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EXPLORING THE RELATIONSHIP BETWEEN FIRM ATTRIBUTES AND ENVIRONMENTAL DISCLOSURE IN NIGERIA'S OIL AND GAS INDUSTRY

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Abstract
This paper examined the effect of firm attributes on environmental disclosure of listed oil and gas firms in Nigeria from 2017 to 2021. The paper used firm size, firm age and firm financial performance as (firm attributes) independent variables and environmental disclosure index as dependent variable. The paper adopted the ex-post facto design to achieve its objectives. Secondary data was sourced from audited annual reports of the ten (10) sampled oil and gas firms through content analysis. Panel data regression techniques were carried out and the results reveal that firm size has a significant effect on environmental disclosure of the sampled firms. Also, the result show that, firm age has a significant effect on environmental disclosure. The result further reveals that firm financial performance has a significant effect on environmental disclosure of the sampled firms. Based on the findings, the paper recommends that listed oil and gas firms in Nigeria should put measures in place to increase their profitability as they age and grow so as to enable them accommodate the expenses associated with disclosing information about their efforts in preserving the environment as this will help them to acquire legitimacy status from stakeholders. Also, financial Reporting Council of Nigeria and other financial regulatory bodies should hasten their efforts in making environmental disclosure mandatory so as to track firms' commitments towards preserving the environment.

Keywords: Firm Attributes, Firm Size, Firm Age, Firm Financial Performance Environmental Disclosure

Introduction

Environmental information is a voluntary practice in Nigeria but many companies disclose this information alongside the statutory disclosures to remain legitimate and reap the benefit of a legitimate firm which range from easy access to capital through issue of shares to security of the companies properties by the host community and high patronage of the company's products and/or services.

Zayol et al. (2021) see firm characteristics as the features that qualify a firm to earn the status of an independent entity. In other words, firm characteristics are the attributes that a firm possesses which defines her activities (Kabiru, 2020). These characteristics include among others firm age, firm size, financial leverage, industry type and firm financial performance. The characteristics of a firm to an extent will influence her decision to disclose or not disclose voluntary information like environmental information.

This paper assesses the effect of firm characteristics on environmental disclosure of listed oil and gas firms in Nigeria. In order to achieve this objective, the study hypothesized thus:

$H0_1$: Firm size has no significant effect on the environmental disclosure of listed oil and gas firms in Nigeria.

$H0_2$: Firm age does not significantly affect environmental disclosure of listed oil and gas firms in Nigeria.

$H0_3$: Firm financial performance has no significant effect on the environmental disclosure of listed oil and gas firms in Nigeria.

The succeeding part of the paper is structured thus: section 2 literature review, section 3 methodology. Section 4 is result and discussions while section 5 is the conclusion and recommendations.

2. Literature Review

This section deals with conceptual review, theoretical review and empirical studies.

2.1 Conceptual Review

This section discusses the concept of firm characteristics and environmental disclosure thus:

Firm Attributes

To Zayol et al. (2021), firm characteristics are the attributes that qualifies a firm to be referred to as an independent entity that creates utility. These features include the size of the firm, age, financial leverage and financial performance. Kabiru (2020) holds that, the older a firm, the higher the probability of the firm to disclose information about environmental performance so as to legitimize their business. In the same vein, Hasan and Hosain (2015) opined that, due to their confidence, bigger firms can easily spend to tell the public what they have been doing differently to preserve the environment so as to look differently in the public eyes than their competitors. Since more disclosure implies more expenses to a firm, it can be said that firms that are not profitable may not be willing to disclose mandatory and voluntary (environmental) information.

2.1.1 Environmental Disclosure

This is the art of identifying, estimating, analysing and disclosing environmental information to management and other stakeholders. The environmental information include the negative effect of a firms activities on the environment and the efforts the firm has made to restore the environment for its use, the use of other stakeholders both now and in future. To Mahdi, Mahdi and Sima (2011) environmental accounting involves all the activities that enable the accounting system to recognize, record and report the damage done to the environment.

2.2 Empirical Review

Zayol, Akpa, Tsegba and Gberindyer (2021) examine the relationship between firm characteristics and corporate environmental disclosure by Nigerian less- sensitive listed companies from 2009 to 2018. The study adopted ex post factor research design. Secondary data was sourced from the annual reports of the sampled companies and analysed using panel regression. Results show that environmental disclosure by less-sensitive listed companies in Nigeria is low but reveal a steady increase over the study period. Also, the result revealed that age of the firm and leverage are positively and significantly related to the level of corporate environmental disclosure by the less-sensitive listed companies in Nigeria. In addition, firm size and size of audit firm are positive but insignificantly related to environmental disclosure.

