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Effect of Corporate Attributes on Sustainability Reporting of Listed Non-financial Firms in Nigeria

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Abstract

The conventional accounting practice is predicated on the protection of overriding interests of wealthy capital providers. This is clearly demonstrated in the contents of general-purpose financial statements, which serves as a bastion of accountability and stewardship. This study examined the effect of corporate attributes on sustainability reporting of listed non-financial firms in Nigeria. The study measured corporate attributes with firms' attributes (firm size, profitability, leverage, liquidity), board attributes (board size, board independence, board gender diversity, board financial expertise) and ownership attributes (foreign, managerial, institutional, ownership concentration) and sustainability reporting measured by sustainability disclosures in line with Global Reporting Initiative (GRI) standards. The study adopted ex-post facto research design relying on secondary data obtained from annual reports of the population, which comprised of 116 non-financial firms listed on the Nigeria Exchange Group (NGX) as at 31st December 2020 with sample size of 51 firms, covering the period of 2011 – 2020. The study employed the use of multiple regression panel model to analyze the data using E-view 10 statistical tool. According to the results of random effect regression, profitability, liquidity, leverage, institutional ownership, firm size, foreign ownership, board size and board financial expertise have positive and significant effect on sustainability reporting. Based on the findings, the study concluded that corporate attributes can effectively enhance the sustainability reporting of firms. Thus, the study recommended among others that regulators in financial reporting should monitor corporate attributes in firms closely as a measure of enhancing sustainability reporting of listed non-financial firms in Nigeria.

Keywords: Corporate Attributes, Sustainability Reporting, Global Reporting Initiative, Non-financial Firms in Nigeria.

1.0 Introduction

Beginning from the Dark Ages through the Renaissance Period and up to the Industrial Revolution of the 18th Century, the conventional accounting practice is normatively predicated on the protection of overriding interests of wealthy capital providers. This is clearly demonstrated in the contents of general-purpose financial statements, which serves as a bastion of accountability and stewardship. However, the insufficiency of general-purpose financial reporting to meet both financial and non-financial disclosures requirements of various users of financial statements has created the vacuum of information asymmetric between the management and other stakeholders. Over the years, there has been clamoring from stakeholders demanding for enhanced accountability and disclosures about the operations of corporate organizations.

The financial performance objective of firms with its obsessed profit maximization goal as the sole yardstick of the organizational success at the expense of other stakeholders is misleading (Owen, 2008). This is because business as an open system, interacts with the environment on economic, social and governance (ESG) factors in its day-to-day operations. The environment is positively or negatively impacted by these activities. Thus, expectations that long-term profitability should go hand-in-hand with the protection of the interests of other stakeholders are gaining ground. Therefore, the profit maximization objective is not sufficient to satisfy the needs of various stakeholders in the business world. Often, firms have been challenged to account for their activities and impacts they exert on the environment.

Thus, disclosing non-financial information has over the years attracted the attention of many researchers. The need for sustainability reporting and disclosure by companies is more pronounced now more than ever before as ever-increasing number of companies and other organizations want to make their operations sustainable. Investors, consumers, creditors and other stakeholders alike are raising demands especially these days for corporate transparency and accountability to give more insight into financial reports. Hence, the perceived value of sustainability reporting is growing.

In literature, several corporate factors determine the nature, the extent and the frequency of sustainability reporting among organizations. In this study, firm attributes (firm size, profitability, leverage, liquidity), corporate ownership structure (foreign, managerial, institutional, ownership concentration) and board attributes (board size, board independence, board gender diversity, board financial expertise) are considered as enhancing corporate attributes of sustainability reporting. This study presents an evaluation of the strength of the theoretically identified corporate attributes in promoting sustainability reporting.

For instance, in firm attributes, size is considered as one of the firm attributes which influence sustainability reporting and disclosure. As large companies do more, they thus tend to exert more influence on the society, thereby attracting increased public attention which puts them under more pressure in relation to what steps they are taking to address sustainability issues. Thus, large and transnational companies are being encouraged to adopt sustainable practices and to integrate sustainable reporting and disclosures in their reporting cycles. Also, in order to assure investors and lenders, a high geared company tends to disclose more information to demonstrate its ability to pay its obligations (Ho & Taylor, 2013). Where there is high leverage, as opined by Sonia and Khafid (2020), it has a preponderance of reducing the firm's ability to bear cost associated with sustainability reporting and the negative outcomes from such reporting which may be potentially adverse, could be manipulated. Furthermore, firm performance can be used to determine sustainability reporting, as profitable companies could involve disclosing sustainability information to legitimize their operations (Legendre & Coderre, 2013). Studies often assume that profitability increases the firm's capability and flexibility to bear sustainability reporting costs and to cope with the resultant effect of disclosing possibly adverse information.

