Corporate Characteristics and Environmental Reporting in Nigeria Manufacturing Sector

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Abstract: **This study investigates the effect of Corporate Characteristics on Environmental Reporting of Beverage companies in Nigeria. Using company's specific Corporate Characteristics. Firm Age (FA), Firm Size (FS) and Return on Assets (ROA) were used to proxy Corporate Characteristics, while Employee Health & Safety Cost Disclosures (EHSCD), Waste Management & Remediation Cost Disclosure (WMRCD) and Donations & Charity Contribution Cost Disclosures (DCCCD) served as proxies for the dependent variable – financial performance. The study selected all 3 companies out of four (4) quoted Beverage companies in Nigerian Stock Exchange as at 2021. Ex Post Facto research design was adopted and the secondary data were collected from annual reports of sampled firms from 2010 to 2019 through content analysis. The data were analyzed with descriptive statistics and regression analysis. Eview version 8 was applied in testing the hypotheses. The study showed that Sustainable Firm Age has a significant positive effect on EHSCD with a p – value of 0.0000 and a t – statistical value of 5.1416, while Firm Size has a significant positive effect on WMRCD with a p – value of 0.0000 and a t – statistical value of 5.1964. The study also reveal that Return on Assets has no significant positive effect on DCCCD with a p – value of 0.1176 and a t – statistical value of 1.6185. Based on these findings, the study recommended that companies should carter for the wellbeing of its employees, adopt practicable waste management plans, insure the environment against degradation, as well make valuable contributions to the society.**

***Keywords*: Environmental Reporting, Sustainability Reporting, Global Reporting Initiative (GRI), Corporate Characteristics.**

I. INTRODUCTION

1.1 Background of the study

Globally, the harmful effect of industrialization has attracted the interest of different stakeholder groups in the recent past (Ala, 2019). These economic developmental impacts and negative industrial footprints have heightened the concern of national, regional and international bodies including companies' wide stakeholder groups about the need to protect the world's ecosystem (Akras, 2014). Companies face increased pressure from these interested parties, especially state authorities and International donors, to publish sustainability reports (Chaklader and Gulati 2015). For this reason, it has become imperative for the environmental activities of companies to be disclosed in a report form. (Manini and Abdillahi, 2019). As a matter of public interest it has become critical for companies to report their efforts and contributions towards the protection and growth of the environment. This is the beginning of production and dissemination of periodic environmental report and information disclosure, to describe the position of an entity in relation to environmental issues and activities in that period (Manini and Abdillahi, 2019). One of the problems in the corporate environmental argument is Environmental Disclosure. Different groups have claimed right to Environmental Disclosure; these may include: owners of businesses, foreign capital suppliers, workers of companies, the government, customers as well as the public. Environmental disclosure is a non-financial disclosure which forms part of Social Reporting. (Belal, 1999 cited in Elshabacy, 2018). As an element of corporate responsibility disclosure, environmental reporting has become pertinent among business players and participants. The objective of environmental reporting is to enhance sustainable growth and development as well as improve organizational relations and reputation (Ministry of the Environment, 2005 cited in Menike, 2020). In addition, it gives credibility to the information made available to stakeholders aimed at realizing a unanimous environmental stance. As well, it increases the fair market share of companies that have adopted productive policies and green processes through sustainability value chain to produce sustainable products. Consequently, these sustainable performances compliments societal efforts geared towards combating environmental problems. (Rifai, 2012 cited in Ala, 2019). In other to gain legitimate recognition, most organizations have realized the importance of safeguarding the business environment as this adds to their business success (Welbeck et al, 2017). Díez-Martín et al. (2013) cited in Welbeck et al (2017), maintained that, some corporate failures are not traceable to lack of competencies, capabilities or resources but because of total collapse or crumbling legitimacy. Subsequently, increased interests have been shown by researchers towards environmental disclosures in recent times, therefore boosting its prominence. The consequences of unhealthy environmental business practices have given rise to more research on environmental reporting and accountability. (Welbeck et al, 2017).

1.2 Statement of Problem

Environmental disclosure as a concern has caught the attention of international, regional, national, stakeholders, and the advanced and emerging economy alike. Industrialization has led to all manner of negative environmental footprints giving rise to global debates on sustainability and the need to engage in sustainable developmental practices (Samuel et al, 2020).

