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Green Accounting and Firm Performance in Nigeria

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ABSTRACT

This study examines the impact of green accounting on firm performance in Nigeria. TobinQ was use to measure the firm value. The study selected 72 manufacturing firms listed on the Nigerian Stock Exchange that disclosed green accounting information in line with GRI-4. Ex- post facto research design was used and secondary data were collected from annual report of sampled firms from 2012-2019. The data were analyzed with descriptive statistics and correlation analysis while pooled ordinary least squared regression was employed to test formulated hypotheses. From the analysis it was discovered that material and energy disclosure have positive and significant effect on firm performance. Based on these findings, the study recommends that company's should develop policy concerning materials used to produce and package company's primary product and services during the reporting period and firms should also make their operation more sustainable by reporting on their energy consumption and energy efficiency policy being aware of it's in becoming accountable and responsible.

KEYWORDS: *Green accounting, Firm performance, Material disclosure, Energy disclosure, Agency theory*

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1. INTRODUCTION

Need for green accounting disclosures by businesses regardless of the industry type cannot be overemphasized. Green accounting serve as a means through which businesses can bring to the knowledge of stakeholders their environmental performance, to enhance values and corporate image as well as creating a sustainable base for improved earnings and operations in the future since no business can boast of not affecting the environment in one way or the other (Udo, 2018). Companies' activities have profound influence on the society and environment not only in terms of benefit but also in terms of risks and hazards. Activities of some companies have brought some environmental pollution, depletion of resources and threat to human health (Buckingham, 2001).

The ecological equilibrium of the earth is particularly endangered by the chemical process industries as the power plant continue to spew gaseous pollutants, chemical toxicants, heated effluents, fly ash and other pollutants which posses great hazards (Bhatia,2011). The magnitude of contamination of the environment has reached an alarming level (Srinivas, 2014). On the effect of environmental degradation, industrial activities of some companies are destructive to the environment which may not only prevent future generation from meeting their goals, but may also lead to extinction of these resources (Emeka-Nwokeji & Okeke, 2019). Despite the effect of firm's activities, Hussain, Rigoni and Rene (2018) observed that some companies behave in manner that suggests that they can achieve corporate goals even if green accounting and social responsibility are trampled upon. Amedu, Iliemena and Uwaigba, (2019) opined that green accounting information is not value relevant. Murray (2010) opined that it is counter intuitive to think that companies would undertake expenditure on social and environmental impacts knowing that there would be no profit. The study argued that additional costs associated with green accounting and disclosure depresses the profitability of reporting company. These situations have attracted research within Nigeria and diaspora on the effect of green accounting on firm performance. While some researchers discovered a positive relationship between green accounting and firm performance, others found negative relationship. There are some studies that revealed no relationship at all between green accounting and firm performance.

According to Lodhia (2006), green accounting is a procedure through which organizations regularly disclose environmental information to their stakeholders to provide evidence that they are accountable for their activities and its resultant impact on the environment. Green accounting involves the identification, measurement and allocation of environmental costs and the integration of these costs into business and encompasses the way of communicating such information to the companies' stakeholders, (Magara, Aming & Momanyi, 2020). Also Baba, (2012) defined green accounting as a method of measuring (in economic terms) the performance of the organization in relation to the environment. According to Steele and Powell (2002), Green accounting is the identification, allocation and analysis of material streams and their related money flow by using accounting system to give insight in environmental impact associated with financial effect. Ekubiat (2019) defined green accounting practices as guidelines, framework, models and activities that are in line with accounting principles to recognize, measure, present and disclose environmental issues by an entity for the preparation of environmental financial statement.

