Journal of Global Accounting
8 (3) December, 2022.
https://journals.unizik.edu.ng/joga

NNAMDI AZIKIWE UNIVERSITY AWKA

GREEN ACCOUNTING PRACTICES AND CORPORATE PERFORMANCE: EVIDENCE FROM QUOTED CONSUMER GOODS MANUFACTURING COMPANIES IN NIGERIA

Chude, Daniel Izuchukwu PhD
Department of Accountancy, Chukwuemeka Odumegwu Ojukwu University Igbariam Campus
di.chude@coou.edu.ng

Chude, Nkiru Patricia PhD
Department of Banking and Finance, Chukwuemeka Odumegwu Ojukwu University Igbariam Campus
np.chude@coou.edu.ng

Egbunike, Francis Chinedu PhD
Department of Accountancy, Nnamdi Azikiwe University, Awka, Nigeria
cf.egbunike@unizik.edu.ng

ABSTRACT:

The study specifically investigated the effect of green accounting practices on the returns on assets and returns on equity of consumer goods manufacturing firms in Nigeria. The stakeholder theory underpins the research. The study adopted an ex post facto research design, and the final sample comprised twenty-one consumer goods companies quoted on the Nigerian Stock Exchange. The study relied on secondary sources of data from annual financial reports from 2011 to 2017. The data were analyzed using least squares regression with the aid of E-views. The findings of the study revealed that green accounting practices have a positive and significant relationship with returns on assets but a negative effect on returns on equity that is not significant. The study recommends, among others, that green accounting practices should be part of the corporate practices of manufacturing firms because they improve return on assets and improve stakeholder engagement. Secondly, the negative effect of green accounting on return on equity implies that green accounting reduces the income available for distribution to shareholders, and therefore managers should adopt practices that justify their enticement for green practices as they secure the environment for an unforeseen tomorrow.

Key words: *Green Accounting, Return on Assets, Return on Equity*
Paper Type*: Original Research Paper;* ***Correspondence****:* di.chude@coou.edu.ng

CITE THIS PAPER: Chude, D.I., Chude, N.P. & Egbunike, C.F. (2022). Green Accounting Practices and Corporate Performance: Evidence from Quoted Consumer Goods Manufacturing Companies in Nigeria, *Journal of Global Accounting*, 8(3), 53 - 65. Available at: https://journals.unizik.edu.ng/joga

1. INTRODUCTION

Green accounting refers to the practice of accounting and providing relevant information on the probable social and environmental costs emanating from production externalities on the environment and society in general (Makori & Jagongo, 2013). Green accounting and its most evolved form, "sustainability accounting", has been receiving increasing attention in the academia

 © December, 2022 JOGA

and business literature since the early '90s (Bhat, 2014). Presently, firms are paying more attention to social and environmental issues and, dedicate portions of their annual reports and accounts to reporting and disclosing such costs (Ding, Ferreira, & Wongchoti, 2014; Hoje, Kim, & Park, 2014). Stakeholders are mounting pressure on corporate boards on corporate social responsibility issues (Rahim, 2012); while, there are also increasing regulations and sanctions (Aggarwal, 2013). Firms are being pressured to respond to social and environmental matters and report on them (Oluwagbemiga, 2014). Such disclosure is believed to make a firm more responsive (Cortez & Cudia, 2011). Other benefits, identified include, enhancing the reputation of a firm (Servaes & Tamayo, 2013; Carroll & Shabana, 2010); reducing idiosyncratic risk (Lee & Faff, 2009; Bassen, Meyer, & Schlange, 2006).

It is a signal of management efficiency (Renneboog, Ter Horst, & Zhang, 2008a,b); and a signal to the capital market to enhance credit ratings (Jiraporn, Jiraporn, Boeprasert, & Chang, 2014). Proponents of green accounting argue that managers should not only focus on the bottom line (profit) objective alone but should assume more responsibilities to society and the environment (Ogbodo, 2015). Green accounting represents a deliberate effort to incorporate environmental benefits and costs into economic decision-making (Bhat, 2014). This drives by the perceived interrelationship and interdependence between business and society (Ogbodo, 2015). In today's dynamic and complex business environment, sustainability influences the bottom line and is also a fundamental determinant of corporate performance (Udeh & Ezejiofor, 2018; Jeroh & Okoro, 2016; Okoye & Ezejiofor, 2013). As a response the Nigerian Stock Exchange (NSE) has demonstrated efforts at integrating sustainability into existing business models, which culminated in the production of the Sustainability Disclosure Guidelines (SDG), covering environmental, social and governance (ESG) issues. Thus, sustainability reporting has remained one of the strategic tools used by organizations to engage with wider stakeholders (Vallesi, D'Andrea, & Eswarlal, 2012). The risks and opportunities associated with environmental and social issues, and the possible link with the bottom line economic performance have made sustainability a strategic priority for companies as part of their overall business strategy (Committee of Sponsoring Organisations [COSO], 2013). In Nigeria, corporate social responsibility is now a burning issue, as companies are facing tremendous pressure to take responsibility for their activities in the natural environment (Fodio & Oba, 2012). They include gas flaring, environmental degradation, indiscriminate land and hill clearing, and toxic waste dumping (Uwuigbe & Egbide, 2012). Stakeholders are becoming knowledgeable, driven by the wider availability of information and governance codes granting greater visibility of corporate business practices (COSO, 2013).

