

## FIRM CHARACTERISTICS AND ENVIRONMENTAL PERFORMANCE OF QUOTED CONGLOMERATES FIRMS IN NIGERIA

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### Abstract

*The study examined the effect of firm profitability on the environmental performance of quoted conglomerates firms in Nigeria. Ex-post facto research design was adopted for this study. The population of the study was constituted by all the five (5) conglomerate firms listed on the Nigerian Exchange from 2011 to 2020. Data were derived from the financial statements of the selected firms over the years of interest. Ordinary Least Square multiple regression analysis was used at 5% level of significance. The findings revealed that firm profitability has significantly affects waste management expenses of quoted conglomerates firms in Nigeria It was recommended that managers should avoid prioritizing the traditional trend of putting financial profitability and maximization of shareholder wealth ahead of all other corporate values.*

**Keywords:** Firm profitability, Waste management and Environmental performance

### Introduction

According to existing literature, firm-intrinsic characteristics have the ability to influence the environmental disclosure of corporate entities that use the resources at their disposal to incorporate practices that help protect and maintain the environment from hazardous corporate operations (Abdulsalam & Auwal, 2020; Shaibu, 2020; Oluwamayowa, 2020; Eneh, 2019). In light of the foregoing, Abdulsalam and Auwal (2020) stated that firm factors such as firm leverage, firm size, firm sales growth, firm profitability, firm industry type, and so on can impact whether or not firms in Nigeria perform exceptionally well in terms of environmental performance. Firms must not compromise the interests of future generations in order to fulfill the demands of shareholders. As a result, it is critical for Nigerian conglomerates to be aware of the environmental implications of their operational engagements in order to avoid causing significant environmental damage and dangers.

Environmental protection actions, addressing inequities, poverty eradication, and conservation of sea life and life above sea level, including aquatic and terrestrial species, are among the topics mentioned under corporate environmental performance (Usman, 2019). However, the focus of this research is on the environmental performance component of waste management. The study's hypotheses were based on the notion that enterprises with a small size, unhealthy leverage, and poor economic performance likely to score poorly in terms of environmental responsibility (Usman & Okafor, 2018). Conglomerate enterprises that lack the structural firm wherewithal for solid environmental performance, on the other hand, is unable to implement a triple bottom line and thus have a low environmental performance score. Though the degree to which a firm

incorporates environmental performance aspects into its strategies influences its survival and competitiveness, most conglomerate firms have yet to come to terms with the requirement for environmental preservation and protection against damages caused by firm operations. In light of this, this study investigates the impact of selected business characteristics on the environmental performance of Nigerian listed conglomerates.

In Nigeria, conglomerate enterprises are expected to meet society's demands through a variety of sustainability practices, including practices that limit environmental damage, pollution, and dangers. According to Onyali and Okafor (2018), the growing pressure on environmental responsibility comes from a variety of sources, including shareholders, government regulators, and the general public, and this pressure has prompted companies to pay more attention to the environmental impacts of their operations. Stakeholder groups today want companies to be environmentally sensitive in order to incorporate environmental protection issues such as greenhouse gases, waste management, emissions, pollution, and so on into their business practices (Etale, Ikechukwu & Ayaundu, 2021).

Despite the foregoing, the traditional tendency to prioritize financial profitability and shareholder wealth maximization over all other corporate values continues to provide a challenge to organizations' environmental performance. Firms that are constantly striving to maximize shareholder profit at the expense of the environment frequently fall behind in terms of environmental responsibility. This is exacerbated when the company in question lacks the financial means to invest adequately in the environment. As a result, there have been waste management breaches, irregular increases in gas emissions, and energy inefficiencies (Nasiru, Abdulrahman, Babangida & Abubakar, 2020). Various groups, including environmentalists, farmers, regulatory authorities, activists, and green businesses, have expressed grave worry about this. The activities of environmentally-unconscious firms give rise to highly hazardous environmental consequences which include land degradation, air pollution, depletion of the ozone layer, oil spillage, deforestation, loss of biodiversity, and water pollution from effluent discharge.