Since disclosure of green accounting information is not mandatory in Nigeria, most companies decide on the quality of green accounting information to disclose. According to Oyedokun, Egberioyinemi and Tonadmukaila (2019), many Nigerian companies tend to disclose green accounting information to conform to industry practices, pressure from environmental activities, and advocates relationship with the parent company, ownership structure of the company, size and level of profitability. Nevertheless in the field of better shaping of voluntary environmental disclosure of significant use, efforts are being made by non-governmental organizations to prescribe comprehensive framework for corporate sustainability reporting and to specify how companies should disclose numerous environmental and social issues, among such organizations are Global Reporting Initiative (GRI), Sustainability Reporting Guidelines (SRG) and International Standard Organization (ISO) (Sekerez, 2017).

According to Degan (2013), green accounting is a field of study that identifies resource use, measures and communicates costs of a company's or national economic impact on the environment. In view of this, costs include cost to clean up or remediate the contaminated sites, environmental fines, penalties and taxes, purchase of pollution prevention technologies and waste management costs. Green accounting deals with accounting and management issues relating to environmental and social impact, regulations and restrictions, safety, environmentally sound and economically viable energy production and supply (Moorthy & Yacob, 2013). Vandna (2018) conceptualized green accounting as an accounting system that measures the current economic losses that are experienced by renewable and non- renewable resources in the environment. Furthermore by incorporating these losses into all levels of economics, all parts of economic sectors can make informed decisions that support long term sustainable development and help in strengthening human right.

Statement of the problem

Increasing environmental issues such as global warming, destruction of biodiversity, soil erosion and deforestation by firms of which manufacturing firms are among tends to have a profound impact on the environment. Despite the environmental laws and policies targeted at ameliorating these problems, the situation in Nigeria seems degenerating owing to the fact that these laws are not effectively enforced. Moreover, financial statements have not traditionally provided sufficient information on green accounting, current reporting framework did not emphasize on green accounting which was what led to stakeholders criticism of traditional reporting framework. This calls for examination of the quality of green accounting information voluntarily provided by firm in their annual report in other to create awareness among the stakeholders and ascertain whether it is value relevant (Ofoegbu, 2016).

Increase in firms providing information on green accounting disclosure led to increase in extant literature on green accounting disclosure. For instance Ironkwe and Success (2017; Emeka- Nwokeji and Okeke (2019) investigated the impact of green accounting on market firm value and discovered that green accounting has positive significant relationship on firm value. On the contrary other researchers like Jariya (2015); Adediran and Alade (2016);) examined the extent of green accounting on firm performance and discovered that there is a negative relationship between green accounting and firm value. More so other researchers such as Okonkwo, Ezelibe and Okoye (2019) examined the impact of green accounting on firm performance and discovered that there is no relationship at all between green accounting and firm performance.

Objectives of the study

General objective of this study is to ascertain the effect of green accounting on financial performance of manufacturing firms listed on the Nigerian Stock Exchange. To pursue this, the following specific objectives were designed.

To determine the extent to which material disclosures affect financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

To find the extent to which energy disclosures affect financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

Research questions

1. To what extent does material disclosure affect financial performance of manufacturing firms listed on the Nigerian Stock Exchange?
2. To what extent does energy disclosure affect financial performance manufacturing firms listed on the Nigerian Stock Exchange?

Research Hypotheses

The assertions are stated in their null forms as follows.

Material disclosure has no significant effect on financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

Energy disclosure has no significant effect on financial performance of manufacturing firms listed on the Nigerian Stock Exchange.

2. Review of Related Literature

Theoretical framework:

There are many theories associated to green accounting. This study shall be anchored on agency theory in the sense that conflict of interest and information asymmetry which is synonymous to agency theory will be reduced through environmental accounting disclosure.

Material disclosure: Companies are beginning to feel the shortage of raw materials such as earth mineral used in electronic and oil for plastic production. According to United Nations Environment Program (UNEP), the next twenty years will see increasing competition for material resources as they become scarce. With an ever more interconnected global economy and growing industrialization, an increasing volume of materials are being transported across the world, consumed and converted into waste. Wastes in turn contribute to green house gas emission. There is an increasing emphasis on companies using material in a more efficient way (waste avoidance) and resource recovery (reuse and recycling) in the interest of the company, for instance in the terms of cost reduction.