The literature on green accounting initiatives and disclosure documents mixed findings on the relationship between green accounting practices and corporate performance both globally and locally. studies in Nigeria can be divided into two: studies that examine determinants of disclosure practices of Nigerian firms on green initiatives (Onyali, Okafor, & Egolum, 2014; Ebimobowei, 2011). However, there the consensus seems to be that the disclosure level is still ad hoc; with little or no quantifiable data. According to Jeroh and Okoro (2016), this is further compounded by the absence of adequate green accounting models or techniques of practical applicability in Nigeria. The second stream of studies is devoted to studying the link between sustainability practices and corporate performance. They include studies by Asuquo, Dada, and Onyeogaziri (2018) on sustainability reporting; Egbunike and Okoro (2018) on green accounting practices; Nnamani, Onyekwelu, and Ugwu (2017) on sustainability accounting and reporting. These studies have extensively focused on manufacturing firms (either consumer or industrial goods). Other studies; such as Onyekwelu and Ekwe (2014) on the banking sector; Ijeoma (2015) used primary data; while, Udeh and Ezejiofor (2018) focused on telecommunication firms.

And despite several prior related studies, few studies have specifically examined this in the Consumer goods sector in Nigeria. For instance, Ekwe, Odogu, and Mebrim (2017) on two

companies, Conoil and Forte; Ajayi and Ovharhe (2016) undertook an exploratory study on LNG; Nze, Okoh, and Ojeogwu (2016) restricted to two firms in the Oil and Gas sector. An extensive study was conducted by Ifurueze, Lydon, and Bingilar (2013) on a sample of twelve oil companies based on field survey methodology in the Niger Delta region. Thus, a need to investigate this using secondary data from a quoted consumer goods sector in Nigeria. In order to control the effect of green accounting on corporate performance and consider the disparity among firms, the current study used some control variables, which are firm size and firm leverage (Waheed & Malik, 2019a). The size of a firm is a significant determinant of the resources available to such a firm for disbursal; it is argued that the larger a firm, the greater the intensity of green spending. A firm's CSR expenditures are also affected by its degree of leverage. Sheikh (2019) find that CSR is negatively associated with book leverage and market leverage.

1.1 Objectives of the Study

The main objective of the study is to ascertain the relationship between green accounting practices and the corporate performance of selected quoted manufacturing firms in Nigeria. The specific objectives of the study are to:

1. determine the relationship between green accounting practices and the return on assets of manufacturing firms.
2. determine the relationship between green accounting practices and the return on equity of manufacturing firms.

1.2 Hypotheses

H_{01}: There is no significant relationship between green accounting practices and return on assets of manufacturing firms.

H_{02}: There is no significant relationship between green accounting practices and return on equity of manufacturing firms

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Green Accounting Practices

The concept of green accounting originated as an offshoot of the sustainability discussion about 20 years ago. According to the Brundtland Report, sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Corporate sustainability is viewed as the "capability of an organization to continue its activities indefinitely, taken due account of their impact on natural, social and human capitals" (Accountability, 1999). The concept of sustainability expands on the traditional CSR view, which according to Wood (1991a,b) refers to an organization's "configuration of principles of social responsibility, processes of social responsiveness, policies, programs, and observable outcomes as they relate to the firm's societal relationships". Despite the abundance of definitions of sustainability, it generally refers to serving people, communities, and the environment in ways that go above and beyond what is legally required (Jo & Harjoto, 2012). According to Rizk, Dixon, and Woodhead (2008); sustainability entails "The process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and society at large. As such, it involves extending the accountability of organizations (particularly) companies; beyond the traditional role of providing a financial account to the owners of capital, in particular, shareholders". Sacconi (2006) described it as a management model where managers have responsibilities that range from meeting the responsibilities of shareholders to the fulfilment of the responsibilities of other stakeholders. Green accounting is a subcategory of financial accounting that focuses on activities that have a direct impact on the society, environment and economic performance of an organization and the disclosure of such information to external parties such as capital holders, creditors and other authorities (Alnafea, 2014). Green accounting refers to the process of collecting; analysing and communicating sustainability-related information (Schaltegger

& Burritt, 2010) to enable organizations to become more sustainable (Alnafea, 2014). It is based on a synergetic view; that the financial and competitive success of a firm is intertwined with its social legitimacy (Perrini & Tencati, 2006).

