OWNERSHIP STRUCTURE AND CORPORATE DISCLOSURE OF ENVIRONMENTAL INFORMATION IN NIGERIAN LISTED CONSTRUCTIONS COMPANIES

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Abstract

This study examines the impact of ownership structure on environmental information disclosure (EID) of listed construction companies in Nigeria from 2013-2021. A sample of six (6) companies listed as construction companies using census sampling technique was drawn from the population of nine (9) companies. Audited annual reports and accounts were used for data extraction. The analysis was done using descriptive statistics and multiple regressions. Correlational research design was adopted in the study to find out the impact of ownership structure on EID. Variables used include foreign ownership; managerial ownership and block-holder ownership and EID measured using ordinal coding scheme based on GRI guidelines (G4). Robustness tests such as multicollinearity test, heteroscedasticity test, normality test and Hausman specification test were conducted to validate the results. The study revealed that there is a negative and significant relationship between foreign ownership and EID, while a negative and significant relationship between managerial ownership with EID and lastly there is a positive and significant relationship between block- holder ownership and EID. The study, therefore, recommends among others that the management of listed construction companies should direct their attention more on how to increase the level of block-holder ownership because they can influence the managers to disclose more environmental information and consequently by reducing information asymmetry, which not only clarifies the conflicts of interests between shareholders and management but also makes management more accountable and increases profit in the long run.

Keywords: Foreign ownership, Managerial ownership, Block-holder ownership, EID, Nigeria.

Introduction

Company voluntary disclosure has emerged as one of the most critical concerns in corporate reporting around the world. Globally, a slew of environmental

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issues has piqued the public's interest. Since the nineteenth century, climate change has emerged as one of the most important issues confronting the planet. At the same time, the general public is becoming more conscious of how corporate operations can affect the environment. The study of Ade-Ademilua and Obalola (2008) reported that increasing public awareness of environmental issues has an impact in terms of greater demands on businesses to take environmental responsibility. Other stakeholders, such as governments' international organisations and other organisations, have put considerable pressure on firms to improve their environmental performance by implementing legislation and guidelines. Companies must be accountable to the community for the impacts of their activities as a result of stakeholder demand.

Various activities and operations of companies degrade ecosystem components such as water, air, soil, and vegetation (Adeniyi & Adebayo, 2018). Many firms, such as cement companies contain heavy metals such as chromium, nickel, cobalt, lead, and mercury pollutants that are harmful to the environment and have an impact on human health (such as causing asthmatic symptoms in humans), animal health, and the ecosystem. Exposure to cement dust for a short period may not cause serious problem, however, prolonged exposure can cause serious irreversible damage to plants and animal (Heather, 2003). Therefore, air is the basic necessity of human life, but the quality of air deteriorating continuously and it is being constantly polluted from different sources. World Health Organisation (WHO) estimates that worldwide at least 2 million people every year die due to health effect cause by a lack of clan air. One of the major sources is industrial pollution cause about (20-30%) of the air pollution (Manisalidis, Stavropoulou, Stavropoulou and Bezirtzoglou, 2020).

According to a recent report on pollution and health in 2022 indicated that poor air quality has a negative impact on people's health in Nigeria. In 2019, around 68,500 people died as a result of poor air quality (State of Global Air, 2022), with at least 1,650 individuals dying as a result of ozone pollution. This represents a more than 24 percent increase in mortality related to harmful levels of ozone since 2013, when 1,330 individuals died as a result of ozone pollution, according to the research economic losses owing to poor air quality are predicted to be around 1% of the country's GDP.

UNEP report (2011) shows that firms' operational activities in Nigeria have resulted in substantial environmental damage throughout the country. Nigeria has been established as one of these countries, with a high degree of environmental pollution that significantly contributes to global environmental problems caused by oil spills, gas flaring, and deforestation. Consequently, the issues of oil construction or production in Niger Delta, the region is the oil capital of Nigeria and the region has been having a lot of problems based on the production of the oil in the region.

Nigeria, the country with the largest population in Africa, ranked 168 out of 180 countries in the 2022 by the environmental performance index (EPI) making the country among the poorest performing nations in the African continent. EPI is an international ranking system that measures environmental health and sustainability of countries. The assessment was based on 40 performance indicators, which are listed under three policy objectives such as environmental health, ecosystem vitality and climate change. Nigeria, along with Cameroon, Central African Republic, India,

Pakistan and Lesotho, is among the six worst-performing nations in the world on environmental health. This means that the giant of Africa and the country with the largest economy in Africa has failed to protect its citizens from environmental health risks, which include poor air quality, heavy metals, sanitation and drinking water as well as waste management (EPI, 2022).