Again, board attributes such as the composition of the Board can significantly influence the level of sustainability disclosure. From the agency theory viewpoint, a greater number of directors on the board may contribute to the oversight functions of the Board, since larger boards tend to provide diversity in terms of expertise and more capacity for monitoring the management. To buttress this, Elzahar and Hussainey (2012) stated that the increased board size may lead to an increase in the number of directors who have financial or accounting expertise, which could bear positively on corporate sustainability reporting. Another major board mechanism that is widely investigated in the environmental disclosure literature is board independence. It is widely accepted that as the proportion of independent directors on the board increases, the effectiveness of the board in monitoring and controlling management is enhanced. From this perspective, independent directors may encourage companies to disclose more information to outside stakeholders.

In similar vein, Haladu and Salim (2016) opined that where ownership control is vested in local hands, sustainability reporting tends to be poor, whereas foreign ownership especially multinational corporations find it much easier to comply with sustainability disclosures requirements as a result of level of recognition they are viewed by the larger society. This is because sustainability disclosures by foreign ownership may be voluntary locally but might have been imposed as a financial reporting requirement by the regulators as part of regulatory and operating frameworks in the overseas headquarters. In this connection, it is imperative that companies should maintain relationships with their stakeholders, especially stakeholders who have power over the availability of resources used for companies' operational activities (Chariri & Ghozali, 2007). One of the strategies to maintain relationships with stakeholders is to ensure that the stakeholders are kept abreast about the operations of the companies by sustainability-related reporting that informs about economic, social, and environmental performance as part of overall corporate responsibility to stakeholders in the form of reports.

There is a plethora of studies in the areas of corporate attributes and sustainability reporting. Disclosure of non-financial information has over the years attracted the attention of many researchers. However, in the past considerable studies have been conducted disparately on the relationship that subsisted between either one corporate attribute or the other on sustainability reporting with mixed and inconclusive results in variables measurement or methodologies applied. Many studies have not explored the synergetic robustness of combining two or more corporate attributes could impact to explain the sustainability reporting. Thus, Aifuwa (2020); Onyinye and Chinelo (2019); Duarte-Atoche and Moreno (2019); Umuokoro et al. (2019); Oyedokun et al. (2019); Rabiu (2019); Yahaya (2018); Innocent and Gloria (2018); Whetman (2018); Elshabasy (2017); Ghuslan and Saleh (2017); Chariri et al. (2017); Oba and Fodio (2012) found nexus between corporate attributes such as firm characteristics, ownership structure, board characteristics, audit attributes, and sustainability reporting and disclosures.

This study is therefore motivated by the need to fill the gaps by exploring multiple variables measurement of corporate attributes by combining firm attributes, ownership attributes and board attributes to explain the dynamics of sustainability reporting lacking in many studies. Also, the sectorial peculiarity of non-financial sub sector strata of economy has not been widely covered using multiple variables and domesticating this research work to Nigerian environment. In this connection, the main objective of this study is to examine the effect of corporate attributes of firms, board attributes and ownership structure holistically on sustainability reporting of listed non-financial firms in Nigeria. The rest of this paper is organized as follows. Section 2 reviews the literature and present theoretical framework. Section 3 discusses the research methodology. Section 4 discusses the results. Finally, conclusions and recommendations are drowned in Section 5.

2.0 Literature Review

Firm Attributes and Sustainability Reporting

Adekanmi (2022) assessed the effect of firm's attributes on sustainability reporting of non-financial firms listed on the Nigerian Stock Exchange (NSE) between 2006 and 2020. The study population comprised of (113) listed non-financial firms. The sample size was made up of (76) listed non-financial firms out of the total population. Yero Yamane technique was employed in the determination of the sample size.

Secondary data was sourced from the audited financial reports of sample firms. Panel data least square multiple regression was employed for the analysis. The outcomes showed that profitability, firm size, and liquidity maintain positive and statistically significant relationships with sustainability reporting and assets tangibility has a negative and statistically significant relationship with sustainability reporting while age of the business has negative but not significant effect on sustainability reporting. The findings also show that growth rate, financial leverage, free cash flow and business risk have positive but no significant relationships with sustainability reporting of the sampled companies.