Green accounting emerged from developments in accounting, on two lines of thought. The first line is the philosophical debate; on the relevance and contribution of green accounting to sustainable development. The second is the management perspective associated with varied terms and tools for sustainability (Schaltegger & Burritt, 2010). Broadly, green accounting takes into consideration environmental resources and changes in them and integrates the result with the system of national account so as provide a valuable information base for planning and formulating policy for the integrated sustainable development and growth of a nation (Bhat, 2014). Green accounting provides a framework for organizations to identify and account for past, present and future environmental costs to support managerial decision-making, control and public disclosure (KPMG & UNEP, 2006). Green accounting provides "information on positive and negative impacts", and can provide a complete picture of the company to stakeholders (Vallesi, D' Andrea, & Eswarlal, 2012). Green accounting provides an opportunity to reduce present and future costs to the business; which improves competitiveness, market positioning and profitability (Little, 2003).

2.1.2 Green Accounting and Corporate Performance

Green accounting is a subset of accounting that deals with activities, methods and systems used to record, analyse and report (Schaltegger & Burritt, 2010): environmentally and socially induced financial impacts; ecological and social impacts of a defined economic system (e.g., the company, production site, nation, etc.); and, the interactions and linkages between social, environmental and economic issues. The nexus of green accounting and corporate performance has been substantiated in several studies and contexts. For instance, Udeh and Ezejiofor (2018) in Nigeria employed multiple regression and found that green accounting had a significant effect on the return on assets; and, the return on equity of telecommunication firms. However, in contrast, Egbunike and Okoro (2018) in Nigeria utilized canonical correlations but finds no significant relationship between green accounting and profitability.

Additionally, studies have documented evidence which is based on the component of green accounting studied. The components of green accounting can be broadly classified into three: social, environmental and economic accounting. According to Adams (2006) sustainability requires the reconciliation of environmental, social and economic demands, which are known as the 'three pillars' of sustainability. For instance, Asuquo, Dada and Onyeogaziri (2018) in Nigeria showed that economic performance disclosure, environmental performance disclosure and social performance disclosure have no significant effect on return on assets. The social dimension deals with the "preparation and publication of an account about an organisation's social, environmental, employee, community, customer and other stakeholder interactions and activities and, where, possible the consequences of those interactions and activities" (Gray, 2000). It discloses the impact of the company and its activities on the different stakeholder groups. The environmental dimension on the other hand focuses on 'the identification, measurement and allocation of environmental costs, the integration of these environmental costs into business decisions, and the subsequent communication of the information to a company's stakeholders. Like, the social component it is a tool for managing and controlling corporate activities and supporting communication with stakeholders, especially those interested in environmental issues. The last component, the economic dimension deals with the traditional 'financial' metrics usually found in the annual financial statements of a firm. Prior studies document mixed findings depending on the green accounting dimension studied. For instance, Ekwe, Odogu, and Mebrim (2017) in Nigeria from two oil and gas firms find that triple bottom line accounting has a negative but non-significant effect on EPS, but a significant negative effect on ROA. In contrast, Nnamani, Onyekwelu, and Ugwu (2017) in Nigeria and a sample of

brewery firms sector from 2010 to 2014finds that total personnel cost to the total asset has a significant effect on ROA.

2.2 Theoretical Review

2.2.1 Stakeholder Theory

The study is anchored on 'stakeholder theory', which advocates the role of the firm in meeting the interests of several stakeholders. The stakeholder theory was propounded by Freeman (1984). The theory draws from the strategic management literature, systems theory and corporate social responsibility to challenge the long-standing assumption "that the sole objective of firms is to maximize shareholders' wealth" (Laplume, Sonpar, & Litz, 2008). Stakeholders refer to individuals or groups who are affected by, or whose actions can directly, or sometimes indirectly, affect the firm's operation (Orlitzky, Louche, Gond, & Chapple, 2017; Kassinis & Vafeas, 2006; Harrison & Freeman, 1999). Stakeholder theory posits that the long-term value of a firm is premised on its relationships with critical stakeholders (Post, Preston, & Sachs, 2002). The theory suggests that the company has a binding fiduciary duty to different stakeholders' which ultimately determines the value of the company based on how well the company fulfils the contracts with its stakeholders (Ong & Djajadikerta, 2017).

2.3 Empirical Review

Udeh and Ezejiofor (2018) investigated the effect of sustainability cost accounting on financial performance in Nigeria. The sample comprised telecommunication firms in Nigeria. They used regression to test the formulated hypotheses. The study found that sustainability cost accounting has a significant effect on return on assets; and, return on equity of Nigerian telecommunication firms.

Asuquo, Dada and Onyeogaziri (2018) investigated the effect of sustainability reporting on corporate performance in Nigeria. The sample comprised three brewery firms listed on the Nigerian Stock Exchange from 2012 to 2016. The data were obtained from the annual reports and accounts of the selected non-consumer goods firms. The results showed that economic performance disclosure, environmental performance disclosure and social performance disclosure have no significant effect on return on assets.