Inspite the heightened interests in environmental reporting, there are still paucity of research in the area of corporate characteristics in relation to environmental reporting in Nigeria as most researches (like Okafor, 2018; Oshiole, Elemah & Ndubuisi, 2020; Dioha, Mohammed, & Okpanachi, 2018; Nwobu, 2017; Falope and Offor, 2019; Nwaiwu and Oluka, 2018; Agboola and Oroge, 2019) were carried out on environmental disclosure in relation to corporate performance.

Besides this, many of these researches carried out on corporate characteristics in relation to environmental reporting were done within a short term period without ascertaining the long run effect. Like Elshabasy (2018) covered 2007 – 2011; Damak - Ayadi (2009) covered 2000 – 2005; Akbas (2014) covered 2011; Sulaiman, Abdullah, & Fatima (2014) covered 2009; Lamidi, Oluwatunji, & Masunda (2020) covered 2014 – 2017; Moruff, Salisu, Mohammed, Garba & Nasiru (2021) covered 2012 – 2018, Ohidoa, Omokhundu, & Oserogbu (2016) covered 2012 – 2015; Atang and Eyisi (2020) covered 2011 – 2016; Nwobu (2017) covered 2010 – 2014.

1.3 Objective of the Study

The objective of the study is to evaluate the effect of corporate characteristics on environmental reporting in Nigerian manufacturing sectors. To achieve the major objective, the following specific objectives are to:

1. Determine the effect of Firm Age (FA) on Firm's Employee Health and Safety Disclosure of quoted Beverage companies in Nigeria.
2. Evaluate the effect of Firm size (FS) on Firm's Waste Management and Environmental Remediation cost disclosure of quoted Beverage companies in Nigeria.
3. Ascertain the effect of Profitability (ROA) on firm's Donations and Charitable Contributions cost disclosure of quoted Beverage companies in Nigeria.

1.4 Research Questions

The following questions guided the study;

1. To what extent has Firm Age (FA) affected Employee Health and Safety cost Disclosure (EHSCD) of quoted Beverage companies in Nigeria?
2. How has Firm size (FS) affected Waste Management and Environmental Remediation cost disclosure (WMRCD) of quoted Beverage companies in Nigeria?
3. How does Profitability (ROA) affect Donations and Charitable Contributions Cost disclosure (DCCCD) of quoted Beverage companies in Nigeria?

1.5 Research Hypotheses

The Null Hypotheses below were formulated and tested in the study:

i. Firm Age (FA) does not significantly affect Employee Health and Safety Cost Disclosure (EHSCD) of quoted Beverage companies in Nigeria.
ii. Firm Size (FS) has no significant effect on Waste Management and Environmental Remediation Cost Disclosure (WMRCD) of quoted Beverage companies in Nigeria.
iii. Firm's Profitability (ROA) has no significant effect on Donations and Charitable Contributions Cost Disclosure (DCCCD) of quoted Beverage companies in Nigeria.

II. REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Corporate characteristics

Corporate characteristics are elements controlled, directed, determined or influenced by management. It constitutes the size of the entity, profitability, liquidity, age, leverage, asset growth, sales growth, and turnover of the organization (Dioha et al, 2018).

Firm size and Environmental Disclosure

Extant researches revealed that the quality of environmental reporting are affected by the corporate size. The bigger the firm size, the more likely environmental information is reported. Big companies are always assured of their future outlook, so they are willing to spend more to report additional voluntary information in order to differentiate themselves from other competitors and create value (Hasan and Hosain, 2015 in Kabiru, 2020).

Firm age and Environmental Disclosure

It is probable for older firms to participate more in sustainable environmental practices to increase and maintain business reputation as well as validate their corporate existence. Matured businesses tend to be larger and well-disposed to report environmental information that influences their going concern. Older firms may have up to date information about recent developments and changes in the industry they operate, which makes them willing to implement new policies that ensures the going concern assumption of their entity (Kabiru, 2020).

Leverage and Environmental Disclosure

Firms with higher debt – to – equity structure may report more environmental performance activities to achieve minimal agency costs (Ho and Taylor, 2007). It is contended that when firms' debt rises, there is an increased demand by investors for sustainable information so as to properly understand the operating activities of the entity (Clarkson et al., 2008 in Kabiru, 2020).