Energy disclosure: Fossil fuel is the largest contributor to green house gas emission and the reporting of the two areas is therefore closely intertwined. Over 80% of energy consumed today is based on fossil fuel and research indicates that 80% of global fossil fuel reserve cannot be burned if we are to keep global warming within the international agreed target of 2 degree Celsius. Fossil fuel markets are likely to become increasingly volatile in coming years due to higher global demand, supply uncertainties and increased regulation. Energy security is an important factor for companies, concerning both the availability of energy sources as well as energy prices. Energy security consideration will vary depending on the energy source of the company, including whether the company mixes energy sources or depends on a single source.

Firm Performance

Performance has been defined and conceptualized differently by various authors and researchers. It is a set of financial and non-financial indicators which offer information on the degree of achievement of objectives and results. According to Barney (2002), firm performance is the general measurement of firm overall financial health over a given period which can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. According to Nangih and Onuora (2020), firm performance is an assessment of firm's ability to utilize it's assets in the generation of profits as well as wealth maximization According to Touab and Issor (2019), firm performance is an achievement or results obtained by management, economics and marketing in providing competitiveness, efficiency and effectiveness to the company. Peterson, Gijsbers and Wilks (2003) conceptualized firm performance as the capability to achieve accomplishment consistent with set of objectives of the company as well as considering their relevance to it's users. Firm performance is a sub-set of organizational effectiveness that covers both operational and financial outcome.

For the purpose of this study, firm value will be measured using TobinQ

TobinQ

Tobin's Q plays an important role in financial interaction. TobinQ can be defined as the market value of a firm to the replacement cost of it's assets. These measures are based on historical events and do not reflect future value. Positive accounting measures do not necessarily entail value for owners and also do not take into account the relationship between risk and return.

According to Lindenberg and Ross (1981), TobinQ is defined as the ratio of firm's market value to the replacement costs of the firm's asset. It can be stated mathematically as thus

Firm value = MVS+ DA⁄TA.

Where MVS= market value of equity (market price× number of circulated stock sheets).

DA= book value of total debts.

TA= Total assets.

TobinQ ratio has been used in a variety of situation in the financial literature to examine the different financial phenomena and decisions. .

EMPIRICAL ANALYSIS

Makori and Jagongo (2013) examined the relationship between environmental accounting and profitability of selected firms listed in 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 result 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.

Oyedokun, Egberioyinemi and Tonademukaila (2019) examined the effect of environmental accounting disclosure on firm value of listed industrial goods companies in Nigeria from 2007-2016. The ex-post facto research design was adopted in this study while the data were gathered through the individual sample company annual financial statement. Multiple regression was used to analyze the effect of environmental accounting disclosure on firm value. Environmental accounting disclosure was measured by non-financial indicators, financial indicators and performance indicators while the firm value is measured by Tobin's Q. From the result, it was observed that non-financial indicators have a positive significant effect on firm value while performance indicators have a negative significant effect on firm value and the financial indicator have no significant effect on firm value of industrial goods companies in Nigeria.

Okonkwo, Ezelibe and Okoye (2019) examined the extent of disclosure of environmental management practices of quoted firms in Nigeria and how it affects their corporate performance. The study was conducted using all the twenty one Agriculture, Natural Resources, and oil and gas firms quoted on the floor of the Nigerian stock market. Firm size, profitability, and return on assets were used to measure firm corporate performance. Twenty four (24) content category items within four (4) testable dimensions of corporate environmental disclosure was developed for coding environmental management disclosures. The data obtained were analyzed using the ordinary least square (OLS) regression analysis. It was found that environmental management disclosure does not significantly affect firm's profitability and ROA while firm size was found to increase with the level of environmental management disclosure.