Egbunike and Okoro (2018) investigated the effect of green accounting practices on profitability in Nigeria. The sample comprised ten non-consumer goods firms listed on the Nigerian Stock Exchange from 2012 to 2016. The data were sourced from the annual reports and accounts of the selected non-consumer goods firms. They used canonical correlations to analyze the data. The study finds no significant relationship between green accounting and profitability.

Ekwe, Odogu, and Mebrim (2017) examined the link between triple bottom line accounting and profitability in Nigeria. The sample comprised two firms, Conoil and Forte Oil. They used secondary Data from annual reports and accounts of the companies. The hypotheses were tested using Ordinary Least Square (OLS). The study finds that triple bottom line accounting has a negative but non-significant effect on EPS, but a significant negative effect on ROA.

Nnamani, Onyekwelu, and Ugwu (2017) investigated the effect of sustainability accounting and reporting on financial performance in Nigeria. The sample comprised three firms from the brewery sector from 2010 to 2014. The data were sourced from the annual reports and accounts of the selected brewery firms. They used ordinary linear regression to test the hypotheses. They found that total personnel cost to the total asset has a significant effect on ROA; while total equity to total asset did not.

Bhatia and Tuli (2017) examined the relationship between sustainability reporting and corporate attributes in India. The sample comprised 158 companies listed on the BSE 200. They employed

 © December, 2022 JOGA

multiple regression to analyse the data. They found that firm's profitability, leverage, growth and advertising intensity were negatively related to the extent of sustainability disclosure.

Nze, Okoh and Ojeogwu (2016) examined the effect of corporate social responsibility on earnings in Nigeria. The sample comprised two firms in the Oil and Gas sector over ten years. They used secondary data from firms' annual reports and accounts. They used multiple regression to analyse the data. The results revealed that CSR has a positive and significant effect on earnings.

Jeroh and Okoro (2016) assessed the effect of environmental and dismantling costs on firm performance in Nigeria. The sample comprised oil and gas from 2008 to 2015. They used secondary data from annual reports and accounts of the firms. The hypotheses were tested using the ordinary least square. The study finds that environmental and dismantling costs positively influence the performance of a firm.

The current study adopted a single-theoretical perspective to assess the effect of green accounting practices on corporate performance. Though few studies had been carried out globally on green accounting practices corporate most of these studies made use of primary data sources as in Ekwe, Odogu, and Mebrim (2017) on two companies, Conoil and Forte; Ajayi and Ovharhe (2016) who undertook an exploratory study on LNG; Nze, Okoh, and Ojeogwu (2016) restricted to two firms in the Oil and Gas sector. Also, an extensive study was conducted by Ifurueze, Lydon, and Bingilar (2013) on a sample of twelve oil companies based on field survey methodology in the Niger Delta region. Hence the aim is to fill the gap by green accounting practices relative to corporate performance, focusing on companies engaged in the consumer goods sector of the Nigerian stock exchange market and using secondary data

3. MATERIAL AND METHOD

The study made use of an ex post facto research design. The final sample comprised quoted consumer goods firms on the Nigerian Stock Exchange. The study utilised secondary sources of data. The data was retrieved from the annual financial statements of the sampled companies. The study used data that were extracted from the Annual Reports of the selected manufacturing companies. Part X1, Chapter One of the Companies and Allied Matters Decree 1990, requires companies to keep and produce accounts that render a true and fair view of the state of affairs of the company. The reliability of such data is in line with the requirement that all quoted companies conduct an independent external audit on published financial statements.

Content analysis was used to measure green accounting practices; this is similar to the procedure used in prior studies (Haniffa & Cooke, 2005). Content analysis is "a research technique for making replicable and valid inferences from data to their context" (Krippendorft 1980). This method involves the construction of a classification scheme (defining a set of boxes into which to put the data) and developing a set of rules about "what" and "how" to code, measure and record the data to be classified (Miliie & Adler, 1999). The study measures disclosure quantity, by assigning "1" if an item is present in the annual report, otherwise zero. This is consistent with studies on the corporate social responsibility of firms in emerging nations (Haji, 2013; Khan, Muttakin, & Siddiqui, 2013; Haniffa & Cooke, 2005).

$$GAj = \frac{\sum_{i=1}^{n} \text{disclosure quantity}_i \times \text{disclosure type}_i}{\text{Max score}_i}$$

Where *GAj* = green accounting disclosure index of firm *j*; The community, diversity, employee relations, and environment elements of CSR are included in the green accounting index.*Disclosure quantityi* = the disclosure or non-disclosure of item *i* concerning this item's disclosure type in firm *j*;

Disclosure qualityi = the weight for an item i concerning this item's disclosure type in firm j (i.e., narrative, monetary/numerical quantification, or both narrative and monetary/numerical); n = the number of items within the checklist; Max $score_i$ = the highest score of three disclosed dimensions for a specified firm.