Onovo et al. (2022) investigated the effect of corporate characteristics on environmental reporting of beverage companies in Nigeria. Firm age, firm size and ROA were used to proxy corporate characteristics, while employee health and safety cost disclosures, waste management and remediation cost disclosure and donations and charity contribution cost disclosures served as proxies for the dependent variable – financial performance. The study selected all 3 companies out of four (4) quoted beverage companies in Nigerian Exchange Group (NGX) 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. E-view version 8 was applied in testing the hypotheses. The study showed that Sustainable firm age has a significant positive effect on employee health and safety cost disclosures, while firm size has a significant positive effect on waste management and remediation cost disclosure. The study also revealed that ROA has no significant positive effect on donations and charity contribution cost disclosures.

Abdusalam and Babangida (2020) investigated the significant effect of sales and firm size on sustainability reporting of oil and gas companies in Nigeria. The population of the paper consists of 24 oil and gas firms playing a major role in the upstream, midstream and downstream of the Nigerian oil and gas sector. Six of the companies were selected to form the sample size of the study for a period of fifteen years, from 2004 – 2018. Panel regression techniques were utilized to analyzed data obtained from annual accounts and stand-alone reports of the sample companies. The results showed that firm characteristics proxied by sales growth and leverage exert a negative significant effect, whereas firm size exerts a positive significant effect on sustainability reporting and profitability of oil and gas companies in Nigeria.

Board Attributes and Sustainability Reporting

Githaiga and Kosgei (2023) investigated the influence of board characteristics on sustainability reporting among listed firms in East Africa. The study uses a sample of 79 listed firms drawn from East African securities exchanges and data from 2011 to 2020. Sustainability reporting is measured using Global Reporting Initiative, and the data is analyzed by using three-panel data estimation models – fixed effect, random effect and the generalized method of moments. The results reveal that board gender diversity, board financial expertise and board independence are positively and significantly associated with sustainability reporting. Conversely, board size has a negative and significant effect on sustainability reporting.

Olayinka (2022) examined the impact of corporate governance on sustainability reporting of listed firms. This study explored the effect of corporate governance dimensions on sustainability reporting. The study adopted ex-post facto research design. The population of the study comprised 169 quoted companies on the Nigerian Stock Exchange (NSE) as at December 31, 2019. A sample of 42 quoted companies that had complete and relevant data for the period of study (2010-2019) was selected through stratified and purposive sampling techniques. Data were extracted from published audited annual reports of firms and

Global Reporting Initiative (GRI-4) performance indicators. Data were analyzed using descriptive and multiple regression. The findings revealed that corporate governance had positive and significant relationship with sustainability reporting of selected quoted companies in Nigeria. This implies that, board size, board independence, female directorships and board ownership are significant factors influencing changes in sustainability reporting. However, CEO duality does not significantly influence changes in sustainability reporting. The study concluded that corporate governance affects sustainability reporting.

Nguyen (2020) examined the relationship that subsisted between board attributes and sustainability reporting based on empirical evidence from German large listed firms between 2013 and 2016. The research utilized a regression model anchored on 388 observations from 97 German listed firms. The study found that there is a significant but negative relationship between board size and sustainability reporting. The study based its research on sustainability index on GRI sustainability reporting criteria.

Ownership Structure and Sustainability Reporting

Junias et al. (2020) studied the impact of managerial ownership on sustainability accounting in Indonesia between 2015 to 2019, using a moderated regression analysis to find out the relationship between the variables of the study. The study found that managerial ownership has a positive and significant effect of sustainability accounting. The study explained the existence of managerial ownership playing an important role in achieving sustainability reporting disclosures. But the study revealed that managerial ownership is capable of interfering with the operations of free cashflow for the benefits of social environmental sustainability.

Ali and Isa (2018) examined the impact of ownership attributes (managerial ownership, institutional ownership and blocking) on environmental, social and governance (ESG) disclosures, based on exploratory review of literature. The study found that managerial ownership, institutional ownership and blocking holding have influence on firms' corporate social responsibility (CSR) disclosure. The study is rich in corporate attributes variables, the study revealed inconsistent results of both positive and negative impact, necessitating a need for further studies to validate the study in a greater depth.