Emeka- Nwokeji (2018) investigated whether contending with environmental disclosures challenges affect market value of Nigerian firms. Environmental disclosures were measured with: disclosure of pollution control and abatement cost, environmental litigation cost and waste management cost. While market value was measured with Tobin's Q .Data for the study were collected from eight of listed oil and gas firms in Nigeria from 2006 to 2015 that has complete data on the variables. Data were analyzed with pooled ordinary least square regression. Analysis revealed among other things that: disclosure of pollution control and abatement cost, waste management cost has significant positive effect on firm value .Disclosure of environmental litigation cost has significant negative effect on firm value.

Ironkwe and Success (2017) studied how environmental accounting has influenced the sustainable development in Nigeria, particularly in the Niger Delta area. Two hypotheses were formulated and tested as an off shoot of the research questions. Environmental Accounting as Independent variable was measured by Sustainable development variables such as infrastructural amenities, poverty eradication, health care delivery, natural disaster and pollution. Quasi experimental research design was employed in the research. Data were gathered using questionnaires which were distributed to gather opinion from accountants, auditors, environmentalist, and community leaders in six states in Niger Delta area. Of 400 questionnaires distributed 388 were retrieved out of which 8 were invalid. Chi-square, Spearman's coefficient correlation among others under SPSS Version 23 package was used to analyze the data and test the hypotheses. The result showed that there is positive relationship between Environmental accounting, Sustainable development and Economic Stability in Nigeria.

Wahyuni, Meutia and Syamsurijal. (2019). studied the effect of green accounting implementation on improving environmental performance in mining and energy companies in Indonesia. In this study, the implementation of green accounting was taken from the green accounting concept that contained quantitative and qualitative information reported by the company. The observation period of this study was three years from 2014 to 2016. The object of this research was the mining and energy companies registered in the Global Reporting Initiative (GRI)

database in Indonesia. The data used were secondary data obtained from sustainability reporting with the GRI-G4 report type. Data analysis used was panel data regression with a random effect model approach. The results show that the implementation of green accounting in the form of recycled materials, renewable energy, and green cost allocation has a positive and significant effect on improving environmental performance. Conversely, Corporate Social Responsibility (CSR) fund allocations do not affect environmental performance.

3. Methodology

The secondary was analyzed using descriptive statistics, correlation analysis and regression analysis. However, other diagnostic tests were conducted to confirm the assumption of regression. Multiple regression techniques were used to evaluate the effect of independent variable on the dependent variable. Multiple regression techniques were used for the analysis since the independent variables are more than one and regression used to test the effect of a predictor variable on dependent variable. Descriptive and correlation analysis using the stata statistical software was obtained because stata statistical software provides a more accurate result than the manual computation of the regression. The stata software produced statistics for the coefficient of determination from t- test, R-squared and R- squared adjusted, standard error of the coefficient (SE co-efficient), F-statistics, P-value and variance Inflation Factor (VIF) was used for analysis interpretation. Co-efficient of determination of R-squared and R-squared (adjusted) was used in measuring the explanatory power in the dependent variable that can be attributed to changes in the independent variable. This shows how strong the influence of independent variable is on the dependent variable. Re-squared (adjusted) is preferred to R-squared because R-squared (adjusted) has been adjusted for the number of terms in the model. It gives an estimation of the true value of the population when the sample is small. Making inferences from F- statistics, measured the overall level of significance of the model. the extent to which all the coefficient of determination are jointly statistically significant. It is used for testing the hypothesis; if the hypotheses are to be true at 95% confidence level the calculated F- value should be smaller than 5%.You should reject the null hypotheses when the F-value is less than 5% and accept when it is greater than 5%.

Variation Inflation Factor (VIF) was used for testing multicollinearity. It measured s the correlation of independent variables among themselves. It is a regression diagnostic test. It is a phenomenon in which one predictor variable in a multiple regression model can be linearly predicted from the other with a substantial degree of accuracy. If the value is greater than 10, multicollinearity exists.

The study formulated multiple regression models from prior empirical work and perceived theoretical relationship among the variables to help in testing the hypotheses of the study. The multiple regression models adopted the model of Oyedokun and Egberioyinemi (2016).

TQ= FI ECD+NFIECD+ PI ECD

TQ= FIECD + NFIECD +PI ECD.