The study employed multiple linear regression techniques to analyse the secondary data in the study; it is a statistical technique to analyze the relationship between a single dependent variable and several independent variables. The independent variables are used to predict the dependent variable. According to Hair, Black, Babin, and Anderson (2010), multiple regression analysis falls into two broad classes of research problems, namely prediction and explanation. Prediction indicates to which extent an independent variable can explain the dependent variable. Then, the explanation involves the regression coefficient of each independent variable and attempts to develop a theoretical or substantive reason for the effect of the independent variable (Hair, Black, Babin, & Anderson, 2010). The study used panel regression analysis to capitalize on its strength to control for omitted/unobservable variables that threaten causal inference in observational studies (Halaby, 2004; Lee, 2002).

3.1 Model Specification:

$ROA_{(i,t)} = \alpha + GA_{(i,t)} + BS_{(i,t)} + FS_{(i,t)} + Leverage_{(i,t)} + Age_{(i,t)} + \mu$………. (1)

$ROE_{(i,t)} = \alpha + GA_{(i,t)} + BS_{(i,t)} + FS_{(i,t)} + Leverage_{(i,t)} + Age_{(i,t)} + \mu$………. (2)

Control Variables

Board size	-	Number of directors as of financial year-end
Firm size	-	Natural logarithm of total assets
Firm leverage	-	Total debt / Total equity
Firm age	-	No of years from the date of incorporation

4. RESULT AND DISCUSSIONS

4.1Data Analysis

Table 1: Descriptive statistics of dependent variables

	ROA	ROE
Mean	0.109387	0.215294
Median	0.070412	0.171266
Maximum	4.319268	6.352177
Minimum	-3.237088	-12.57206
Std. Dev.	0.535096	1.673426
Skewness	2.239436	-3.919682
Kurtosis	39.54732	36.03950
Jarque-Bera	8304.071	7062.518
Probability	0.000000	0.000000
Sum	16.07988	31.64822
Sum Sq. Dev.	41.80388	408.8518
Observations	147	147

Source: E-views Ver. 9.0

4.2 Test of Hypotheses

4.2.1 Hypothesis One

H_{01}: There is no significant relationship between green accounting practices and return on assets of manufacturing firms

Table 2: OLS output for hypothesis one

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.260534	0.527873	-0.493553	0.6224
GA	0.169034	0.059388	2.846275	0.0051
BOARD_SIZE	-0.038346	0.022359	-1.714996	0.0885
FS	0.009998	0.024125	0.414442	0.6792
LEVERAGE	0.008677	0.023236	0.373425	0.7094
FIRM_AGE	0.003545	0.002233	1.587516	0.1146
R-squared	0.073654	Mean dependent var		0.109387
Adjusted R-squared	0.040805	S.D. dependent var		0.535096
S.E. of regression	0.524065	Akaike info criterion		1.585559
Sum squared resid	38.72485	Schwarz criterion		1.707617
Log likelihood	-110.5386	Hannan-Quinn criter.		1.635152
F-statistic	2.242195	Durbin-Watson stat		2.059680
Prob(F-statistic)	0.053376			

Source: E-views 9.0

4.2.1.1 Discussion of Result

The table above shows the panel least square regression result for hypothesis one. The model showed an R squared value of .074 (R^2 measures the proportion of the variance in the dependent variable that is explained by the independent variables); and, Adjusted R squared value of 0.041; thus, the model explains approximately 4.1% variation in the dependent variable. The F statistic (ratio of the mean regression sum of squares divided by the mean error sum of squares) which is used to check the statistical significance of the model showed a value of 2.24; p-value <.10; therefore, the hypothesis that all the regression coefficients are zero is rejected.

4.2.1.2 Decision: Given the fact that the t statistic of our variable of interest representing hypothesis one is 2.85 and prob. = 0.0051 which is less than 0.05 ($p<.05$), it is confirmed that *green accounting practice has a positive and statistically significant relationship with returns on assets (ROA)*; thus, the alternate hypothesis is accepted and null rejected. This is consistent with the study by Bassey, Effiok, and Eton (2013) in Nigeria; they examined the impact of environmental accounting and reporting on organizational performance and found that environmental cost significantly affects a firm's profitability. Taimako (2016) also found that profitability and firm size positively and significantly influence the Corporate Social Responsibility of conglomerates in Nigeria.