2.1.2 Environmental Information Disclosure

Environmental Information disclosure also known as Corporate Environmental Disclosure (CED) is a published report concerning company's environmental activities. CED are found in the executive summary. Directors reports, financial statements, and note to the accounts. Items aggregated in environmental reporting has to do with past and present costs incurred on pollution control equipment (Setyawan, and Kamilla, 2015). Most blue chip companies are fully aware of the importance of environmental and social concerns to business profitability (Ja'far and Arifah, 2006 cited in Setyawan, and Kamilla, 2015). In other to maintain social contract, firms are required to publish environmental management report in their annual report since it is tangent with the three (3) bottom line of sustainability report, they are profitability, planet and people. (Setyawan, and Kamilla, 2015). Environmental reporting has to do with an entity's environmental related concerns. It consists of (but is not limited to) environmental contingent risk and liabilities, environmental assets revaluation, cost analysis as it relates to cost on energy conservation, wastes management, and protecting the environment, investments appraisal costs incurred to control carbon emission, costs to control environmental degradation, ecological impacts, support to improve on social amenities etc. (Islam, 2018). Environmental information disclosure is seen as part of a firm's obligations to all parties who have a stake in the business. Environmental information disclosure are voluntary requirements in different regions and international communities. Entities are at liberty to choose their reporting system. These information are obtained from annual reports, integrated reports, sustainability reports, special purpose reports, social media and websites, to disseminate environmental information to the larger society (Islam, 2018). Environmental costs are expenses related to the real or potential degeneration of natural assets as a result of productive activities. Such costs could be perceived from two distinct aspects, which are (i) costs related activities in manufacturing productive units that have real or potential negative effect on environment by their own activities (ii) costs traceable to productive units regardless of their real effects on the environment (Glossary of Environment Statistics, 2001). Entities in order to produce goods and services incurs environmental costs among other costs, and as such environmental performance is pivotal to business success (Ezeokafor & Amahalu, 2019 in Samuel et al, 2020).

Waste Management Cost Disclosure

Waste(s) is an unwanted substance(s) removed as no longer required after a process, lacks real value, or faulty. Examples includes household refuse, infectious waste, sewage water (containing water and urine), radioactive waste etc. Wastes are substances which are discarded or are meant to be discarded or are discarded mandatorily stipulated by enabling Act (UNSD Glossary of Environment Statistics, 2013). Waste collection cost and transportation cost aggregate to more than 69% of the total costs incurred in waste management. Additional costs arises when recyclables are collected separately which at the end may not be beneficial, though the pressure is high to achieve the long term aim of setting the recycling law. Waste collection system are cost effective when monitoring and estimation are done appropriately (Dijkgraaf & Gradus, 2017 cited in Samuel et al, 2020).

Employee Health and Safety Cost Disclosure

Occupational Safety and Health Costs are costs incurred to enhance employees' competencies and proficiency, and uphold standard output, the resultant effect changes organizational behaviour. Skills, knowledge, productivity and morale will increase when investments are made on employees' training and development as this in turn reduces workplace incidence. Health and safety objective emphasizes on ensuring and encouraging safety and health of the company employees including their physical and mental stability (Amahalu *et al.*, 2017 in Samuel et al, 2020). Like most other managerial responsibilities, this consists of developing and executing health and safety policies, assessing and inquiring on performance concerns and communicating these matters to the appropriate stakeholders. Disregarding Health and Safety of employees has cost implications as its resultant outcome, for instance occupational accidents may give rise to financial losses as affected employees will be compensated and treated. In addition, this causes loss of working capacity (Samuel et al, 2020).

Environmental Remediation Cost Disclosure

Environmental remediation describes the elimination of contaminants or pollutants from the environment such as soil, ground water, sediment or surface ground. Remediation cost is a cost of any action taken to lessen the accumulation of polluting or poisonous substances in, on or under the soil, surface ground or ground water. They are also expenses incurred by any person or action taken or activities engaged to eliminate or get rid of hazardous substances, to impede the continuous movement or migration of dangerous substances in the environment, negates the release of harmful substances and adhere to legal provisions. These expenses consists of (but not limited to): accounts payables for professional services (engineering, legal, or consultancy); for inspection, test-running & sampling; for boring, digging & constructing; for withdrawal, improvement, procurement or installation of equipment; for material & labor; and for adequate treatment, storage, as well as destruction of harmful substances (Crane & Scott, 2012 in cited Samuel et al, 2020).

2.2 Theoretical Review

There are many theories backing corporate reporting, but for the purpose of understanding the theoretical concept of sustainable development these two theories of Stakeholder, and Legitimacy were discussed.