According to stakeholders' theory, companies must consider all stakeholders' demands to legalise their activities (Al-Amosh & Mansor, 2018). Disclosure of information related to companies' activities is one of the stakeholders' demands, and it is also a means of communication with various stakeholders, by satisfying stakeholders' desires the companies free themselves from further pressures that they may face, and also minimising the agency conflicts that may arise between management and shareholders of the companies (Al-Amosh & Mansor, 2020). So, the issues related to sustainability fall within stakeholders' interests and this gives companies an excellent opportunity to gain trust and enhanced transparency which in long run can improve financial performance.

Ownership Structure, on the other hand, is one of the attributes that describe a company's identity. Moreover, the ownership structure influences organisations' motivations for disclosing information (Eng & Mak, 2003). Ownership structure of a company plays a pivotal role in corporate climate strategy-making and environmental-friendly decisions. While the threshold can be set quite high in some cases, there is also a risk that corporations could compromise social and environmental policies and disclosures in order to save agency costs. All listed Nigerian companies are required by law to disclose ownership structure details in their annual reports. It is a factor influencing business actions; it is also seen as one of the governance tools used in conjunction with legal regulations (Al-Amosh, 2021). Ownership structure is responsible for monitoring a corporations' disclosed information quality in its annual reports and controls management behavior to ensure that their actions are in line with the interests of stakeholders (Sadiq & Mohammed, 2017). Hence, corporate ownership structure can determine the extent of corporate monitoring, and this affects the quality of disclosures in corporate financial statements (Samaha & Dahawy, 2011). Therefore, corporate ownership be it foreign ownership, managerial ownership or block holder ownership can influence the disclosure of environmental information by corporate organisations.

Foreign shareholders are essential pillars of achieving transparency and trust between companies and stakeholders (Al-Amosh & Mansor, 2020). The presence of foreign shares in companies is an important tool in pushing companies towards more disclosure. Foreign ownership is a significant determinant of disclosure. Thus, this leads to taking decisions that push towards the disclosure of more information. Companies in developing countries have a tendency to disclose more information voluntarily, while dealing with multinational companies as a way to enhance their reputation and satisfying the expectations of investors, particularly on the international issues like child labour, impoverished working atmosphere and abasement of human rights (Zaini, Samkin, Sharma, & Davey, 2018). From the agency theory perspective, Aljifri, Alzarouni, and Tahir, (2014) postulated that corporate voluntary disclosure was expected to be better in widely dispersed firm.

Theoretically, there are two opinions that explain the relationship between managerial ownership and disclosure of information by organizations. The first opinion states that the presence of managerial ownership can reduce agency problems because agent and principals share the same goal, so it will have a positive relationship with environmental disclosure (Abdullah & Nasir, 2004). On the other hand, the presence of managerial ownership can increase the possibility of managers acting opportunistically and will have a negative relationship with environmental information (Eng & Mark, 2003). This is because the main concern of the managers is to make profit not the disclosure of information relating to the environment that they do operates.

The block-holder ownership is the percentage of shareholders that holds 5% of shares of the firm. This percentage is appropriate to push the management of companies towards disclosure. Therefore, it is expected that companies will disclose more information to meet the demands of stakeholders, in response to pressures that the block-holders may impose on companies. This corresponds to the perspective of stakeholders' theory that management is subject to pressure from stakeholders who have the largest share in the company (Juhmani, 2013).

Several studies were conducted in the area of sustainability reporting, corporate social responsibility and environmental information disclosure in Nigeria like the studies of Shuaibu, Jikan-Jatum, Yusuf, and Mohammed (2023),Okere, Rufai, Okeke and Bola (2021), Sabo,(2020), Shuaibu, Muhammad and Isah (2019), Egbunike and Efionayi, (2018), Emmanuel, Owalomwa, Obarakpo, Ikumapayi and Gbenedio, (2018) but these studies failed to focus on construction companies in Nigeria despite the contribution of the sector to environmental degradation. Therefore, this study is an attempt in the right direction to examine the impact of ownership structure on environmental information disclosure of construction companies.