Moruff et al. (2021) investigate the relationship of specific attributes of oil and gas firms with environmental disclosure. Firm specific attributes like firm age, board composition, financial performance, existence of foreign directors on the board and financial leverage were considered in the study. Secondary data were collected for a period of seven years (2012 – 2018) and analysed and hypotheses tested using generalized least square. Result show a positive and significant relationship between board composition, financial leverage, existence of foreign directors on the board and environmental disclosure while firm age and financial performance have an insignificant relationship with environmental disclosure.

Kabiru (2020) examine the influence of firm characteristics on environmental disclosure quality of listed cement companies in Nigeria from 2013 to 2017. Secondary data were gotten from the annual report sampled companies on the independent variables (Firm age, firm size and leverage) and the dependent variable (environmental disclosure quality). The data was analysed using descriptive statistics, correlation and multiple regression technique. Findings show that firm age, firm size and leverage has significant impact on quality of environmental disclosure of the studied firms.

Innocent and Gloria (2018) assess the effect of firm characteristics on corporate environmental performance of quoted industrial goods firms in Nigeria. The study measured firm characteristics using firm size, profitability and firm age and proxied corporate environmental performance by waste management cost of the industrial goods firms. Ex-post facto research design was used. Data was collected from 11 industrial goods firms quoted on the Nigerian stock exchange from 2008 to 2017 and analysed using Pearson correlation coefficient and Multivariate regression analysis. Findings reveal that firm attributes (firm size, profitability and firm age) have a significant and positive effect on environmental performance of the studied firms.

Sulaiman, Suleiman and Khadijah (2018) assesses firm characteristics and environmental disclosure of listed oil and gas firms in Nigeria from 2010-2016. A sample of 10 firms was drawn from a population of 12. Firm characteristics were proxied by firm size, firm age and profitability while binary codification was used for environmemtal disclosure. The study used panel binary logistics regression to analyse the data while descriptive statistics and correlation matrix made the pre regression analyses. Result shows that firm size and firm profitability have negative but insignificant relationship with natural wealth disclosure while firm age has positive significant relationship with natural wealth disclosure.

Uyagu et al. (2017) examine the effect of firm characteristics on environmental reporting practices of listed manufacturing firms in Nigeria. The population of the study comprises of sixty-one (61) manufacturing firms with a sample size of 29 firms drawn using judgmental sampling technique. Data were gathered using annual reports and accounts of the sampled firms through content analysis and analysed using multiple regression technique. Results reveal that the firm characteristics of firm size, leverage, return on assets and firm age have significant and positive effect on environmental reporting practices of listed manufacturing firms in Nigeria.

2.3 Theoretical Review

This paper is anchored on the stakeholders' theory and legitimacy theory. The stakeholders' theory as propounded by Freeman (1983) holds that, a firm has varying stakeholders with varying needs and for a firm to be successful, it must balance the needs of its varying stakeholders. This means that, in as much as listed oil and gas firms are operating to maximize their returns, they ought to also take into consideration the negative effect of their activities on the environment and disclose same.

In the same light, legitimacy theory as proposed by Dowling and Pfeffer (1975) is of the position that organisations' value system should coincide with that of the larger society in which the organization belong. When this value system aligns, an organization attains a legitimate status. This is a condition that makes the society to accept the firm as theirs. Listed oil and gas firms are known by their activities to constitute a threat to the environment. The society will only confer legitimacy status of them when they clean the mess caused by their operations on the environment and report same.

3. Methodology

The study's population is twelve listed oil and gas firms in Nigeria from which a sample size of 10 firms is drawn using judgmental sampling method. The study used ex-post facto design. Descriptive statistics was performed to summarise the data, correlation matrix was also performed. The Hausman test was conducted to select between fixed and random effect model. The model used in the study is shown thus:

EDit= β0 + β1FSIZEit + β2FAGEit + β3FFPit + eit Where:

ED = Environmental disclosure

FSIZE = Firm size

FAGE = Firm age

FFP = Firm financial performance e = Error term

it = Firm i at time t

Table 1: Measurement and definition of variables

Variables Measurements Source

ED KLD rating index Ofoegbu & Megbulu

FSIZE Natural logarithm of total assets at the end of fiscal year Ohidoa, Omekhodu

Oserogho 2016 and

FAGE Number of years listed on Nigeria exchange group at

Each point Zayol, Akpa, Tsegba and

Gberindyer (2021)

FFP Return on assets Ivungu, Iorpev and Ogira

(2020)

4. Results and Discussion

In this section, the descriptive statistics, correlation and regression results are presented and discussed thus:

Table 4.1 Descriptive Statistics of the Data

Variable	Obs	Mean	Std. Dev.	Min.	Max.
ED	50	2.67	0.15	2.33	3
FSIZE	50	15.97	2.26	9.11	21.57
FAGE	50	34	19	9	59
FFP	50	-0.023	0.292	-1.366	0.427

Source: STATA Output, Version 16

Table 4.1 shows the descriptive statistics of the variables. It revealed that, during the period of investigation, the firms disclosed a minimum of 2.33 and a maximum of 3 environmental issues. On average, a total of 2.67 environmental issues with variations to the tune of 0.15 were disclosed. On the other hand, firm size shows 15.97, 2.26, 9.11 and 21.57 as mean, standard deviation, minimum and maximum values. Firm age has mean value of 15.97, standard deviation of 2.26, minimum and maximum values of 9.11 and 21.57 respectively.