2.2.1 Stakeholder Theory

This theory literates the interrelationship existing among an entity, its customers, employees, investors, communities and other parties who have a stake in the business. An entity's board of directors (fund users) does not only own stewardship to the shareholders (fund contributors), but also to other stakeholders. The theory asserts that an entity should not only create value for its investors but also for its stakeholders. An entity's going-concern is attributed to stakeholders' support. The company's effort to adjust is influenced by how powerful the stakeholders are. Sustainability disclosure is perceived as a consensus between an entity and its stakeholder groups (Ghazali and Chariri, 2007 cited in Setyawan, and Kamilla, 2015). Stakeholder theory assists the management in understanding their stakeholders in order to achieve corporate objective (Setyawan, and Kamilla, 2015). The theory is seen an advanced perspective of agency theory as it considers the relationship between the owners (principal) and management (agent). The employed agents owe the shareholders the fiduciary responsibility of acting in good faith in the shareholders interest in order to avoid agency problems arising from conflict of interest (Jensen & Meckling, 1976).

2.2.2 Legitimacy Theory

Legitimacy theory is defined by Suchman (cited in Yusoff and Alhaji, 2012) as "a generalized conception and theory that the activities of a company are acceptable, suitable, and pertinent within the confines of social system of values, beliefs, and norms. As discussed by Ghozali and Chariri (2007), (cited in Setyawan, and Kamilla, 2015) this theory asserts that an entity's existence is legitimized by fulfilling the social contract between the company and host communities. This contract requires a nexus between the values of company with that of the public. The contract is considered breached if the firm fails to fulfil its part of the contract and this will impact negatively on the company. To prevent this, entities have to improve their environmental reporting. When this contract fulfilled, an entity's business is legitimized. In other words, the going concern of an entity relies on the evaluation of the firm's stakeholders as a whole. (Deegan, 2002 in Setyawan, and Kamilla, 2015). Legitimacy theory stipulates that a company will consistently strive to keep abreast with trend in societal norms. These societal norm changes constantly and the entity is expected to comply with the development (Setyawan & Kamilla, 2015).

2.3 Empirical Review

Samuel, Aruna, & Amahalu (2020), studied environmental cost disclosure and effect on profitability of oil and gas companies in Nigeria using Pearson correlation, content analysis, and panel least square regression analysis for a 10 year period. The result revealed that Environmental cost disclosure have a statistical significant effect on net profit margin at 5% level of significance.

Moruff, Salisu, Muhammed, Garba & Nasiru (2021), examined firm – specific attributes and environmental disclosure of listed oil and gas firms in Nigeria using generalized least square. In their findings, board composition, financial leverage and existence of foreign directors on the board have a significant association with environmental disclosure (ED). Furthermore, there was non-significant relationship between firm age, financial performance and environmental disclosure.

Sulaiman, Abdullah, & Fatima (2014), studied determinants of environmental reporting quality in Malaysia for 2 years using content analysis, descriptive statistics and regression analysis. They found that firm size, share ownership distribution, profitability and leverage significantly affect environmental reporting positively.

Akbas (2014), studied the association between firm characteristics and environmental disclosure of quoted Borsa Istanbul for a period of 1 year. The researcher applied regression analysis and content analysis. The result showed that the quality of environmental disclosure is affected by the size, profitability and industry membership. Furthermore, leverage and age have a non- significant association with Environmental disclosure.

Ohidoa, Omokhundu, & Oserogbu (2016), studied determinants of environmental disclosures using binary logistic panel data regression model. In their results, firm size and industry type have significant association with ED, while environmental disclosure is not significantly affected by leverage.

Chaklader & Gulati (2018), examined corporate environment disclosure practices of firms in India using descriptive statistics and regression analysis for a period of 2009 to 2012. In their findings, firm size and environmental certification has a significantly and positively associates with environmental disclosure while profitability (Return on Total Asset), leverage, multinational status showed an insignificant positive association with environmental disclosure practices.

Damak-Ayadi (2009), examined determinants of social and environmental disclosures in French firms. The study applied descriptive statistics, correlation and regression analysis. In their findings, the extent of social and environmental disclosure have significant positive association with firm size and industry's reputation.

Dioha, Mohammed, & Okpanachi (2018), evaluated the effect of firm characteristics on profitability of listed consumer goods companies in Nigeria using multiple regression analysis. The result showed that profitability is significantly affected by sales growth, leverage and firm size. In the contrary, profitability is not significantly affected by liquidity and firm age.

Elshabasy (2018) examined the impact of corporate characteristics on environmental information disclosure; an empirical study on the listed firm in Egypt. The research applied multiple regression analysis. The findings showed that firm size has non-significant relationship with Environmental Information Disclosure (EID). Furthermore, there is a significantly negative relationship between firm age and EID. In addition, there is positive significant relationship between profitability and EID.