Therefore, it's against this background that this study examines the impact of the ownership structure (foreign ownership, managerial ownership, family ownership and block-holder ownership) on the level of environmental information disclosure using a sample of Nigerian listed construction companies. The remainder of the paper is organised as follows: Section two (2) provides literature on ownership structure and EID and previous researches about these concepts. Section three (3) presents methodology of the study. Section four (4) Presents results and discussions and lastly section five (5) discusses conclusion and recommendations alongside limitation of the study and suggestions for further studies.

Literature Review

Ownership Structure

According to Voinea, Fratostiteanu, and Romein, (2019) ownership structure represents the distribution of equity not only in terms of votes and capital but also by the identity of the shareholder. This equity distribution is fundamental to corporate governance because it shapes the managers' incentives and hence the performance of the firms they run. On the other hand, Ownership structure is a comparison between the number of shares owned by insiders and the number owned by investors (Ginting, 2022). Ownership structure is the relative amounts of ownership claims held by

insiders (management) and outsiders (investors) with no direct role in the management of the firm.

Foreign Ownership

The total amount of shares held by foreigners in a corporation is referred to as foreign ownership. As the world's economic and financial liberalisation has continued, so has foreign investor participation in the local market, as argued and demonstrated in literature. Many countries open their capital markets to foreign investors for a variety of reasons, including increasing the availability of money, lowering the cost of capital, and financing economic growth. Foreign ownership is the ownership of the portion of a country's assets (business), natural resources, property, bonds, equity etc) individuals who are not citizens of that country or by companies whose headquarters are not in that country (Al-Al-mosh & Mansor, 2020).

Managerial Ownership

Managerial ownership expresses that the executive management owns shares within the company they manage (Samaha & Dahawy, 2011). Adebiyi and Olowookere, (2016) defines managerial ownership as a situation where insiders or managers act as shareholders if they acquire a considerable proportion of entity's shares. Omolehinwa and Obigbemi, (2017) defines managerial ownership as the process where a large part of the company's shares is owned by management. Managerial ownership denotes a manager's interest in a company's equity holdings.

Block-holder Ownership

According to Edmans, (2014), the block-holder ownership is the shareholder who receives 5% of the total shares of the company. Block-holder ownership is an individual or organisation which owns a substantial amount of a company's shares of a firm. Large shareholders also known as block holders also impact greatly in governance because their sizable stakes give the incentives to bear the cost of monitoring managers.

Environmental Disclosure

Environmental disclosure is as well commonly regarded as corporation social responsibility reporting (Degan, 2007), but Ishak (2010) defined environmental disclosure as an environmental management strategy to communicate with stakeholders. Environmental disclosure is the process of communicating to both shareholders and stakeholders through the financial statements about the operational effects of a firm on the environment and what the firm is doing in order to compensate the environment.

Empirical Review

There has been a wealth of research studies on various outcomes of ownership structure and EID. This study reviewed the following studies; Dewi and Honggowati (2023) examines the effect of ownership structure on social and environmental disclosure in the annual reports of companies in Indonesia during the period of 2017 to 2020. The population of the study comprises of 52 companies in the mining and real estates, building and construction companies. The study used purposive sampling companies to arrive at the sample size of the study. The dependent variable in the study is social and environmental disclosure obtained by analysing the contents of the company's annual report using social and environmental

disclosure index (SEDI) while the independent variable is ownership structure proxy by institutional ownership, managerial and multiple large shareholders structures (MLSS). The findings of the study revealed that institutional ownership had a positive and significant impact on SEDI whereby managerial ownership had a negative and significant impact on SEDI and lastly MLSS had no effect on SEDI during the study period.

Ogboro and Osazuwa (2023) examines the relationship between ownership structure and corporate social responsibility disclosures (CSRD) with focus on the impact of managerial ownership, institutional ownership, foreign ownership, and ownership concentration on CSRD. The United Nations Global Compact (UNGC) index was used as a framework for measuring the disclosure of CSR information. One hundred and eighteen (118) companies listed on the Nigeria Stock Exchange (NSE) as at 31st December 2018 was studied from year 2009 to 2018. The data collected from these companies was analysed using descriptive statistics, correlation analysis and panel regression analysis using a fixed effect model for data estimation. The results indicated that CSRD in Nigeria is low with an average CSRD of 35% for the studied firms. The correlation results revealed that CSRD and foreign ownership have positive correlation, while CSRD and the independent variables; institutional ownership, managerial ownership and ownership concentration have negative correlation and institutional ownership and ownership concentration having the highest correlation. Managerial ownership and institutional ownership also have the lowest correlation. The regression results suggested that among firms listed on the NSE, managerial ownership and foreign ownership have a significant negative effect on CSRD, while institutional ownership and ownership concentration have a significant positive effect on CSRD.

