reports that contain environmental data to aid in internal management decisions and for external usage by stakeholders.

It is well established that the severity of environmental problems in Nigeria and elsewhere has a detrimental influence on life expectancy in general. According to Yakhon and Dorweiler (2004), commercial operations have a variety of negative effects on the environment, including air, water, subsurface pollution, drinking water, land and habitat for endangered and threatened species, oceans, atmosphere, and land pollution. Given that organizational processes contribute to industrial pollution, deforestation, oil spills, and gas flaring, national and international efforts are being made to mitigate the economic, social, and health consequences of these processes. Environmental accounting standards or environmental disclosure requirements for communicating with various stakeholder groups are not available to Nigerian businesses; nonetheless, the government has made some efforts to adopt acts and legislation aimed at enhancing environmental sustainability in Nigeria. These include the Environmental Impact Assessment Act 2004, the Petroleum Industry Environmental Guidelines and Standards 2002, and the National Environmental Standards and Regulations Enforcement Agency Act 2004. Corporate entities that engage in environmental accounting, on the other hand, adhere to particular criteria derived from the Global Reporting Initiative (GRI) Guidelines.

In other words, neither the Companies and Allied Matters Act (CAMA) nor International Accounting Standards (IAS's) or International Financial Reporting Standards (IFRS) impose a mandatory requirement for quantitative or qualitative disclosure of (financial) environmental accounting information in annual reports (IFRS). Additionally, there is no mandatory requirement for Nigerian companies listed on the Nigerian Stock Exchange to disclose environmental accounting information, despite the Nigerian Stock Exchange's recent guideline on sustainability reporting from 2018 recommending the disclosure of corporate environmental events. As a result, environmental accounting information is disclosed in Nigeria on a voluntary basis, which discourages environmental accounting. Amedu et al. (2019) demonstrated that environmental sustainability reporting information is not valuable. According to Murray (2010), it defies logic to believe that businesses would invest on social and environmental issues knowing there would be no return. Proponents believe that the increased expenses connected with environmental accounting and disclosure reduces the reporting company's profitability. It is against this background that the present study examines the implication of environmental accounting practice on corporate sustainability in Nigeria.

**Research Hypotheses**

**Hypothesis One:** There is no significant relationship between environmental accounting practice and economic sustainability in Nigerian fast moving consumer goods companies.

**Hypothesis Two:** There is no significant relationship between environmental accounting practice and social sustainability in Nigerian fast moving consumer goods companies.

**Hypothesis Three:** There is no significant relationship between environmental accounting practice and ecological sustainability in Nigerian fast moving consumer goods companies.

## Literature Review

### Concept of Environmental Accounting

Environmental accounting is a relatively recent idea in accounting literature. However, the hunt for accountability for activities that have a negative impact on the environment dates back many years and has only lately come to the fore. Environmental accounting is concerned with the disclosure of an organization's environmental effect. It entails identifying, quantifying, and allocating environmental costs, incorporating environmental costs into business decisions, and communicating the results to a company's stakeholders. Eze, Nweze and Nweke (2016) define environmental management accounting as the generation and analysis of both financial and non-financial information in order to support internal environmental management processes. Environmental accounting has also been described as a type of accounting that attempts to measure both the social and environmental impacts of business decisions Elliot and Elliot (2009). Igweonyia (2016) define environmental accounting as the preparation, and publication of an account about an organisation's socio-environmental conditions, employee, community, customers, and other stakeholders interactions and activities and, where possible, the consequences and activities. They further stated that it is concerned with the preparation, and communication of information related to the organisations' interaction with the natural environment.

According to Bassey, Sunday and Okon, (2013), environmental accounting is designed to provide information for the assessment of company's behaviour towards its environment and the economic consequence of such action. Environmental accounting is therefore said to cover all information relating to the environment. It includes environment-related expenditure, environmental benefits of products and details regarding sustainable operations (Irish, 2000).

**Concept of Sustainability**

The importance of sustainability cannot be overemphasised because as it is involved with every aspect of business environment, including the economic, social and utilization of resources by the organisations (Adams, Thornton,&Sepehri, 2009). Although sustainability has many faces, the main idea is that resources should be used in ways that will not reduce them. Resources such as wildlife should be conserved in a way that future generations will enjoy their lifestyles at least as happy and healthy as the present generations or perhaps better. According to Ekanem, Nwachukwu, &Etuk (2014), the primary aim of sustainable development is on human capital development,economic empowerment, basic services, healthy living as well as to leverage the resources organizations can give and empowerthe societies intaking the lead on issues for their development.