4.2.2 Hypothesis Two

H_{02}: There is no significant relationship between green accounting practices and return on equity of manufacturing firms

Table 3: OLS output for hypothesis two

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.133130	1.638982	-1.911631	0.0580
GA	-0.015149	0.184392	-0.082158	0.9346
BOARD_SIZE	-0.017561	0.069422	-0.252959	0.8007
FS	0.147046	0.074905	1.963110	0.0516
LEVERAGE	0.199842	0.072146	2.769990	0.0064
FIRM_AGE	-0.003186	0.006934	-0.459417	0.6466
R-squared	0.086911	Mean dependent var		0.215294
Adjusted R-squared	0.054532	S.D. dependent var		1.673426
S.E. of regression	1.627159	Akaike info criterion		3.851508
Sum squared resid	373.3181	Schwarz criterion		3.973566
Log likelihood	-277.0858	Hannan-Quinn criter.		3.901102
F-statistic	2.684176	Durbin-Watson stat		0.960103
Prob(F-statistic)	0.023806			

Source: E-views 9.0

4.2.2.1 Discussion of Result

Table 3 above shows the panel least square regression result for hypothesis one. The model showed an R squared value of .087 (R^2 measures the proportion of the variance in the dependent variable that is explained by the independent variables); and, Adjusted R squared value of 0.054; thus, the model explains approximately 5.4% variation in the dependent variable. The F statistic (ratio of the mean regression sum of squares divided by the mean error sum of squares) which is used to check the statistical significance of the model showed a value of 2.268; p-value <.10; therefore, the hypothesis that all the regression coefficients are zero is rejected.

4.2.2.2 Decision: The fact that the t statistic of our variable of interest representing hypothesis two is -0.082 and prob. = 0.935 which is greater than 0.05 (p>.05) implies that *green accounting practice has a statistically insignificant relationship with returns on equity (ROE)*; thus, the null is accepted. Therefore, there is no significant relationship between green accounting practices and returns on equity of manufacturing firms. This is consistent with the study by Jeroh and Okoro (2016) who assessed the effect of environmental and dismantling costs on firm performance in Nigeria and found out that environmental and dismantling costs positively influence the performance of a firm. Contrary to our research Alikhani and Maranjory (2013) investigated the relationship between corporate social and environmental disclosure levels and profitability in Iran and found no significant relationship between the level of CSED and profitability (ROA, ROE, NPM, and EBITDA).

CONCLUSION AND RECOMMENDATIONS

The study explored the relationship between green accounting practices and the corporate performance of quoted consumer goods manufacturing firms in Nigeria. Green accounting has emerged as a subset of accounting that deals with activities, methods and systems used to record, analyse and report which concerns green disclosure. The disclosure of such entails the description of corporate activities, especially as it impacts the society and environment. Though many companies

are yet to comply with green disclosure and literature on the subject is yet scanty, this becomes the core point of the present study. The empirical results documents mixed findings; while, ROA was positive the effect on ROE was negative. The study, therefore, makes the following recommendations:

1. Green accounting practices have a long-run effect on profitability and in other to make allowance for sustainable growth, it is recommended that an approved amount be made to foster this sustainable development goal.
2. Secondly, managers should justify their reason behinD green practices as it has a negative effect of green accounting on return on equity, implying that it reduces the income avialble for distrubtion to sherholders. The reasoning behind this justification is the recent claims of managers on the issue of green corporate greenwashing, i.e., making an unsubstantiated claims to deceive consumers to believe that a company's products are more ecologically friendly. Therefore managers should adopt the culture of green accounting practices and disclosure and also promote their operations. More so, regulatory authorities should promote enticing incentives for green companies in green disclosures and practices as it secures the environment for an unforeseen tomorrow.

REFERENCES

Accountability, (1999). Accountability 1000 (AA1000) Framework: Standard, Guidelines and Professional Qualification. London: Account-Ability. Available at http://www.accountability.org.uk

Adams, W. M. (2006). The future of sustainability: Re-thinking environment and development in the twenty-first century. Report of the IUCN Renowned Thinkers Meeting, 29-31 January 2006. Available at www.iucn.org.

Aggarwal, P. (2013). Impact of sustainability performance of company on its financial performance: A study of listed Indian companies. *Global Journal of Management and Business Research*, *13*(11), 61-70.

Ajayi, S., & Ovharhe, L. (2016). The effect of corporate social responsibility on the performance and growth of the oil & gas industry in Nigeria a case study of Nigeria LNG limited. Available at SSRN: https://ssrn.com/abstract=2745079

Alikhani, R., & Maranjory, M. (2013). An investigation on the relationship between social and environmental information disclosure level and firms performance in Iran. *International Research Journal of Applied and Basic Sciences*, *5*(1), 125-128.

Alnafea, F. S. (2014). Developing the conceptual framework of sustainability accounting reporting: Field study in Saudi commercial banking sector. *Global Journal of Management and Business Research*,

Asuquo, A. I., Dada, T. E., & Onyeogaziri, U. R. (2018). The effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. *International Journal of Business & Law Research*, *6*(3), 1-10.