Razaq, Ame, Abdullahi, and Abubakar, (2022) examines the effect of ownership structure on environmental disclosure of listed consumer goods companies in Nigeria. The study measures ownership structure with institutional, managerial, foreign and ownership concentration as independent variables, while environmental disclosure, as a dependent variable is measured with the extent of the environmental disclosures in annual reports and financial statements of listed consumer goods companies based on GRI environmental disclosure criteria. The study adopts ex post facto research design relying on secondary collected from the population, consumer goods companies listed on the Nigerian Stock Exchange for the period 2011-2020. The study used multiple regression analysis to test the hypotheses with the aid of E-views 9. The results of the regression analysis show that institutional investment has a positive and statistically significant effect on environmental disclosures. On the other hand, managerial ownership has a negative and statistically significant effect on environmental disclosure of listed consumer goods companies in Nigeria. However, other independent variables are found to be insignificant to the extent of environmental disclosure. The study concluded that the ownership structure is an important corporate attribute for predicting the level of environmental disclosures of firms.

Ginting, (2022) examines the effect of ownership structure on the level of environmental responsibility disclosure in the annual report of companies in Indonesia for the period of 2013 to 2015. The ownership structure used in the study

consists of government ownership, managerial ownership, foreign ownership, and institutional ownership. The measurement of the level of environmental responsibility disclosure is based on the GRI Index. This study uses secondary data in the form of annual reports of companies listed on PROPER and BEI in 2013 to 2015. The total sample of this study is 90 company annual reports which were selected by purposive sampling. The research method used is classical assumption test and hypothesis test with multiple linear regression method. The results of this study indicate that the variables of government ownership, foreign ownership and institutional ownership have a positive and significant effect on the level of disclosure of environmental responsibility. However, managerial ownership has no significant effect on the level of responsibility disclosure environment among companies in Indonesia.

Al Amosh and Mansor, (2020) examines the effect of ownership structure on the level of environmental disclosure in Jordan during the period 2012 – 2107. The study examines the factor of foreign ownership, government ownership, managerial ownership and block-holder ownership, as well as a study sample consisting of 51 Jordanian industrial companies listed on the Amman Stock Exchange. The study used content analysis to obtain 306 notes during the study period, and appropriate statistical tests were applied to obtain the results. The results indicate a significant impact of foreign ownership on the level of environmental disclosure. While the results did not provide sufficient evidence for the presence of impact Government ownership, managerial ownership and block-holder ownership on the corporate environmental disclosure level.

Acar, Çalıyurt, and Zengin-Karaibrahimoglu, (2020) explain the variation in environmental disclosure of firms based on their ownership type, namely state ownership and institutional ownership. The study further aims to understand whether and how the relationship between ownership structure and environmental disclosure changes regarding countries' development levels. The study uses a sample of 27,847 firm-year observations from 72 countries/economic districts between the years 2002 and 2017 and regression analysis to test how the relationship between different ownership structures and environmental disclosure and whether this relation is conditional on countries' development levels. This study finds that firms with higher state ownership have higher environmental disclosures and higher institutional ownership has a negative effect on environmental disclosures.

Matta, (2017) examines the association between ownership structure variables and level of corporate environmental disclosure in the annual reports and standalone sustainability reports of 313 non-financial companies listed in Bombay Stock Exchange, India. Ownership structure is provided by ownership held by promoter group, government, foreign ownership, and institutional investors. The levels of environmental disclosure were measured using the Wiseman scale. The results show that the extent of corporate environmental disclosure has a significant positive association with government ownership and institutional ownership. The results also highlight the fact that promoter ownership and foreign ownership concentration has no significant influence on the level of environmental disclosure. Control variables (size, industry and profitability) have a significant effect on level

of environmental disclosures. Leverage of a firm is not significantly associated with voluntary disclosures during the study period.

Theoretical Framework

The disclosure phenomenon has been discussed in several related theories, such as agency theory and stakeholder theory are used in explaining the relationship between ownership structure and environmental information disclosure.