Lamidi, Oluwatunji, & Masunda (2020) examined determinants of environmental costs of listed deposit money bank in Nigeria. The study adopted multiple regression analysis and Pearson correlation. In their findings, firm size, leverage and profitability positively associate with the environmental cost reported by the studied Banks.

Sanni, Ijasini, & Adamu, (2018) examined effect of Corporate Characteristics on voluntary Disclosure of listed financial service firms in Nigeria using correlation research from 2014 to 2018. In their findings, voluntary disclosure is negatively affected by the leverage and profitability. In the contrary, the significant relationship between firm size and voluntary is positive.

III. RESEARCH METHODOLOGY

3.1 Research Design

Inyiama and Ezugwu (2016) defined research design as a comprehensive summary of plans that specifies the way and manner in which an investigation will be carried. Typically it contains data collection strategy, applicable instruments, the use of such instruments and analysis of data collected. The study applied an ex-post facto design and as a result, relied on historical data. A longitudinal time series data gotten from the cross section of four (4) quoted beverage companies in Nigeria, for the period of ten (10) years were used for the empirical investigation. Similarly, the trendy nature of environmental reporting disclosure and the availability of such environmental related disclosure data in annual reports underlines the choice of time period as well as sample companies used in the study. The study seeks to examine the effect of Corporate Characteristics (with firm age, firm size and profitability as proxy) on Environmental Information Disclosure. In this study, the researcher adopted a sustainability reporting framework provided by the Global Reporting Initiatives (GRI) G4 for measuring environmental information disclosure (EID).

3.2 Population of the Study

The population is made up of four (4) listed companies in Nigerian Exchange as at 2020. These companies are; Champions Breweries, Guinness International, International Breweries, Nigerian Breweries.

3.3 Sampling Technique and Sample Size Determination

Sampling was not necessary because it was the intention of the researchers to use the entire population. However, all the beverage companies studied except for International Breweries dropped as a result of unavailability of ten (10) years data (annual report). Therefore, sample size was reduced to three (3) companies using purposive sampling techniques. These companies are; Champions Breweries, Guinness International, Nigerian Breweries.

3.4 Methods of Data Collection

The study relied upon secondary sources for data collection. Therefore, relevant internet articles and journal were used as well as documents, records, and annual reports of sampled companies as obtained from Nigerian Exchange facts book and website as well as companies websites. In the case of annual reports, the study made use of data from 2009 to 2019 reports due to trendy nature of sustainability reporting disclosures. The study concentrated only on data as it concerns the variables of the study, which are EHSCD, DCCCD, WMRCD, FS, ROA, & FA.

3.5 Method of Data Analysis

The study uses content analysis in measuring disclosure. Content analysis is a method of codifying written text into various groups or categories on the bases of selected criteria. It assumes that frequency is an indication of the subject matter's importance (Abdolmohammad, 2005; Guthrie et al. 2004; Krippendoff, 2004 in Gamerschlag, Moller, Verbeeten, 2010). Extant studies suggest that content analysis provide accurate results sustainability research, thus it is possible for researchers to assess the quality of the different reported items (Gamerschlag, Moller, Verbeeten, 2010). This study adapted Samuel et al (2020) index scoring which is consistent with Global Reporting Initiative (GRI) G4 disclosure framework in order to develop environmental disclosure index. This was assessed by 37 indicators on policies and systems on social, economic and environmental issue.

These indicators were scaled in into 3 points. For every full disclosure bearing qualitative and qualitative description, the indicator is scored 3 points. For every partial disclosure bearing only qualitative description, the indicator is scored 1 to 2 points depending on the broadness of the descriptions. Also, for every non-disclosure, the indicator is scored 0 points. The total score for the content analysis are expected to sum up to a maximum score of 111 (that is, 3x37).

Therefore,

ECDI =TDP/MP

While the descriptive provides an insight into the mean, median, normality of the distributed data and the univaraiate relation between the variables, as well as their joint effect using multiple regression analysis through Eview version 8 was also used as a statistical technique to analyze effect and relationship that exist between Corporate Characteristics (CC) and Environmental Reporting.

*Decision***:** Accept null hypothesis if the estimated p-value is greater than 0.05 level of significance, otherwise reject null hypothesis and accept alternative hypothesis.

Multiple Regression Model:

The study adapted the regression model used by Mohamad et al. (2014) with little modifications to suit the requirement of the study.