The increasing debate amongst concerned stakeholders on sustainability was triggered by the frequent occurrence of natural and man-made environmental disasters such as oil spillage, flooding, landslides among others have become a major concern (Iqbal, Ahmad, Hamad, Bashir &Sattar, 2014). Stakeholders are being perceived to give credence to firms they observe to be socially responsible. Various organizations and regulatory institutions across the globe emphasized that firms must pay serious attention to the economic, social and environmental effects their activities may constitute (James, 2013).

**Theoretical Framework**

This study adopts both the Legitimate theory and Stakeholders theory.

**Legitimacy Theory**

This theory supports the notion that company alters their reporting policies to show that their operations are consistent with the social priorities and expectations of the society. Legitimacy theory also establishes an incentive for corporate environment reporting, streaming from the existence of a general social contract between companies and society (Mathews, 2000). According to Junru (2013), the argument that over the years, the increased environmental disclosures and reporting witnessed was as a result of pressures from stakeholders was founded on the legitimacy theory.

Companies use the legitimacy perspective to disclose voluntarily environmental information which shows that they are conforming to the expectations and values of the society within which they operate (Uwuigbe, 2011).By communicating environmental information, the company makes itself look legitimate in the public pressure on the business (Daniel, 2013).

**Empirical Review**

Several scholars have researched the effects of environmental accounting practices and its effects on corporate organisations within and outside Nigeria. Very recent among them are Ofoegbu and Megbuluba (2016), who examined the influence of firm characteristicson the quality of Corporate Environmental Accounting Information Disclosure (CEAID) in the Nigeria manufacturing companies. Ex-post facto and content analysis research designs were adopted. The study collected panel data for seven-year period covering 2008-2014 from the annual reports of 10 quoted selected manufacturing firms. The study applied the use of Weight Average Environmental Disclosure Index to measure the quality of CEAID based on financial disclosure. The pooled panel data least square regression model was used to estimate the influence of the independent variable on the dependent variables. The results strongly showed that firm financial performance has a significant impact on the quality of CEAID, but firm size had no impact on the quality of CEAID. The study concluded that voluntary CEAID alone would not enhance the quality of CEAID in the manufacturing firms in Nigeria.

Iliemena (2020) examined environmental accounting practices and corporate performance in listed oil and gas companies in Nigeria between 2012-2018. Ex-post facto research design was employed in the study and the analysis carried out using simple linear regression. Findings reveal environmental accounting practices and accounting have significant positive effects on both turnover and Return on capital employed; while the effect on net profit even though positive, was insignificant. The study concluded that, environmental accounting has significant positive effect on corporate sustainability of practicing companies. It is therefore recommended amongst others that corporate organizations should extend their management accounting and financial reporting systems to environmental accounting as a way of ensuring long-run corporate sustainability.

Beredugo and Mefor, (2012) evaluated the relationship between environmental accounting and reporting and sustainable development in Nigeria. Pearson correlation coefficient and OLS were used for data analyses, and was discovered that there is a significant relationship between environmental accounting and reporting and sustainable development; that with environmental accounting encourage organizations to track their greenhouse gas emissions and other environmental data against reduction targets, and there are consequences for noncompliance with environmental accounting and reporting.

Osemene, Kolawole, and Oyelakun (2016) examined the effects of environmental accounting practices and sustainable development on the performance of Nigerian listed manufacturing companies. The study provided an insight into the effect of accountingfor the environmentand companies'attitudes towardsthe sustainabilityof the environment. Data wascollected from annual reportsand accounts of thirty-six randomly selected quoted companies in Nigeria. Thedata were analyzed using panel dataregression analysis. Results revealedthat there is significant positiverelationship between sustainable developmentand return on equity (ROE) and returnon assets (ROA);a significant positive relationship between environmental accounting and return on equity(ROE). Based on this,the study recommends that quoted manufacturing companies should account for, and report the effects of their economic activities on the environment to stakeholders in order to enjoy an improved and robust net profit and earnings per share.

**Methodology**

The research design adopted in this study is the ex-post facto research design as it analysed already existing information over a number of years. Ex-post facto research deals with the determination, evaluation andexplanation of past events essentially for the purpose of gaining a better and more reliable prediction of the future (Amahalu,*et al*, 2015). The research methods involved an initial scrutiny of the selected companies' annual reports to observe the incidence of environmental accounting practices and sustainability disclosures. For this purpose, all sections of the annual report were carefully examined to note the presence of any environmental accounting and sustainability disclosure. Given the time andresource constraints, the nature of the study tends to be mainly exploratory and descriptive. This study will only take account of the disclosures made in the annual reports because, this is the most authentic and reliable document produced by the companies annually.