Where; TQ =Tobin Q

FIECD = Financial indicators of environmental corporate disclosure

NFIECD =Non-financial indicators of environmental corporate disclosure

PIECD = Profitability index of environmental corporate disclosure

The model is modified to suite the variables of this current studies.

Functional form of the model

TobinQ= F (G4EN1 +G4EN2)

Econometric form of the model

TOBINQ = β0 + β1G4EN1+ β2 G4EN2 + E

Where Tq = TobinQ

G4EN1 = material disclosures

G4EN2 = energy disclosures

β0 = Constant

B1-β2 = are the coefficient of the regression equation.

E = Error term;

Table3.1 Variables and measurement

Variable	Code	Measurement
Dependent variable: firm performance.	TobinQ	This was used to measure the firm value
Independent variable: material disclosure	G4EN1	Measured as dummy variable"1" if the company has material disclosure information and "0" if otherwise.
Independent variable: Energy disclosure	G4EN2	Measured as dummy variable"1" if the company has Energy disclosure information and "0" if otherwise.
Control variables	Fsize	Measured as log of total asset
Firm age	Fage	Measured as number of years listed on the Nigerian Stock Exchange.

4. Descriptive Statistics

Descriptive statistics result shows the mean (average), maximum, minimum, median and standard deviation for each of the green accounting information and Tobin Q variables. Table 1 in the appendix provides the result of the descriptive statistics of the sampled firms and variables used in the study. The mean and median measures the central tendency. Measure of dispersion is indicated in the standard deviation (how far the observations are from the sample average). The results below provide an insight into the nature of the sampled firms in Nigeria employed in this study.

The descriptive statistics result from the table 1 in the appendix, it was discovered that the average company in the research sample has firm performance (Tobin's Q), of 1.75. This indicates that market value is higher than the value of company asset for average sampled firms in Nigeria. It shows that the sampled firms have mean proportion of Tobin Q in monetary terms of about 1.75 million naira out of every 1 million naira in total assets for the period under consideration (2012-2019). The average value of Tobin's Q (1.75) indicates good performance. An average value of above 1 means the firm's market value exceeds the book value of assets owned by the firm. The maximum value of 5.54 means that for some sampled firms, their market value is five times more than their total assets.

The statistics showed that on the average, there is a high level of compliance to G4EN2 (Energy Disclosure) companies in Nigeria. This is an indication from the mean values of 0.62 for G4 EN 2 which may be likely related to the fact that firms in the manufacturing industries want to show that their operation are sustainable by providing information on material and Energy disclosure (non-renewable and renewable). This result indicates that sampled firms in Nigeria do not frequently disclose on material. It shows that because government policies on environmental reporting are not mandatory, strict adherence is not in force. The mean value for green accounting information index of 0.45 align with the fact that there are no formal guidelines that require listed companies in Nigeria to disclose environmental issues in line with GRI.

The statistics showed that the variable of firm size (fsize) revealed a mean value of 7.83, a minimum value of 6.35 and a maximum value of 9.24. The value of its standard deviation is 0.76 which shows that all the firms studied are not the same in size, indicative of the fact that the data set consists of a mixture of large, medium and small firms. The average age (fage) of the sampled firms is 35yrs, while the oldest firm in the sample is 55yrs. This indicates that firms that are less than six years of being listed and very old firms in Nigeria Stock Exchange did not provide green accounting information in their annual report using GRI guidelines.

Table 2 of Appendix presents the normality test result for the green accounting information and firm performance variables. This study adopted Shapiro-Wilk W test for normal data as it is more appropriate method for all sample sizes specifically if sample size is between 10 and 2000 (Henderson, 2006). W values is positive and less than or equal to one. Small values of W lead to the rejection of normality, while being close to 1 indicate normality of the data (Henderson, 2006; Peng, 2004). Thus W test of 0.80, 0.46, 0.61, 0.96 and 0.86 respectively for the dependent and independent variables employed in the study are close to 1 indicating normality of the data. With this result, the study concludes that the data used are normally distributed, that there is no outlier in the data and thus analyses and conclusion there from are reliable for drawing conclusion. However the P values contradict the W values test but can be ignored.