The study applied the following model:

$ER = f\,(CC)$

$ER = \beta_o + \beta_1 (FA) + \beta_2 (FS) + \beta_3 (PROF) + e$

$EHSCD = \beta_o + \beta_1 (FA) + \beta_2 (FL) + \beta_3 (AF) + e$ ------ Model 1

$WMRCD = \beta_o + \beta_1 (FS) + \beta_2 (FL) + \beta_3 (AF) + e$ ------ Model 2

DCCCD = $\beta_o + \beta_1$ (ROA) + β_2 (FL) + β_3 (AF) + e ---- Model 3

Where: CC = Corporate Characteristics

ER = Environmental Reporting measured using environmental disclosure index (Proxied with EHSCD. WMECD, DCCCD)

EHSCD = Employee Health and Safety Cost Disclosure.

WMRCD = Waste Management and Environmental Remediation Cost Disclosure.

DCCCD = Donation, customer related and Charitable Contribution cost Disclosure.

FA = Firm Age (calculated by number of years since incorporation).

FS = Firm Size (measured by natural log of total assets).

PROF = Profitability (Proxied by ROA).

ROA = Return on Asset (Calculated as EBIT/TA).

FL = Firm Leverage (measured by ratio of Total Debt to Total Equity), is used as control variable to check the effect of debt serving on environmental reporting.

AFT = Audit Firm Type (a dummy score of 1 for big four audit firm and 0 score for audit type not this category).

β_0 = Regression constant.

β_1, β_2, β_3 = Regression co-efficient associated with independent variables.

e = Stochastic error term.

IV. DISCUSSION OF FINDINGS

Table: 1 Descriptive Statistics

	FA	FS	ROA	LEVERAGE	AFT
Mean	57.83333	1.47E+08	-121.6013	0.138070	0.966667
Median	64.00000	1.22E+08	0.062100	0.070300	1.000000
Maximum	73.00000	3.89E+08	0.880300	0.608700	1.000000
Minimum	36.00000	2801539.	-2544.000	0.000000	0.000000
Std. Dev.	12.91106	1.36E+08	500.1303	0.175212	0.182574
Skewness	-0.602586	0.629583	-4.239311	1.404416	-5.199469
Kurtosis	1.646453	2.061373	20.17355	4.083475	28.03448
Jarque-Bera	4.105660	3.083152	458.5223	11.32932	918.5791
Probability	0.128371	0.214044	0.000000	0.003466	0.000000
Sum	1735.000	4.41E+09	-3648.038	4.142100	29.00000
Sum Sq. Dev.	4834.167	5.37E+17	7253780.	0.890279	0.966667
Observations	30	30	30	30	30

Source: Eview 8 Ouput, 2021.

Table 1 shows the descriptive statistics with 30 observations. And the p – value JB statistics for FA and FS variables were normally distributed at 0.1284 and 0.2140 respectively. This is above 0.05 probability level of significance, while ROA, LEVERAGE and AFT were not normally distributed at 0.00000, 0.003466, and 0.00000 respectively which is below 0.05 probability level of significance.

4.2 Regression Analysis

4.2.1 Test of Hypothesis 1

Ho$_1$: Firm Age has no significant effect on Firm's Employee Health and Safety Disclosure (EHSCD) of Beverage companies listed on Nigeria Stock Exchange.

H$_1$: Firm Age has significant effect on Firm's Employee Health and Safety Disclosure (EHSCD) of Beverage companies listed on Nigeria Stock Exchange.

Table 2: Least Square Regression analysis showing the effect of FA ON EHSCD.

Dependent Variable: EHSCD				
Method: Least Squares				
Date: 06/16/21 Time: 10:08				
Sample: 1 30				
Included observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.233646	0.137085	-1.704382	0.1002
FA	0.010460	0.002034	5.141605	0.0000
LEVERAGE	0.133809	0.143653	0.931475	0.3602
AFT	-0.071231	0.124406	-0.572569	0.5719
R-squared	0.635881	Mean dependent var		0.320887
Adjusted R-squared	0.593868	S.D. dependent var		0.181840
S.E. of regression	0.115884	Akaike info criterion		-1.348892
Sum squared resid	0.349155	Schwarz criterion		-1.162066
Log likelihood	24.23339	Hannan-Quinn criter.		-1.289125
F-statistic	15.13510	Durbin-Watson stat		1.919176
Prob(F-statistic)	0.000007			

Source: Review 8, Regression Output, 2021.