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### **Literature Review**

Firm characteristics are traits or identities that define a company and help it stand out from the competition (Gachoka, Aduda, Kaijage & Okiro, 2018). They refer to a company's distinct

inherent characteristics that distinguish it from other companies. Firm characteristics refer to qualities of an organization that identify measurements and relate to that company in promoting or demoting its environmental sustainability policies or initiatives in the context of environmental performance. There is evidence that firm characteristics influence the internal governance mechanism chosen by the firm, particularly when it comes to performance measures such as environmental reporting (Uyagu, Okpanachi, Nyor & Muhammad, 2017). Various studies interpret firm characteristics differently based on the criteria utilized to define it. However, the majority of studies appear to support the idea that company features are linked to firm resources and organizational goals (Mgeni & Nayak, 2016). Three criteria can be used to examine a firm's resources and objectives: structure, market, and capital-related firm characteristics (Gachoka, Aduda, Kaijage & Okiro, 2018). Structural firm characteristics include firm size, age, profitability and ownership (Onyali & Okafor, 2018). The focus of this study was on one measure of company characteristics: firm profitability.

The extent to which a company improves its effectiveness and efficiency in converting its assets into earnings is referred to as firm profitability. According to Nzewi (2015), the ultimate goal of companies is to maximize shareholder wealth, of which profit maximization is one component. All policies and operations are designed to achieve this grand objective. The ability of a company to make a reasonable return on invested capital is referred to as firm profitability. Corporate profitability is a metric that gauges a company's overall financial health over time (Jeroh, 2020). It is a financial statistic that demonstrates an entity's accountability for the outcomes of its policies, operations, and activities over a specified time period. Efuntade and Akinola (2020) posited that firm profitability reveals the ability of the firm to create profit in excess of actual uses from assets.

Financial profitability refers to a company's ability to operate financially and efficiently, as well as to survive, grow, and respond to environmental opportunities and risks (Kipkijo, 2017). Profitability is determined by how well a company uses its resources to achieve its goals. As Dioha, Mohammed, and Okpanachi (2018) put it, firm profitability refers to the extent to which a corporate entity's financial objectives are being met or have been met. This degree is determined through profitability analysis, which entails the examination and interpretation of financial documents in order to provide a complete diagnostic of a company's profitability and financial soundness (Omoye & Wilson-Oshilim, 2018).

For evaluating the firm profitability of manufacturing enterprises, a variety of profitability measures such as ROA, ROE, NPM, and others are available. Return on Equity (ROE), which measures the returns produced for the owners, Return on Assets (ROA), which reflects the organization's ability to use its assets productively, and Net Profit Margin (NPM), which indicates the percentage a company is able to produce from its total revenue, are the most common measures of profitability in profitability analysis. The net profit margin is used in this study to determine firm profitability.

### **Performance in the Environment**

Environmental performance refers to the scope of activities carried out by a company in order to monitor the impact of its operations on the environment. It is made up of environmental

preventive costs, environmental assessment costs, environmental internal failure costs, and environmental external failure costs (Doni, Corvino & Silvio, 2020). Waste management costs, recycling products, worker training, and environmental studies are all part of corporate environmental performance. Corporate environmental performance was defined by Fodio and Oba (2012) as the way a company engages in and communicates the environmental effects of its actions to specific interest groups within society.

Environmental performance encompasses environmental protection activities, tackling inequalities, poverty eradication, protection of sea lives and lives above sea level including aquatic and terrestrial animals. It refers to a firm's environmental efforts including firm's objectives, environmental policies and environmental impacts which are reported and published annually to the general public as a way by which the firm contributes to environmental preservation and conservation (Iliemena, 2020).