Agency Theory

Jensen and Meckling, (1976) proposed the agency theory based on conflicts as a result of divorce between management and owners of the firm. Agency problems occur because managers' interests are not necessarily aligned with that of the shareholders. As a result, managers would act to maximise and protect not only shareholder wealth but also their own interests. Therefore, agency problems of conflict between the management and the shareholders may occur in the process of discharging the responsibilities of the board. Many measures are put in place to reduce the level of this agency problem such as managerial ownership as a measure can aid in aligning the interests of management with shareholders. Agency problem will be minimal when there is involvement of managers as owners in the company. The managers as owners are believed to place the interests of shareholders as high priority.

Stakeholder Theory

The stakeholder theory was first propounded by Edward Freeman in 1984. Stakeholders are those that have different interest in organisations, each and every stakeholder has different interest in the organisation. Stakeholder theory is all about meeting the demands of the stakeholders. The stakeholder theory argues that companies practice disclosing environmental information to meet their stakeholders' expectations (Al-Amosh & Mansor, 2020). The stakeholder theory perspective takes cognisance of the environment of the firm, including environmentalist, customers, suppliers, employees, and other segments of the society. As a result of this relationship, the company requires support from the stakeholders to survive and one of the ways of maintaining that relationship is by providing information in relation to the environmental the firm operates to gain support and approval of these stakeholders this is because for a firm to survive must have a good relationship with environment. Therefore, this study anchors on both the agency and stakeholder's theories.

Methodology

This study adopted correlational research design. The correlational research design was used to explain the relationship between ownership structure and corporate environmental disclosure among listed construction companies in Nigeria. The population of the study comprises of all the listed constructions companies listed on the floor of Nigerian stock exchange as at 31st December, 2021. There are nine (9) constructions companies listed on the floor of Nigerian stock exchange as at 31 December; 2021.These companies include the following alongside the year of listing of each company in brackets: Arbico PLC (1978), Julius Berger PLC (1991), Dangote Cement PLC (2010),Sky Shelter Fund PLC (2008), Smart Products Nigeria (1991), UACN Property Development PLC (1998), Union Homes Real Estate Investment

Trust (2008), Ronchess global Resourse PLC (2021), and Chemical and Allied Products (1957).

The study used census sampling technique where all the members of the population are considered. However, due to some limitations two filters are applied; one is that all companies must be listed on or before 31st December, 2013 and after applying the filter Ronchess global Resourse PLC has been eliminated because the company was listed in 2021 and all companies that does not disclosed the information needed by the study are also eliminated where Sky Shelter Fund PLC and Union Homes Real Estate Investment Trust are eliminated. Therefore, the following companies six (6) formed the sample size of the study; Arbico PLC, Chemical and allied Products PLC, Dangote Cement PLC, Julius Berger PLC, Smart Products Nigeria PLC and UACN Property Development PLC.

The study used secondary source of data. The data for the study were collected from the audited annual reports and accounts of the sampled companies. Annual reports and accounts of the sample companies were assessed from individual company's websites in addition to Nigerian Stock Exchange fact-book. The data involve those of the ownership structure and environmental disclosure of the sampled companies for the study period. The information collected were analysed using descriptive statistics, correlation and multiple regression techniques of data analysis in addition to some robustness tests carried out.

There are two sets of variables used in the study, namely, dependent and explanatory variables (independent and control variables). The dependent variable in this study is environmental disclosure and the independent variable in the study is ownership structure. Firm size, firm leverage and firm age are the control variables used in the study. Table 3.1 below presented the variable and their measurement;

Table 1: Variables of the study and Their Measurement

Variables	Code	Measurement
Dependent Variable: Environmental Disclosure	ED	When the EI consistent fully with GRI 3 When the EI partially consistent with GRI 2 Presence of EI not in compliance with GRI 1 No environmental information disclosure 0
Independent Variable:		
Foreign Ownership	FROWN	The percentage of the shares owned by foreigners to the total number of issued shares
Managerial Ownership	MNOWN	The percentage of shares owned by CEO and executive directors to the total number of shares
Block-holder Ownership	BLOWN	Percentage of owners with 5% or more to total share
Control variable		
Firm Size	FSIZE	Log of total assets
Leverage	LEV	Total debt divided by total assets.
Firm Age	FAGE	Number of Years passed since listing