FFP revealed a mean, standard deviation, minimum and maximum values of -0.023, 0.292, -

1.366 And 0.427 respectively.

Table 4.1 Summary of Fixed Effect Regression Results

Number of Obs	50		
Prob	0.0301		
R -squared	0.0592		
ED	**Coefficients**	**T**	**p- value**
FFP	-1.2567	-2.50	0.014
AGE	0.1237	3.16	0.002
SIZE -0.0759 -1.89 0.001			

Source: STATA Output, Version 16

Table 4.2 indicates 0.03 as F statistic figure. This signifies the fitness of the study's model. The R^2 which is the coefficient of multiple determinations is 0.059. This means that, about 5.9% of the variation in our dependent variable (environmental disclosure) is accounted for by our independent variable (firm characteristics) while 94.1% of the variation is accounted for by factors outside our model.

Also, the relationship between the dependent variable and each of the independent variablesin shown. The result shows a negative coefficient of -1.2567for FFP which means that, a unit increase in environmental disclosure, reduces financial performance of the studied firms by 1.2567. AGE has a positive coefficient of 0.1237 the older a firm, the more environmental issues it discloses. SIZE has a negative coefficient of -0.0759 indicating an inverse relationship between SIZE and ED.

4.1 Test of Hypotheses

$H0_1$: Firm size has no significant effect on the environmental disclosure of listed oil and gas firms in Nigeria.

Table 4.2 shows p-value of 0.001 for firm size. Since this is less than 0.05, we reject the null and accept the alternative hypothesis.

$H0_2$: Firm age does not significantly affect environmental disclosure of listed oil and gas firms in Nigeria.

Result of Table 4.2 shows that firm age has a p-value of 0.002. Since this is less than 0.05, we reject the null and accept the alternative hypothesis of the study.

$H0_3$: Firm financial performance has no significant effect on the environmental disclosure of listed oil and gas firms in Nigeria.

Table 4.2 shows that firm financial performance has a p-value of 0.014. This is less than 0.05.
We therefore reject the null hypothesis and accept the alternative.

4.2 Discussion of Results

In line with the result, hypothesis one (1) is rejected and we accept the alternate. This position is in tandem with Uyagu, Okpanachi, Nyor and Muhammad (2017) and Kabiru, (2020) but disagrees with Sulaiman, Sulaiman and Khadijah (2018) as well as Zayol, Akpa, Tsegba and Gberinyer (2021) who found that size has no significant effect on the environmental disclosure of a firm. The outcome of this hypothesis is same with our apriori expectation that as a firm grow in size, the firm becomes more familiar, aware and concerned about the environment hence the likelihood to carry out more environmental friendly policies and disclose them to win stakeholders' trust.

Hypothesis two (2) is also rejected and the alternate accepted. This standpoint agrees with Zayol et al. (2021), Innocent and Gloria (2018), Kabiru, (2020) and Sulaiman, Sulaiman and Khadijah (2018) but disagrees with Moruff et al. (2021) who found that age has an insignificant effect on environmental disclosure of firms. A listed company is a corporate being that is seen as a person of her own in the eyes of the law. It can be argued that, when firms advance in age, attention is shifted from maximizing profit at the detriment of her constituent (maybe because the firm has broken even) but rather about sustaining the environment for continued survival even with little returns.

Hypothesis three (3) is also rejected and the alternative accepted that firm financial performance has a significant effect on environmental disclosure of firms. This result also concurs with Innocent and Gloria (2018) and Uyagu, Okpanachi, Nyor and Muhammad (2017) but differs with Moruff, Salisu, Muhammed and Garba (2021) that firm financial performance affect environmental disclosure. Disclosure is an expense to a firm in the year the disclosure is made. Firms that are not profitable may be economical with the information they disclose. Unprofitable firms most likely disclose only to comply with the law.

5. Conclusion and Recommendations

This paper therefore concludes that, firm characteristics measured by firm size, age and financial performance have significant effect on environmental disclosure of listed oil and gas firms in Nigeria.

Based on the findings, the paper recommends that listed oil and gas firms in Nigeria should put measures in place to increase their profitability as they age and grow so as to enable them accommodate the expenses associated with disclosing information about their efforts in preserving the environment as this will help them to acquire legitimacy status from stakeholders. Also, financial Reporting Council of Nigeria and other financial regulatory bodies should hasten their efforts in making environmental disclosure mandatory. This will track firms' commitments towards preserving the environment.

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