Bassen, A., Meyer, K., & Schlange, J. (2006). The influence of corporate responsibility on the cost of capital. Available at https://papers.ssrn.com/soL3/papers.cfm?abstract_id=984406

Bhat, S. (2014). Green products and green accounting. Available at http://www.ba.lv/wp-content/uploads/2014/10/Green-products-and-Green-Accounting_Bhat.pdf

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews*, *12*(1), 85-105.

Committee of Sponsoring Organisations [COSO], (2013). Integrating the triple bottom line into an enterprise risk management program. Available at https://www.coso.org/documents/COSO-ERM%20Demystifying%20Sustainability%20Risk_Full%20WEB.pdf

Cortez, M. A. A., & Cudia, C. P. (2011). Sustainability and firm performance: A case study of Japanese electronics companies. *Ritsumeikan international affairs*, *10*, 321-339.

Ding, D. K., Ferreira, C., & Wongchoti, U. (2014). Does It Pay to Outclass? Corporate Social Responsibility and Its Impact on Firm Value. Available online at https://ink.library.smu.edu.sg/cgi/viewcontent.cgi?article=5425&context=lkcsb_research

Ebimobowei, A. (2011). A study of social accounting disclosures in the annual reports of Nigerian companies. *Asian Journal of Business Management*, *3*(3), 145-151.

Egbunike, A. P., & Okoro, G. E. (2018). Does green accounting matter to the profitability of firms? A canonical assessment. *Ekonomski horizonti*, *20*(1), 17-26.

Ekwe, M. C., Odogu, L. I., & Mebrim, A. A. (2017). Triple bottom line accounting pattern and profitability of firms. An empirical study of oil and gas companies in Nigeria. *International Journal for Research in Business, Management and Accounting*, *3*(9), 44-56.

Fodio, M. I., & Oba, V. C. (2012). Gender diversity in the boardroom and corporate philanthropy: Evidence from Nigeria. *Research Journal of Finance and Accounting*, *3*(8), 63-69.

Gray, R. (2000). Current developments and trends in social and environmental auditing, reporting and attestation: a review and comment. *International Journal of Auditing*, *4*(3), 247-268.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: a global perspective* (7th Ed.). Upper Saddle River, N.J: Pearson.

Haji, A. A. (2013). Corporate social responsibility disclosures over time: evidence from Malaysia. *Managerial Auditing Journal, 28*(7), 647-676.

Halaby, C. (2004). Panel Models in Sociological Research: Theory into Practice. *Annual Review of Sociology*, *30*, 507-544.

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy, 24*(5), 391-430.

Harrison, J. S., & Freeman, R. E. (1999). Stakeholders, social responsibility, and performance: Empirical evidence and theoretical perspectives. *Academy of Management Journal*, *42*(5), 479-485.

Hoje, J., Kim, H., & Park, K. (2014). Corporate environmental responsibility and firm performance in the financial services sector. Korea Advanced Institute of Science and Technology, Working Paper, Series No. 2014-007.

Ifurueze, M. S. K., Lydon, M. E., & Bingilar, P. F. (2013). The impact of environmental cost on corporate performance: A study of oil companies in Niger Delta States of Nigeria. *Journal of Business and Management*, *2*(2), 1-10.

Ijeoma, N. B. (2015). Evaluation of companies environmental practices in Nigeria. *Social and Basic Sciences Research Review*, *3*(7), 349-364.

Jeroh, E., & Okoro, G. E. (2016). Effect of environmental and dismantling costs on firm performance among selected oil and gas companies in Nigeria. *Sahel Analyst: Journal of Management Sciences, 14*(5), 14-26.

Jiraporn, P., Jiraporn, N., Boeprasert, A., & Chang, K. (2014). Does corporate social responsibility (CSR) improve credit ratings? Evidence from geographic identification. *Financial Management*, *43*(3), 505-531.

Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, *106*(1), 53-72.

Kassinis, G., & Vafeas, N. (2006). Stakeholder pressures and environmental performance. *Academy of Management Journal*, *49*(1), 145-159.

Khan, A., Muttakin, M. B., & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: evidence from an emerging economy. *Journal of Business Ethics, 114*(2), 207-223.

KPMG & United Nations Environment Programme (UNEP), (2006). Carrots and Sticks for Starters'. Current Trends and Approaches in Voluntary and Mandatory Standards for Sustainability Reporting. Parktown: KPMG

Laplume, A. O., Sonpar, K., & Litz, R. A. (2008). Stakeholder theory: Reviewing a theory that moves us. *Journal of Management, 34*(6), 1152–1189.

Lee, D. D., & Faff, R. W. (2009). Corporate sustainability performance and idiosyncratic risk: A global perspective. *Financial Review*, *44*(2), 213-237.

Lee, M. (2002). *Panel Data Econometrics: Methods of Moments and Limited Dependent Variables*. San Diego, CA: Academic Press.

Little, A. D. (2003). The Business Case for Corporate Responsibility. *Business in the Community*.