Source: Generated by the Researcher from Empirical Literature, 2023

The study adopts the regression equations model to investigate the impact of the ownership structure variables on the level of environmental information

disclosure used in the study of Al Amosh and Mansor, (2020) with a modification as shown below:

$$EID_{it} = \alpha + \beta 0 + \beta_1 FROWN_{it} + \beta_2 MNOWN_{it} + \beta_3 BLOWN_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 FAGE_{it} + \varepsilon$$

Where:

EID = Environmental Information Disclosure
FROWN = Foreign Ownership
MNOWN = Managerial Ownership
BLOWN = Block-holder Ownership
FSIZE= Firm Size
LEV= Leverage
FAGE=Firm Age
ε = Error term
β0-4 = Coefficients
α = Constant

Results And Discussion

Robustness Tests of the Variables

Multicollinearity, Heteroskedasticity, Hausman specification and Breusch tests were carried out to increases the validity and reliability of the data. The result from the multicollinearity test shows the dearth of multicollinearity as the variance inflation factor (VIF), test value is less than 10 in the model of the study. Based on the test carried out, the VIF values ranged from 1.42 to 8.44 signifying absence of multicollinearity. Furthermore, the ability of independent variable to predict dependent variable is not negatively affected by relationship among independent variables in the study. Therefore, the outcome generated from the test of heteroskedasticity using Breush-pagan revealed that the p-value is 4% thereby indicating the presence of heteroskedasticity. Therefore, the presence of heteroskedasticity was corrected using OLS robust.

The Hausman Specification test was conducted to choose the preferred model between fixed effect and random effect regression models. The result obtained suggests that random effect model was the best option considering the p-value of 0.2455. The Breusch and langrangian multiplier test was also conducted to choose between random effect and robust OLS regressions. The result documented a P-value of 0.0000 for the model of the study, suggesting that random effect model is the most appropriate to use and hence was interpreted.

Table 2: Descriptive Statistics

Variables	Observation	Mean	Standard Deviation	Minimum	Maximum
ED	54	0.87	0.75	0	3
FROWN	54	0.28	0.33	0	0.79
MNOWN	54	0.54	0.25	0.2	0.92
BLOWN	54	5.9	0.83	0.16	0.98
FSIZE	54	7.42	0.85	6.05	8.98
LEV	54	0.65	0.25	0.24	1.18
FAGE	54	29.5	16.9	12	64

Source: Generated by the researchers using STATA 11.1

Table 2 present the descriptive statistics of the variables. The average disclosure of environmental information was 0.87, and the maximum and minimum disclosure of environmental information was 3 and 0. This in effect means that most of the construction companies in Nigeria, their environmental information is consistent with global reporting initiative and only few construction companies did not disclose their environmental information.

The mean of foreign ownership stood at 0.28, this indicate that an average of about 0.28 of the ownership of the companies belongs to foreign shareholders, also with a minimum and maximum values of 0 and 1 respectively, and a standard deviation of 0.33 which is low and above the mean suggests that there are low foreign shareholders in the listed construction companies in Nigeria.

Managerial ownership has a minimum of 0.2 which clearly signifies that, the minimum number of directors that owns shares in the construction companies is 0.2 while the maximum numbers of such directors are 0.92. The table 2 also shows that the mean of the block holder ownership of the listed construction companies within the study period is 5.9 and a minimum of 0.17 and maximum of 0.98, which implies that the minimum number of shareholders with 5% share and above are 0.17 and the maximum number of those shareholders are 0.98, with standard deviation of 0.25 meaning that the data deviate by 0.25%.

Firm size of the listed construction companies has an average of 7.4 with standard deviation of 0.86 and minimum value of 6.05 and 8.98 as the maximum value. The standard deviation of 0.86 implies that the data deviate from both side of the mean value by 0.86%. Leverage of the listed construction companies has an average of 0.66 with standard deviation of 0.26 and minimum value of 0.25 and 1.19 as the maximum value. The standard deviation of 0.26 implies that the data deviate from both side of the mean value by 0.26%. Firm age of the listed construction companies has an average of 29.5 with standard deviation of 16.20 and minimum value of 3 and 64 as the maximum value. This implies that the construction company with the minimum number of years listed in the Nigerian stock exchange is 12 years and the construction company with the highest number of years listed in the Nigerian stock exchange is 64 years.