Table3 in the Appendix presents Pearson correlation analysis. From the result of the analysis, there is no correlation problem among the dependent and independent variables since none of the variables had correlations greater than 0.70. Thus none of the independent variables show very high degree of association with each other.

Considering the nature of the relationship there is no room to suspect the presence of multicolinearity between the variables used in the model. Meanwhile a separate multicolinearity test (Variance Inflation Factor VIF) was performed to confirm this result. Table3 in the Appendix among other things showed that firm performance (Tobin Q) is moderately and positively correlated with G4EN1 (0.2865), G4EN2 (0.1345), Fsize (0.3834), Fage (0.1517).

Again independent variable of G4EN1 (material disclosure) showed weak association with Fsize (0.0802) but have moderate relationship with G4EN2 (0.3636) and Fage (0.2697).

Another variable of interest is a control variable Fage negative relationship with Fsize (-0.1794), it also showed positive correlation with G4EN 2 (0.3955) and G4EN 8 (0.1133).

Table 4.4: Pooled OLS Regression: Tobin Q and Green accounting Model

Independent Variables	**Coef.**	**t-Stat**	**P>/t/**
G4EN1	0.695	2.38	0.020*
G4EN2	0.382	1.44	0.153
Fsize	0.908	5.98	0.000**
Fage	0.0142	1.58	0.119
Intercept	-2.059	-1.42	0.16
F – Stat	**16.60**		**0.000****
R-squared	**0.605**		
Adjusted R-squared	**0.568**		
Number of Observation	**72**		

Source: Authors Computation, (2021).
Where *, **, implies statistical significance at 05% and 1% levels respectively

The Pooled OLS regression analysis performed on the dataset from listed manufacturing firms in Nigeria indicates the following empirical findings as presented in Table 4.4 above. The table shows a summarized result obtained from the model of Firm performance (Tobin Q) as a function of G4EN1 - Materials Disclosure and G4EN2 - Energy Disclosure of listed firms in Nigeria. The regression analysis revealed that 72 observations were used. The empirical results of the Ordinary Least Squares (OLS) pooled regression analysis showed that the adjusted R-squared value often referred to as the coefficient of determination or measure of the overall fitness of the model variables was approximately 0.57. This means that the model explains about 57% of the systematic variation in the performance (Tobin Q) of sampled companies over the period of interest. The remaining 43% will be attributed to other variables not used in the model captured by error term.

F-Statistics measures the overall significance of the explanatory (independent variables) in a model and the appropriateness of the model used for the analysis, while the P value measure the significance level of the f-statistics. Thus the F-statistics of 16.60 which has a P-value that is less than 0.0000 (p-value < 0.01) indicates that simultaneously the explanatory variables altogether are very significantly associated with the dependent response variable. This indicates that the research model employed describes the relationship between firm performance (Tobin Q) and green accounting information in line with GRI framework.

The analysis shows that Tobin Q is being influenced positively by two of the explanatory variables. This influence is represented by the equation: Tobin Q = -2.058 + 0.695 G4EN1 + 0.382 G4EN2 + 0.908Fsize + 0.0142Fage + ε.

This robust regression was used in interpreting the effect of green accounting information on performance of sampled manufacturing firms in Nigeria. R. squared value of 0.605 (61%) and R-squared (adjusted) 0.568 (58%) of the first Regression (Table 4.4) is still valid in interpreting the Robust Regression. The F-statistics value of the robust regression at 32.90 and its probability value of 0.000 shows that model formulated for this study is appropriate. Thus the model used for the analysis is appropriate and statistically significant at 1% level.