Interpretation of Regression Coefficient Result

The following regression equation was obtained from table 2:

EHSCD = -0.233646 + 0.010460 + 0.133809 – 0.071231

With the model above, it is possible to ascertain the relationship between FA, LEV, AFT and EHSCD of listed Beverage Companies. If all other factors are held constant, an increase in one unit of the FA results into 0.010460 increase in EHSCD, while a unit increase in LEV will result to 0.133809 corresponding increase of EHSCD. In addition, the slope coefficient (β_1 = 0.010460) indicates that Firm Assets positively relates with EHSCD, with a t – statistics of 5.14 as well as P - value of 0.0000 < 0.05. This means that sustainable environmental disclosure has a significant positive relationship with EHSCD at 5% level of significance. The adjusted R – squared for the model is 0.5938 meaning that the

Independent variables explained 59.38% of the variation in EHSCD of listed Beverage Companies. The probability value of the F – statistics = 0.000007 implies that the regression model is significant in predicting the effect of Firm Age on Firm's Employee Health and Safety Disclosure (EHSCD). The significant between the variable is less than a = 0.05.

Decision Going by the rule of thumb, since the probability of the test = 0.0000 is less than the a – value of 0.05; therefore H_1 is accepted which confirms that Firm Age has a significant positive effect on Employee Health & Safety Cost disclosure of quoted Beverage companies in Nigeria at 5% level of significance.

This is inconsistent with the findings made by Moruff et al (2021) & Akbas (2014) which showed a statistical insignificant relationship that exist between firm age and environmental. In addition, the result of Elshabasy (2018) showed a negative significant relationship with Environmental information disclosure.

4.2.2 Test of Hypothesis 2

Ho_2: Firm Size has no significant effect on Waste Management and Environmental Remediation cost disclosure of quoted Beverage companies Nigeria.
H_2: Firm Size has significant effect on Waste Management and Environmental Remediation cost disclosure of quoted Beverage companies Nigeria.

Table 3: Regression analysis showing the effect of FS ON WMRCD.

Dependent Variable: WMRCD				
Method: Least Squares				
Date: 06/16/21 Time: 10:11				
Sample: 1 30				
Included observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.002611	0.123641	-0.021120	0.9833
FS	9.32E-10	1.79E-10	5.196384	0.0000
LEVERAGE	0.568364	0.137982	4.119126	0.0003
AFT	0.079545	0.128933	0.616945	0.5426
R-squared	0.718277	Mean dependent var		0.289700
Adjusted R-squared	0.685770	S.D. dependent var		0.220565
S.E. of regression	0.123640	Akaike info criterion		-1.219316
Sum squared resid	0.397460	Schwarz criterion		-1.032489
Log likelihood	22.28973	Hannan-Quinn criter.		-1.159548
F-statistic	22.09641	Durbin-Watson stat		1.714160
Prob(F-statistic)	0.000000			

Source: Eview 8, Regression Output, 2021.

Interpretation of Regression Coefficient Result

The following regression equation was obtained from table 3:

WMRCD = -0.0026 + 9.3200 + 0.5684 +0.0795

With the model above, it is possible to ascertain the relationship between FS, LEVERAGE, AFT and WMRCD of the listed Beverage Companies. If all other factors held constant, an increase in one unit of the FS results into 9.3200 increase in WMRCD, while a unit increase in LEVERAGE will result to 0.5684 corresponding increase of WMRCD. Also, a unit increase in AFT will lead to 0.0795. The slope coefficient (β_1 = 9.32) showed that Firm Size positively relates with WMRCD, with a t – statistics of 5.1963 and associated P - value of 0.0000 < 0.05. This indicates that Firm Size has a significant positive relationship with WMRCD at 5% level of significance. The model's adjusted R – squared is 0.69 meaning that the Independent variables explained 69% of the variation in WMRCD of listed Beverage Companies. The probability value of the F – statistics = 0.0000 suggests that the regression model is significant in predicting of the effect of Firm Size on Waste Management and Environmental Remediation cost disclosure. The significant between the variable is less than a = 0.05.

Decision Going by the rule of thumb, since the prob.(F-Statistics) of the test = 0.0000 is less than the a – value of 0.05; therefore H_2 is accepted which confirms that Firm Size has a significant positive effect on Waste Management and Environmental Remediation cost disclosure of quoted Beverage companies in Nigeria at 5% level of significance.