Table 3: Correlation Matrix

Variables	ED	FROWN	MNOWN	BLOWN	FSIZE	LEV	FAGE
ED	1.0000						
FROWN	-0.3780	1.0000					
MNOWN	0.2277	-0.7765	1.0000				
BLOWN	0.0595	0.3211	-0.1337	1.0000			
FSIZE	-0.0516	0.1755	0.0131	-0.2952	1.0000		
LEV	-0.2255	0.8473	-0.9097	0.2502	0.0559	1.0000	
FAGE	-0.3278	0.1307	-0.4739	0.0194	-0.2791	0.3440	1.0000

Source: Generated by the researchers using STATA 11.1

Table 3 present the correlation result between ownership structure (foreign ownership, managerial ownership and block holder ownership) and environmental disclosure of listed construction companies in Nigeria. It can be seen from the result that there is a negative relationship between foreign ownership, firm size, leverage and firm age of the listed construction companies with environmental disclosure with the correlation coefficient of -0.3780, -0.0516, -0.2255 and -0.3278 respectively. Table 3 on the other hand shows a positive relationship between managerial ownership and block holder ownership with environmental disclosure with the correlation coefficient of 0.2277 and 0.0595 which is significant at 1%.

The presentation also shows the relationship between independent variables with one another which indicate that there is a negative relationship between managerial ownership and foreign ownership from the correlation value of -0.7765, also a positive relationship exists between block holder ownership, firm size, leverage and firm age with foreign ownership with the coefficient of 0.3211, 0.1755, 0.8473 and 0.1307 respectively. Furthermore, there is a negative correlation between block holder ownership, leverage and firm age with managerial ownership with the result value of -0.1337, -0.9097 and -0.4739, firm size has a positive relationship with managerial ownership with the correlation coefficient of 0.0131.

Block holder ownership have a negative relationship with firm size with the correlation coefficient of -0.2952 and also have a positive correlation with leverage and firm age with the correlation value of 0.2502 and 0.0194 respectively. Firm size has a position correlation with leverage with the coefficient of 0.0559 and a negative correlation with firm age with the coefficient of -0.2791. Leverage has a positive correlation with firm age with the coefficient of 0.3440 respectively.

Regression Result on EID and FROWN, MNOWN, BLOWN, FSIZE, LEV, FAGE

Table 4: Regressions Result (Random Effect Model)

EID	z	Coefficients	Stad err	p>/z/
FROWN	2.545087	.5379375	-4.73	0.000
MNOWN	-1.838723	.9336766	-1.97	0.049
BLOWN	1.388724	.6179408	2.25	0.025
FSIZE	.0661265	.1158412	0.57	0.568
LEV	.8443602	.9352941	0.90	0.367
FAGE	-.0247088	.00632	- 3.91	0.000
CONS	1.095834	1.407144	0.78	0.436
R-sq: Within				0.2148
Between				0.6622
Overall				0.4227
P-Value				0.0000

Source: Generated by the researchers using STATA 11.1

The cumulative adjusted R^2 is 21% (0.2148) which gives cumulative effect of all independent variables jointly on the dependent variable. This means that 21% of the variation in the EID is caused by foreign ownership, managerial ownership, block holder ownership, firm size, leverage and firm age while 79% of the variation in EID is caused by other factors not considered in the model of the study. This indicates that the model is fit and the explanatory variables are carefully selected considering the p-value of 0.0000.

Foreign Ownership and EID of Listed Constructions Companies in Nigeria

Table 4 above shows that foreign ownership has a negative and significant impact on environmental information disclosure of listed constructions companies in Nigeria. This suggests that the higher the number of foreign investors, the lower the level of environmental information disclosed by listed constructions companies in Nigeria during the study period. The likely reason for documenting this finding is that most of the foreign investors focused more on profit than disclosure of environmental information. This therefore negates the idea that foreign owners of shares protect their share investments by promoting social and environmental activities. The findings of this study align with the findings of razaq, et.al, 2022, Ogboro and Osazuwa, 2023. Hence, the result is inconsistent with the findings of Ginting, (2022) where a positive relationship was found. The result also is inconsistent with agency theory that companies having foreign investors tend to provide more information publicly thus reduce the information asymmetry (Jensen & Meckling, 1976).