From the robust regression analysis, Materials Disclosure (G4EN 1) positively and significantly influences firm performance (Tobin Q). Regression coefficient of 0.53 and p-value of 0.007 show that the result is statistically significant at 1%. The coefficient value shows the degree of influence which material disclosure has on Tobin Q measure of firm performance. The result shows that one percent increase in material disclosure will result to 0.53% increase in value of Tobin Q of listed manufacturing firms in Nigeria. Base on the result, null hypothesis is rejected. The study rejects the null hypothesis and

concludes that material disclosure has positive and significant effect on performance of listed manufacturing firms in Nigeria.

From the robust regression analysis, Energy Disclosure (G4EN2) has positive and significant effect on firm performance. The regression coefficient of 0.372 and p-value of 0.003 show that the result is statistically significant at 1%. The result shows that one percent increase in energy disclosure by listed manufacturing in Nigeria will result to 0.37% increase in firm performance. Base on the result, null hypothesis is rejected. The study concludes that energy disclosure has positive and significant effect on performance of listed manufacturing firms in Nigeria.

Companies should develop policy concerning the material used to produce and package the organization's primary products and services during the reporting period. Firms should make their operations more sustainable by reporting on their energy consumption and energy efficiency policy being aware of its ability in them becoming responsible and accountable.

Conclusion and Recommendations

Green accounting information provided in line with Global Reporting Initiative (GRI) framework affect performance of listed manufacturing firms in Nigeria. Level of adherence to the guideline is low as some manufacturing companies did not provide their information in accordance with the guideline. There is low level disclosure for Material disclosure. This can be attributed to the voluntary nature of green accounting in Nigeria at the moment. Providing information to stakeholders on material and energy usage/policy improves firm reputation and lead to increase market value.

Agency theory is validated through the findings of this study. On the part of Agency theory, the empirical analysis suggests that adherence to GRI framework in providing green accounting information makes the shareholders view such firms as transparent and responsible and operating in their interest. Such green accounting information reduces information asymmetry as well as cost of litigation that would have been incurred for not complying with environmental laws. The reduction in information asymmetry, fine and litigation will affect the bottom line figure which is the profit.

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Appendix: Data Analysis

Table1: Descriptive Statistics

stats	tobq	edi	g4en1_	g4en2_	fsize	fage
mean	1.749653	.4591667	.1805556	.625	7.83525	35.33333
min	.3942	0	0	0	6.358	6
max	5.5383	1	1	1	9.2409	55
p50	1.1587	.5	0	1	7.8901	41
sd	1.327076	.2288597	.3873488	.4875203	.7589167	13.43948
N	72	72	72	72	72	72

Source: Authors Computation (2021).

Table 2: Normality Test

Shapiro-Wilk W test for 3-parameter lognormal data

Variable	Obs	W	V	z	Prob>z
tobq	72	0.80263	12.430	5.871	0.00000
g4en1_	72	0.46722	33.553	8.681	0.00000
g4en2_	72	0.61337	24.349	7.953	0.0000
fsize	72	0.96302	2.329	2.495	0.00630
fage	72	0.86647	8.409	-1.174	0.87979

Source: Authors Computation, (2021).

Table3: Correlation Analyses

	tobq	g4en1_	g4en2_	fsize	fage
tobq	1.0000				
g4en1_	0.2865	1.0000			
g4en2_	0.1345	0.3636	1.000		
fsize	0.3834	0.0802	0.1769	1.0000	
fage	0.1517	0.2697	0.3955	-0.1794	1.0000

Source: Authors computation, (2021).

Table 4: Robust Regression of Tobin Q and Green accounting

Independent Variables	**Coef.**	**t-Stat**	P>/t/
G4EN1	0.528	2.79	0.007**
G4EN2	0.372	2.17	0.003*
Fsize	0.743	7.56	0.000**
Fage	0.004	0.74	0.119
Intercept	-0.400	-0.43	0.461
F – Stat	**16.60**		0.000**
R-squared	**0.605**		
Adjusted R-squared	**0.568**		
Number of Observation	**72**		

Source: Authors Computation, (2021).

Where *, **, implies statistical significance at 05% and 1% levels respectively