Mgammal (2017) investigated the effect of ownership structure of managerial ownership, family and government ownership on voluntary disclosure of non-financial firms listed in Saudi Arabia for the year 2009, utilizing multiple regression model. The population of the study consists of 89 companies listed on the Saudi Stock exchange as at 2009. Relying on secondary data, the study collected data from annual reports of the sampled companies. The study proxied ownership structure with managerial ownership, government ownership, and family ownership) on voluntary disclosure. The study found that all the independent variables have a positive effect on voluntary disclosure. However, the study was limited to 2009 when the data was collected. This study therefore presents a more current information in terms data and country validation as this study is carried out in Nigeria.

Theoretical Framework

This study relied and anchored on agency (Jensen & Meckling, 1976), legitimacy (Dowling & Pfeffer, 1975) and Stakeholders' theories (Edward Freema, 1984). These theories offer most suitable theoretical explanations of the relationship that subsists between corporate attributes of firm, board and ownership attributes on sustainability reporting and disclosures. The theories described above are related and relevant theories to this research work (i.e. agency, legitimacy and stakeholders' theories). While the investors and shareholders have every right and legitimacy to profit for risks taken by putting together other factors of production such as Land, Capital and Money in line with Legitimacy theory, however, this should be realized without usurping the rights of other stakeholders. Stakeholders' theory recognizes the individual rights of all stakeholders in the community and that each and every one can benefit without hurting one another. This study therefore anchors on the agency, legitimacy and stakeholders' theories.

3.0 Methodology

This study adopted a descriptive *ex post facto* research design. The purpose of this approach to research was to establish causal or functional relationships among variables to examine the effect of corporate attributes relying on secondary data from the population of the study. The population of this study comprises of 116 listed non-financial firms listed on the floors of Nigerian Exchange Limited (NGX) cutting across 13 sub-sectors in the economy for a 10-year period between 2011 and 2020. The study used Tero Yamani's sampling technique to determine the sample size of 51.

Table 1: Population and Sample Size of the Study

S/N	Sector	Number of Firms	Computation	Number of Firms Selected
1	Agriculture	5	5/116*51	2
2	Conglomerate	6	6/116*51	3
3	Consumer goods	23	23/116*51	10
4	Industrial goods	13	13/116*51	6
5	Healthcare	10	10/116*51	4
6	Technology	9	9/116*51	4
7	Real Estate and construction	9	9/116*51	4
8	Oil and Gas	12	12/116*51	5
9	Services	25	25/116*51	11
10	Natural resources	4	4/116*51	2
Total		116		51

Source: Researcher's computation, 2022.

Model Specification and Variables of the Study

The model of the study is stated as:

$$SUS_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 LEV_{it} + \beta_3 PROF_{it} + \beta_4 LIQ_{it} + \beta_5 MOit + \beta_6 OC_{it} + \beta_7 IO_{it} + \beta_8 FO_{it} + \beta_9 BZ_{it} + \beta_{10} BI_{it} + \beta_{11} BG_{it} + \beta_{12} BF_{it} + \varepsilon_{it} \quad (1)$$

Where

SUS = sustainability reporting;

β_0= is the intercept;

β_1-β_{12}= are the parameters estimate or coefficients in equation

ε = error term.

FS = firm size

LEV = leverage

PROF = profitability

LIQ = liquidity.

MO = managerial ownership

OC= ownership concentration

IO= institutional ownership
FO = foreign ownership
BZ = board Size
BI = board Independence
BG = board gender/diversity
BF = board financial expertise.

Derivation of Sustainability Reporting

The simple average Sustainability Reporting indices were arrived based on Global Reporting Initiative (GRI) Sustainability Reporting Guidelines and Criteria for Economic, Social/Environmental and Governance (ESG) indicators as captured in GRI Standards on 51 disclosure items in the annual reports and financial statements of quoted non-financial firms in Nigeria. For each disclosure, a score of 1 mark was awarded while non-disclosure attracts 0 score. A ratio of the total score obtained to the total expected score (51).

4.0 Results and Discussion

Multicolinearity

The tolerance values and the variance inflation factor (VIF) are two good measures of assessing multicollinearity between the independent variables in a study. The VIF result of the study is presented in Table 2.

Table 2: Variance Inflation Factor

Variable	VIF	I/VIF
PROF	1.262898	0.041690
OC	1.670359	0.018310
MO	1.755390	0.160318
LIQ	1.955004	0.003554
LEV	1.028720	0.010908
IO	1.399411	0.010286
FS	1.686436	0.000285
FO	1.417230	0.037290
BZ	1.989155	0.000045
BI	1.364750	0.143038
BG	1.280080	0.001834
BF	1.545774	0.008738
Mean VIF	**1.529600**	

Source: E-view 10 Output, 2022.