### **Empirical Review**

The quality and extent of environmental disclosure (ED) in ecologically sensitive manufactures were investigated by Badingatus, Ukhti, and Ntim (2021). It also looked at the impact of media attention, environmental awards, and financial success on the quality of environmental disclosure, as well as the role of corporate governance (CG) principles in mitigating these effects. The study hypothesis was tested using partial least squares–structural equation modeling (PLS-SEM). Better financial performance can also increase the quality of environmental disclosure, according to the study. Okeke, Ezejiofor, and Okoye evaluated the influence of leverage on the cash ratio of Nigerian conglomerates (2021). Using E-Views 9.0 statistical software, data from the sampled firms' annual reports and accounts were examined using Pearson correlation and Ordinary Least Square (OLS) regression analysis. The study discovered that leverage had a significant negative influence on the cash ratio of Nigerian firms at a 5% level of significance. Aigienohuwa and Ezejiofor looked into the relationship between leverage and financial report timeliness in Nigerian quoted companies (2021). Ex post facto research was used in this study. Data was acquired through a textual analysis of ten publicly traded Nigerian companies' annual reports and accounts from 2010 to 2019. The panel data regression technique was used to estimate the relationship between the variables using the e-view 9.0 application. The study indicated that company leverage had no relevant relationship with financial report timeliness in Nigerian listed enterprises at a 5% level of significance. Over a 10-year period (2009–2018), Jeroh (2020) investigated the association between business attributes and environmental disclosure of listed companies in Nigeria's financial services sector. On the basis of nine hypotheses, SEM estimation techniques were used to evaluate the link and interrelatedness among the study's constructs. Variables such as firm performance, firm value, and capital structure had a substantial impact on the level of environmental disclosures among publicly traded financial service firms in the study. Shaibu (2020) investigated the impact of business characteristics on the environmental disclosure quality of Nigerian listed cement companies. For the years 2013-2017, data was gathered from the annual reports and accounts of the listed cement businesses. Firm characteristics were proxied using firm age, size, and

leverage. The annual reports of the firms were studied by content analysis using the GRI as a disclosure index, and the data was analyzed using descriptive statistics, correlation, and multiple regression techniques via STATA 12.0 to determine the amount of environmental disclosure quality. The study's findings demonstrated that the age, size, and leverage of a company had a substantial impact on the quality of its environmental disclosure. The impact of environmental fairness on asset utilization in Nigerian oil and gas corporations was investigated by Adegbe and Olubunmi (2020). Twelve oil and gas businesses engaged in downstream activities made up the population. A purposive selection technique was used to select organizations over a 16-year period, from 2003 to 2018. Inferential statistics were used in the data analysis, and a multicollinearity test was performed to assess whether or not multicollinearity existed. For residual constantans, the Breusch-Pagan / Cook-Weisberg heteroscedasticity test was used. The impact of environmental justice on asset utilization was shown to be statistically and positively significant (Adj R<sup>2</sup>=0.30; F-statistics (3, 44) =226.3; p-value=0.00 0.05). For the seven years from 2012 to 2018, Ahmed and Moses (2020) looked at the impact of corporate governance features on environmental disclosure of listed industrial companies in Nigeria. The correlation matrix and regression analysis were used in the empirical analysis. Using Stata 11.0, regression analysis was utilized to evaluate the hypothesis. Independent directors have a considerable favorable effect on listed industrial businesses' environmental disclosure, according to the results of fixed effect regression. Oranefo looked into the influence of environmental costs on the performance of Nigerian oil and gas companies (2021). Data was gathered from the financial statements of eleven (11) publicly listed oil and gas companies over a period of eleven (12) years, from 2008 to 2019. The hypothesis was tested using Ordinary Least Square, which revealed that at a 5% level of significance, the Waste Management Cost and Community Development Cost have a significant positive effect on Tobin's Q of Nigerian Oil and Gas Companies. In Nigeria, Eneh (2019) investigated the impact of company characteristics (firm size, leverage, and profitability) on sustainability reporting. The ex-post causal research design is used in this study. The sample consists of 35 manufacturing enterprises that are publicly traded in Nigeria. Secondary data from corporate annual reports of environmentally sensitive enterprises quoted from 2011 to 2017 was used in the study. Because econometric modeling of bounded dependent variables presents constraints for linear estimation methods, the Generalized Least Squares method was used initially, followed by moving forward fractional regression. The researcher combined both methodologies in this study. The white adjusted standard error was used to correct for potential heteroskedasticity in the estimate, resulting in heteroskedasticity-free estimation results. The estimations were determined to be devoid of panel period and cross-sectional heteroskedasticity. The Peseran cross-dependence test was used to confirm the possibility of serial correlation in the errors, and the statistic shows that the residuals are not cross-section dependent. Sole business size is identified as the only characteristic that has a positive and significant impact on sustainability reporting, according to the coefficient analysis. In Nigerian conglomerates, Nwakoby, Ezejiofor, and Ajike (2018) study the relationship between board qualities and directors tunneling. An after-the-fact study design was adopted. Hypotheses were investigated using multiple regression and Pearson Coefficient Correlation in