Makori, D. M., & Jagongo, A. (2013). Environmental accounting and firm profitability: An empirical analysis of selected firms listed in Bombay Stock Exchange, India. *International Journal of Humanities and Social Science, 3*(18), 248-256.

Nze, D. O., Okoh, J., & Ojeogwu, I. C. (2016). Effect of Corporate Social Responsibility on earnings of quoted firms in Nigeria. *ESUT Journal of Accountancy*, *1*, 260-267

Ogbodo, O. C. (2015). The imperatives of sustainability management accounting system (SMAS) for developing country: The case of Nigeria. *Scholars Journal of Economics, Business and Management*, *2*(7B), 779-785.

Okoye, P. V. C., & Ezejiofor, R. A. (2013). An appraisal of sustainability environmental accounting in enhancing corporate productivity and economic performance. *International Journal of Advanced Research, 1*(8), 685-693.

Oluwagbemiga, E. O. (2014). The use of voluntary disclosure in determining the quality of financial statements: Evidence from the Nigeria listed companies. *Serbian Journal of Management*, *9*(2), 263-280.

Ong, T., & Djajadikerta, H. G. (2017). Impact of corporate governance on sustainability reporting: Empirical study in the Australian resources industry. Available at: https://www.eticanews.it/wp-content/uploads/2017/10/SSRN-id2902495.pdf

Onyali, I.C., Okafor, T.G., & Egolum, P. (2014). An assessment of environmental information disclosure practices of selected Nigerian manufacturing companies. *International Journal of Finance and Accounting*, *3*(6) 349-355.

Onyekwelu, U. L., & Ekwe (2014). Does corporate social responsibility predicate good financial performance. *ESUT Journal of Management Sciences*, *8*(1), 1-10.

Orlitzky, M., Louche, C., Gond, J. P., & Chapple, W. (2017). Unpacking the drivers of corporate social performance: A multilevel, multistakeholder, and multimethod analysis. *Journal of Business Ethics*, *144*(1), 21-40.

Perrini, F., & Tencati, A. (2006). Sustainability and stakeholder management: the need for new corporate performance evaluation and reporting systems. *Business Strategy and the Environment*, *15*(5), 296-308.

Post, J. E., Preston, L. E., & Sachs, S. (2002). Managing the extended enterprise: The new stakeholder view. *California Management Review*, *45*(1), 6-28.

Rahim, M. M. (2012). Corporate governance as social responsibility: A Meta-regulation approach to raise social responsibility of corporate governance in a weak economy. In S. Boubaker, & D. K. Nguyen (Eds.), *Board Directors and Corporate Social Responsibility*, pp. 145-166. New York: Palgrave Macmillan.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008a). Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking & Finance*, *32*(9), 1723-1742.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008b). The price of ethics and stakeholder governance: The performance of socially responsible mutual funds. *Journal of Corporate Finance*, *14*(3), 302-322.

Rizk, R., Dixon, R., & Woodhead, A. (2008). Corporate social and environmental reporting: a survey of disclosure practices in Egypt. *Social Responsibility Journal*, *4*(3), 306-323.

Sacconi, L. (2006). A social contract account for CSR as an extended model of corporate governance (I): Rational bargaining and justification. *Journal of Business Ethics*, *68*(3), 259-281.

Schaltegger, S., & Burritt, R. L. (2010). Sustainability accounting for companies: Catchphrase or decision support for business leaders? *Journal of World Business*, *45*(4), 375-384.

Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science*, *59*(5), 1045-1061.

Sheikh, S. (2019). Corporate social responsibility and firm leverage: The impact of market competition. *Research in International Business and Finance*, *48*, 496-510.

Udeh, F. N., & Ezejiofor, R. (2018). Effect of Sustainability Cost Accounting on Financial Performance of Telecommunication Firms. *Journal for Studies in Management and Planning Nigeria*, *4*(6), 223-250.

Uwuigbe, U., & Egbide, B. C. (2012). Corporate social responsibility disclosures in Nigeria: A study of listed financial and non-financial firms. *Journal of Management and Sustainability*, *2*(1), 160.

Vallesi, M., D'Andrea, A., & Eswarlal, V. K. (2012). Evaluation of sustainable accounting practices in the Italian bioenergy sector. *Politica Agricola Internazionale-International Agricultural Policy*, *3*, 18-45.

Waheed, A., & Malik, Q. A. (2019a). Board characteristics, ownership concentration and firms' performance: A contingent theoretical based approach. *South Asian Journal of Business Studies*, *8*(2), 146-165.

World Commission on Environment and Development [WCED], (1987). *Our Common Future*. Oxford: University Press.

Wood, D.J. (1991a). Corporate social performance revisited. *Academy of Management Review*, *16,* 691–718.

Wood, D.J. (1991b). Social issues in management: Theory and research in corporate social performance. *Journal of Management*, *17*, 383–406.