The population of this study consists of 35 fast moving consumer goods manufacturing firms in Nigeria (https://infoguidenigeria.com/fmcg-companies-in-nigeria/), including **Dangote Group,** Unilever Nigeria Plc., Nigerian Breweries, Nestle Nigeria Plc., Chi Limited, Flour Mill in Nigeria, Vital Products, Sona Agro Allied Foods Limited, Dansa Foods Limited, Yale Foods Ltd., Beloxxi group, Nexans Nigeria, La Casera Company Plc., OK Foods, Deli Foods, British American Tobacco, CWAY Food and Beverages Nigeria Company Limited, Rites Foods Ltd, Comart Nigeria Ltd, Newbisco Ltd., Honeyland Foods, PZ Cussons, Friesland Campina Wamco Nigeria Plc., Zubee International Company Limited, Bimzy Super Stores Ventures, DuFil Prima Foods, Dis and Dart Mart, Be Global Food FZE (BGF), Conserveria Africana Ltd., Nutri C, Apples and Pears Ltd., Sc Johnson – Raid, Daraju Industries Limited, May & Baker Nigeria Plc.,and Farest Mercantile Company.

For the sample size, however, 11 of the firms were selected based on the availability of their annual reports for the period of 12 years (2007-2018). They are **Dangote Group,** Unilever Nigeria Plc., Nigerian Breweries, Nestle Nigeria Plc., Chi Limited, Flour Mill in Nigeria, Vital Products, PZ Cussons, Nutri C, Apples and Pears Ltd., and May & Baker Nigeria Plc. Hence, the environmental accounting and sustainability information were obtained from the annual reports of the firms for a period under review, using content analysis; which was adopted because it is one of the most suitable, systematic, objective and quantitative method of data analysis technique employed in prior research studiesin measuring acompany's social environmental disclosure in annual audited reports (Hackston and Milne, 1996; Onyali, Okafor&Egolum, 2014). The extracted data from the annual reports were analysedusing Pearson Product Moment Correlation Coefficient (PPMC), with SPSS 23.0, at 0.05 level of significance.

**Results**

The three hypothesis stated in the course of this study are tested with Pearson Correlation, as shown in the table below.

**Table 1: Pearson Correlation Statistics**

| | | Economic Sustainability | Social Sustainability | Ecological Sustainability |
|---|---|---|---|---|
| **Environmental** | Pearson Correlation (r) | .739 | .593 | .654 |
| **Accounting** | Sig. (2-tailed) | .001 | .007 | .004 |
| **Practice** | N | 132 | 132 | 132 |

The above table shows the relationship between environmental accounting practice and economic, social, and ecological sustainability. For Economic sustainability, *r=.739*, indicating a strong relationship between environmental accounting practice and economic sustainability, while p=.001 shows a significant relationship between the two variables. Hence, the first hypothesis is rejected and its alternative is accepted.

## Discussion

This position is in line with Omotosho (2006) who opines that a suitable macroeconomic environment is necessary if Nigeria is to be relevant and effectively compete in the global economy. Furthermore, Akinbami&Adegbulugbe (1998) opined that the use of natural resources including energy is indispensable to economic development and not devoid of environmental consequences as traceable to the environmental degradation and atmospheric pollution experienced in Nigeria. For social sustainability, *r=.593*, indicating a fair relationship between environmental accounting practice and social sustainability, while p=.007 shows a significant relationship between the two variables. Hence, the second hypothesis is rejected and its alternative is accepted.This finding corroborates Murray, Sinclaire, Power and Gray (2006) investigation in the relationship between UK companies' social and environmental performance disclosure and their financial market performance, they revealed a convincing relationship between consistently high returns and high levels of social and environmental disclosure while low market returns is also found to be associated with low social and environmental disclosure practices. Further findings by Setyorini and Ishak (2012) revealed that when the association is driven more by political cost considerations, it can be expected that corporate social and environmental disclosure is positively associated with earnings management.

As for ecological sustainability, *r=.654*, indicating a strong relationship between environmental accounting practice and ecological sustainability, while p=.004 shows a significant relationship between the two variables. Hence, the third hypothesis is rejected and its alternative is accepted.This is in line with Esan (1998) who is of the view that sustainable development is concerned with technologies for pollution reduction; monitoring of technologies to optimize energy mix; peoples‘ participation in environmental degradation; modern technologies of biomass, wind, solar energy, thereby reducing the ecological and environmental hazards and risk.

## Conclusion

The results of this study revealed that there are significant relationships between environmental accounting practice and economic sustainability, social sustainability, and ecological sustainability in fast moving consumer goods manufacturing companies in Nigeria.

## Recommendations

This study, therefore, recommends that:

1. Corporate organisations in Nigeria should extend their management accounting and financial reporting systems to environmental accounting as a way of ensuring long-run corporate sustainability;
2. There should be an accounting standard for measuring, treatment and disclosure of firms' environmental practices, to enhance proper environmental reporting;
3. The Nigerian firms should adopt uniform reporting and disclosure standards of environmental practices for the purpose of control and measurement of performance;

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