SPSS Version 20.0. According to the data, board size in Nigerian conglomerates has a negative significant relationship with related party transactions. Omoye and Wilson-Oshilim (2018) investigated the factors that influence environmental disclosure or environmental accounting information across Nigerian Stock Exchange-listed companies. It used descriptive statistics, Pearson correlations, and the Hausman test and Random Effect Panel least square regression as diagnostic tests. E-views 8.0, a computer program, was used to estimate the data obtained. This research found that (i) firm size and profitability have a significant and positive relationship with environmental disclosure; (ii) managerial shareholding has a significant and negative relationship with environmental disclosure; and (iii) leverage and industry type were statistically insignificant, but leverage was negatively related while industry type was positively related. Finally, it was discovered that including environmental information in yearly reports helps stakeholders make better decisions. Ezejiofor, John-Akamelu, and Chigbo investigated the impact of sustainable accounting metrics on the performance of corporate organizations in Nigeria (2016). The researchers used time series data and an ex post facto study approach. The information used in the study came from the company's annual reports and accounts in Nigeria. The data was tested using regression analysis, which was done with the help of SPSS Version 20.0. Environmental expenditures have a negative impact on business revenue in Nigeria, but they have a good impact on profit generation, according to the report. Uyagu, Okpanachi, Nyor, and Muhammad (2017) investigate the impact of firm characteristics on listed manufacturing firms' environmental reporting procedures in Nigeria. Ex-post facto research design led the study. The population of the study comprised sixty-one (61) manufacturing firms with a sample size of 29 firms drawn using judgmental sampling technique. Content analysis was used to collect data from the sampled firms' annual reports and accounts, which were then analyzed using the multiple regression technique. The study discovered that firm size, leverage, return on assets, and firm age have a significant and favorable impact on listed manufacturing enterprises' environmental reporting procedures in Nigeria. Ndukwe and Onwuchekwa (2015) used oil and gas businesses in Nigeria to investigate the factors that influence environmental disclosures. The study was conducted using a cross-sectional research design. The study examined a sample of 15 businesses from the Nigerian stock exchange's oil and gas industries from the 2008 to 2013 financial years. Secondary data was gathered from the sampled companies' annual reports, and the data was analyzed using the binary regression technique. The study found that the voluntary nature of environmental reporting has been used as a justification for companies to under-report their environmental impact, which has resulted in a lack of corporate social and environmental reporting by a number of corporations. The significance of sustainability environmental accounting in increasing corporate performance and growth was examined by Okoye and Ezejiofor (2013). Two assumptions were examined and tested using the Pearson Product Movement Correlation Coefficient. The study discovered that sustainable environmental accounting has a significant impact on organizational productivity and growth as a result of this.