This is consistent with the results of Ohidoa et al (2016), Sulaiman et al (2014), Damak-Ayadi (2019), Akbas (2014), Lamidi et al (2020), Sanni et al (2018). The result of Elshabasy is inconsistent with the study, as it showed an insignificant relationship between firm size and Environmental Information Disclosure

4.2.3 Test of Hypothesis 3

Ho_3: Return on Assets has no significant effect on Donations & Charity Contribution Cost Disclosure of quoted Beverage companies in Nigeria.

H_3: Return on Assets has significant effect on Donations & Charity Contribution Cost Disclosure of quoted Beverage companies in Nigeria.

Table 4: Regression analysis showing the effect of ROA ON DCCCD.

Dependent Variable: DCCCD				
Method: Least Squares				
Date: 06/16/21 Time: 10:14				
Sample: 1 30				
Included observations: 30				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.37E-05	0.179476	0.000188	0.9999
ROA	0.000110	6.82E-05	1.618463	0.1176
LEVERAGE	0.514181	0.196650	2.614703	0.0147
AFT	0.232633	0.185161	1.256382	0.2201
R-squared	0.354577	Mean dependent var		0.282483
Adjusted R-squared	0.280105	S.D. dependent var		0.211530
S.E. of regression	0.179476	Akaike info criterion		-0.473981
Sum squared resid	0.837506	Schwarz criterion		-0.287155
Log likelihood	11.10971	Hannan-Quinn criter.		-0.414214
F-statistic	4.761217	Durbin-Watson stat		0.648691
Prob(F-statistic)	0.008922			

Source: Eview 8, Regression Output, 2021.

Interpretation of Regression Coefficient Result

The following regression equation was obtained from table 4:

DCCCD = 3.37000 + 0.000110 + 0.514181 + 0.232633

With the model above, it is possible to ascertain the relationship between SED, AFT and NPM of listed Beverage Companies. If all other factors are held constant, an increase in one unit of the ROA results into 0.000110 increase in DCCCD, while a unit increase in LEVERAGE will lead to 0.5142 corresponding increase of DCCCD. Also, a unit increase in AFT will give rise to 0.2326 increase in DCCCD. The slope coefficient (β_1 = 0.000110) showed that Profitability (ROA) positively relates with Donations & Charity Contribution Cost Disclosure (DCCCD), with a t – statistics of 1.6185 and associated P - value of 0.1176 > 0.05. This entails that Return on Assets has no significant positive relationship with DCCCD at 5% level of significance. The model's adjusted R – squared is 0.2801 implying that the Independent variables explained 28% of the variation in DCCCD of listed Beverage Companies. The probability value of the F – statistics = 0.0089 suggests that the regression model is significant in estimating the effect of Return on Assets on Donations & Charity Contribution Cost Disclosure. The significant between the variable is less than a = 0.05.

Decision: Going by the rule of thumb, since the Prob. (F – Statistic) of the test = 0.00891 and p – value of ROA is 0.1176 greater than the a – value of 0.05; therefore Ho_3 is accepted which confirms that Return on Assets has no significant positive effect on Donations & Charity Contribution Cost Disclosure of quoted Beverage companies as listed in Nigeria at 5% level of significance.

Sanni et al (2018) and Akbas (2014) have a contradictory result as profitability relates with environmental disclosure. It is also inconsistent with the result of Chaklader & Gulati (2018). Furthermore, this is in agreement with findings of Lamidi et al (2020) and Elshabasy (2018) which showed significant positive association.

V. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

With the findings above, firm characteristics of quoted Beverage companies affects the environmental performance activities reported. There are high expectations that large older firms like Beverage companies will implement and report more environmental performance activities due to their scale of operations and volume of activities engaged.

5.2 Recommendations

1) The age of quoted Beverage firms in Nigeria demands more sustainable environmental performance practices. Those charged with governance in these Beverage companies should adopt and report practicable policies that will improve the health and safety of its employees in other to increase productivity and add value to its output. By providing, safety kits, soft loan, free medical care and life assurances policies for its employees.
2) Companies with assets size like that of quoted Beverage companies in Nigeria engage in volumes of activities that produces waste and results in environmental footprints. The board of such companies should consider a sustainable approach of waste management and remediation plans by insuring the environment against probable wastes and negative environmental footprints.
3) Even though donation contributions and charity performance activities is not depend on the level of profit made, quoted beverage firms are advised to inculcate community support, social amenities and community health support system as part of their period cost to enhance social contract, boost companies image as well create sustainable value.

5.3 Limitation of the Study

The study is limited because it examined corporate characteristics in relation to environmental reporting of Beverage companies in Nigeria. However, future researches could study environmental reporting in other sectors especially cement and extractives industries.

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