Managerial Ownership and EID of Listed Constructions Companies in Nigeria

Managerial ownership has negative and significant impact on environmental information disclosure of listed constructions companies in Nigeria. This implies that the more managers own shares in the company the lower the level of environmental information that will be disclosed by the listed constructions companies in Nigeria during the study period. The possible reason for this finding is that the major concern of managers as owners of a firm is the financial information and to them non-financial information is not their major concern as the firm can generate profit. Moreover, the disclosure of both voluntary and mandatory information requires a lot of money, so, the more the disclosure of information including environmental information, the lower the profit that will be earned by the company. This can be a reason for managers who act as shareholders in the Nigerian listed constructions companies during the study period not to disclose environmental information. The findings of the study is not in agreement with agency theory and the findings of Sadiq and Mohammed (2017) and is in agreement with the findings of Razaq, *et.al*, (2022), Ogboro and Osazuwa, (2023), Dewi and Honggowati , (2023).

Block-holder Ownership and EID of Listed Constructions Companies in Nigeria

Block holder ownership has a positive and significant impact on environmental disclosure of listed constructions companies in Nigeria. This means that the higher the block- stock ownership, the higher the disclosure of environmental information among listed constructions companies in Nigeria during the study period. The possibility of documenting such finding can be as a result of those holding 5% of shares of listed construction companies in Nigeria are adequate enough to put pressure on the managers of the companies to engage in the disclosure of

environmental information in order to meet the demands of various stakeholders of the organisations. This corresponds to the perspective of stakeholders' theory that management is subject to pressure from stakeholders who have the largest share in the company (Juhmani, 2013), and management is subject to the control of major shareholders to reduce conflicts of interest (Strik,2011). The findings of the study tally with the findings of Razaq, *et.al*, (2022), Ogboro and Osazuwa, (2023), Dewi and Honggowati , (2023) and also with stakeholders' perspective that the owners of the pieces impose pressure on the company to disclose more information to satisfy the stakeholders. The finding of the study contradicts with that of that Al Amosh and Mansor, (2020).

Test of Hypotheses

Hypothesis 1 is stated in null form as "foreign ownership has no significant impact on EID of listed constructions companies in Nigeria." Findings from table 4 revealed that foreign ownership has a negative and significant impact on EID of listed constructions companies in Nigeria during the period of the study. This is evidenced by the coefficient of -2.545087 and p-value of 0. 000.This finding provides a basis of rejecting the stated null hypothesis.

Hypothesis 2 is stated in null form as "managerial ownership has no significant impact on EID of listed constructions companies in Nigeria." Findings from table 4 revealed that managerial ownership has a negative and significant impact on EID of listed constructions companies in Nigeria during the period of the study. This is evidenced by the coefficient of -1.838723 and p-value of 0. 049. This finding provides a basis of rejecting the stated null hypothesis.

Hypothesis 3 is stated in null form as "block-holder ownership has no significant impact on EID of listed constructions companies in Nigeria." Findings from table 4 revealed that block-holder ownership has a positive and significant impact on EID of listed constructions companies in Nigeria during the period of the study. This is evidenced by the coefficient of 1.388724and p-value of 0.025. This finding provides a basis of rejecting the stated null hypothesis.

Conclusion

The following conclusions are drawn from the findings of the study:

i. The findings of the study documented that foreign ownership has a negative and significant influence on EID among listed constructions companies in Nigeria.
ii. The findings of the study documented that managerial ownership has a negative and significant influence on EID among listed constructions companies in Nigeria.
iii. The findings of the study documented that block-holder ownership has a positive and significant influence on EID among listed constructions companies in Nigeria.

Recommendations

The following are the recommendations that are made based on the findings of the study;

i. The management of listed constructions companies in Nigeria should reduce the level of foreign ownership to improve the level of environmental practices.
ii. Managerial ownership in the listed constructions companies in Nigeria should be minimise to an average level to reduce the possible occurrence of opportunistic actions within the company by the managers to improve the extent of environmental information disclosure.
iii. The management of listed constructions companies should direct their attention more on how to increase the level of block-holder ownership because they can influence the managers to disclose more environmental information and consequently by reducing information asymmetry, which not only clarifies the conflicts of interests between shareholders and management but also makes management more accountable and increases profit in the long run.
iv. It is recommended that the federal Government of Nigeria and relevant regulatory agencies should make EID compulsory and also provide a guide for the disclosure to be robustly composed to cater for diverse interests of various stakeholder groups and for easy comparison.

Limitations and Future Directions

This study focused on constructions companies only; however, future studies on this area should consider other sectors of the economy especially in the listed non-financial companies in Nigeria such as the consumer goods companies, heath care firm, oil and gas etc. Since their operations is hazardous to the host communities. Furthermore, the study considered ownership structure only ignoring other aspects of corporate governance mechanisms such audit committee, board diversity.

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