### **Methodology**

*Ex-post facto* research design was adopted for this study, because this design is because the study analyses data in relation to events that already took place in the past. Thus, the researcher has no control over the events since they already occurred.

### **Population and Sampling**

The study's population consists of all five (5) conglomerate firms listed on the Nigerian Exchange Group from 2011 to 2020. On the Nigerian Exchange Group, there are five conglomerate firms listed. The study used the Census Sampling Technique, which included the objects in the population in the sample. As a result, the sample size comprises all five conglomerate firms listed on the Nigerian stock exchange, namely;

1. Chellarams Plc.
2. John Holt Plc
3. S C O A Nig Plc
4. Transnational Corporation of Nigeria Plc
5. U A C N Plc.

### **Method of Data Collection**

Data were obtained from secondary sources. The data were sourced from publications of the Nigerian exchange group fact books and the annual report and accounts of the sampled firms covering the period of ten years (2011-2020).

### **Technique of Data Analysis**

In analyzing the collected data, Ordinary Least Square was used at 5% level of significance. The technique was made possible with the use of the E-view 9 package. The regression model of the study is stated below:

The model is expanded into econometric form;

$$WME_{it} = \beta_0 + \beta_1 FPRO_{it} + e_{it} \dots\dots\dots i$$

Where:

$B_0$  = Intercept

$\beta_1$  = is the parameters to be estimated in the equation

WME = Waste Management Expenditure

FPRO = Firm Profitability

$i$  = Firm intercept

$t$  = time intercept

$e$  = Stochastic error term

### **Test of Hypothesis**

The hypothesis to be tested in this section is restated as follows:

$H_{01}$ . Firm profitability has no statistically significant effect on the waste management expenditure of quoted conglomerates firms in Nigeria.

**Table 1: Regression analysis between FPRO and WME**

Dependent Variable: WME

Method: Least Squares

Date: 02/07/22 Time: 06:03

Sample: 1 50

Included observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.294858	0.110282	29.87653	0.0000
FPRO	-0.124939	0.050875	-2.455794	0.0177
R-squared	0.111620	Mean dependent var		3.204288
Adjusted R-squared	0.093112	S.D. dependent var		0.771724
S.E. of regression	0.734918	Akaike info criterion		2.261062
Sum squared resid	25.92502	Schwarz criterion		2.337543
Log likelihood	-54.52656	Hannan-Quinn criter.		2.290187
F-statistic	6.030923	Durbin-Watson stat		0.469216
Prob(F-statistic)	0.017728			

The Table 1 above showed that firm profitability has negative but significantly influenced the waste management expense of listed conglomerate firms in Nigeria. This can be observed from the value of beta the coefficient of -0.125 with p-value of 0.0177 indicating that the p-value is statistically significant at 5%. This implies that firm profitability as a proxy of firm characteristics drive the environmental performance of listed conglomerate firms in Nigeria. The *p*-value of 0.018 is less than 0.05 and so serves as a basis for accepting the first alternative hypothesis, which states that firm profitability has a statistically significant effect on the waste management expenditure of quoted conglomerates firms in Nigeria ( $\beta_1 = -0.125$ , *p*-value = 0.018).

### Discussion of Result and Recommendation

According to the results of a regression analysis that looked at the impact of business profitability on waste management costs, the interaction of FPRO has a substantial impact on the environmental performance of Nigerian conglomerate firms. FPRO, in particular, has a negative relationship with WME, implying that as the cost of waste management rises, the firm's profitability decreases. Firms that are extremely lucrative appear to be environmentally conscientious, and as a result, trash disposal is not a significant expense for them. However, the negative effect of FPRO on WME is significant, just like the studies of Kiswanto, Woro and Ulupui (2020); Atang and Eyisi (2020). According to the study's conclusions, managers should avoid emphasizing the traditional trend of putting financial profitability and shareholder wealth maximization ahead of all other business values.

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