Table 2 shows that variance inflation factors were consistently smaller than ten (10) indicating complete absence of multicollinearity (Neter et al., 1996; Cassey et al., 1999). This shows the suitability of the study model been fit with the three independent variables. Also, the tolerance values were consistently smaller than 1.00, therefore extend the fact that there is complete absence of multicollinearity between the independent variables (Tobachmel & Fidell, 1996).

Table above presents the variance factor (VIF) and tolerance coefficients of each of the explanatory variables. A rule of thumb is that if VIF is >10, then multicollinearity is high. Since the multicollinearity is less than 10, it indicates that there is no multicollinearity problem which is good for this study. It is observed that the collinearity diagnosis revealed a VIF well below 10, a tolerance above 0.2. This shows that there is no threat of multicollinearity or independent errors. Researchers suggested that multicollinearity does not constitute a problem when the VIF does not exceed 10 and when the tolerance for each of the variable is above 0.2 (Wasserman & Kutner, 1990).

Ramsey Reset Test

Table 3: Ramsey RESET Test

Equation: UNTITLED
Specification: SUS PROF OC MO LIQ LEV IO LOG(FS) FO BZ BI BG BF C
Omitted Variables: Squares of fitted values

	Value	Df	Probability
t-statistic	1.422109	37	0.1634
F-statistic	2.022394	(1, 37)	0.1634
Likelihood ratio	2.714106	1	0.0995
F-test summary:	Sum of Sq.	Df	Mean Squares
Test SSR	0.008640	1	0.008640
Restricted SSR	0.166712	38	0.004387
Unrestricted SSR	0.158072	37	0.004272
LR test summary:	Value		
Restricted LogL	73.57856		
Unrestricted LogL	74.93561		

Source: E-view 10 Output, 2022.

Table 3 above shows that the value of F-test is 2.022394 with probability value of 0.1634. Since the computed *p-value* is greater than the alpha which is 0.05. Therefore, this study accepts the null hypothesis that the true specification is linear. This means that there is no misspecification error in the model.

Hausman Specification Test

Table 4: Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.600492	12	0.6510

Source: E-view Output, 2022.

The Hausman Specification Test indicates that Random Effect Model is most appropriate to Fixed Effect Model given the *P-value* of 0.6510 which is more than the critical value of 0.5.

Random Effect Model Regression Results

This constitutes the summary of the multiple panel regression results obtained from the model using Random effect regression. The results show individual effect of firm size, profitability, liquidity, leverage, managerial ownership, ownership concentration, institutional ownership, foreign ownership, board size, board independence, board gender diversity and board members' financial expertise on sustainability reporting and finally the overall effect of corporate attributes on sustainability reporting of listed non-financial firms in Nigeria. This is presented in Table 5.

Table 5: Random Effect Regression Results

Variable	Coefficient	Standard Error	t-statistics	Prob
C	0.243070	0.108378	2.242803	0.0254
PROF	0.120938	0.048680	2.484327	0.0204
OC	0.011191	0.040702	0.274945	0.7835
MO	-0.013055	0.025523	-0.511488	0.6092
LIQ	0.193503	0.069408	2.787920	0.0102
LEV	0.128106	0.021208	6.040456	0.0000
IO	0.028106	0.005452	5.154978	0.0000
FS	0.029731	0.003292	9.031287	0.0000
FO	0.136693	0.030054	4.548246	0.0006
BZ	0.111261	0.012223	9.102593	0.0000
BI	0.001067	0.106637	0.010008	0.9920
BG	0.008822	0.014939	0.590558	0.5551
BF	0.120688	0.013528	8.921348	0.0000
R^2	0.517			
Adj. R^2	0.496			
F-Statistics	5.504			
Prob(F-Statistics)	0.0068			
Hausman P-value	0.651			
Lagrange Multiplier Test	0.0014			
Normality Test	0.905			
Heteroskedasticity Observed R-square	0.1687			
Serial Correlation LM Test	0.0737			

Source: E-view Output, 2022.

Discussion of Findings

Profitability as one of the indicators of firm attributes was found to have significant positive effect on sustainability reporting of listed non-financial firms in Nigeria. This can be observed from the coefficient of 0.120938 with *p value* of 0.0204. The positive effect of profitability is as a result of the positive coefficient of profitability, the *p value* is less than 0.05 t value, this leads the study to accept the alternative hypothesis that profitability has significant positive effect on sustainability reporting of listed non-financial firms in Nigeria. This shows that companies that make profits have the motivation to engage in sustainability reporting. This means that the higher the level of profitability, the higher the level of sustainability report.

This finding agreed substantially with the study of Maryana and Carolina (2021), Sonia and Khafid (2020), Antara, Putri, Ratnadi and Wirawati (2020), Thomas, Aryusmar and Indriaty (2020); but contradicts the empirical works of Doktoralina et al. (2018); Chamo (2020). This finding supports the stakeholder theory which states that companies are not entities that only operate for their own interests; however, they must provide benefits to their stakeholders and the legitimacy theory which states that the company can survive if the surrounding community feels that the company conducts business activities in accordance with the values held by the community.

Liquidity was found to have positive significant effect on sustainability reporting of listed non-financial firms in Nigeria. The coefficient value of liquidity is 0.193503 with *p-value* of 0.0102. This shows that if the level of a firm liquidity increases, the sustainability report disclosure will also increase. Firms with high levels of liquidity show great ability to pay their short-term obligations on time. Strong financial conditions will encourage companies to disclose more information as an instrument to convince stakeholders, namely by publishing activities related to social and environment through disclosure of sustainability report. This finding is in line with the Doktoralina et al. (2018); works of Aswi and Nurul (2019). This finding supports the Resource Dependence Theory, liquid assets are a resource to the firm and it determines the firm ability to engage in sustainability reporting.

The panel regression shows that leverage possesses significant positive effect on sustainability reporting of listed non-financial firms in Nigeria. The coefficient of leverage is 0.128106 with p-value of 0.0000. This indicates that firms with large leverage will have large debts and therefore disclose more information on sustainability. This finding supports the work of Thomas, Aryusmar and Indriaty (2018); Chamo (2020). This finding supports stakeholders' theory because debt holders are critical stakeholder of the firm and they deserve high level of information on sustainability of the firm.

Firm size was found to have positive significant effect on sustainability disclosure of listed non-financial firms in Nigeria. The coefficient of firm size is 0.029731 with p-value of 0.0000. It means that big firms have the resource and the technical know-how to disclose information pertaining to sustainability in their financial reports. The bigger a firm is, the more information it will disclose on sustainability issues. This finding supports the work of Modugu and Eragbe (2017); AbdulSalam and Babangida (2020). But contradicts the work of Aswi and Nurul (2019); Thomas et al. (2020); Chamo (2020). This finding also supports Agency Theory, Legitimacy Theory, and Resource Dependence Theory.

Ownership concentration was found not to have significant effect on sustainability disclosure of listed non-financial firms in Nigeria. The coefficient of ownership concentration is 0.009089 with p-value of 0.8137, the *p-value* is greater than the significance level of 0.05. This allows the study to accept the null hypothesis which states that ownership concentration has no significant effect on sustainability reporting of listed non-financial firms in Nigeria.

The inability of ownership concentration to significantly increase sustainability reporting could be as a result of ownership dispersion, firm ownership is not concentrated in the hands of a few, therefore, shareholding control tends to be weak because of poor shareholder monitoring. Small shareholders are unlikely to be interested in monitoring because they would bear all the costs of monitoring, hence, share a small proportion of the benefits. Hence, no monitoring of managerial efforts would take place.

Dispersed ownership lacks both the means and the motive to address managerial agency problems. In jurisdictions with dispersed ownership, in which principals are typically both unwilling and unable to act as effective monitors, the market controls are the primary controlling forces that keep managers in check. However, when ownership of a company is concentrated, large shareholders would play an important role in monitoring the management. This finding is inconsistent with those of Junias, Suharto and Elim (2020), Yusuf, Fodio and Nwala (2018); Ali and Isa (2018). This finding is contrary to the agency theory which stated that a concentrated ownership causes a better monitoring environment. This means that concentrated ownership functions could lead to a reduction of agency problems. This finding supports stakeholder theory and legitimacy theory, shareholders are critical stakeholder in a business, and firms disclose sustainability information in order to appease this critical stakeholder.

Managerial ownership has no significant effect on sustainability reporting of listed non-financial firm in Nigeria. This study found that managerial ownership does not influence sustainability reporting significantly, this could be as a result of the fact that managerial ownership allows managers to dominate the company and decide which strategies and policies the company will take because in this case the manager also acts as a shareholder. However, the proportion of managerial ownership is not significant to influence sustainability reporting significantly. This finding contradicts the works of Yusuf, Fodio and Nwala (2018); Ali and Isa (208); Malik, Ahsan and Khan (2017); Mgammal (2017). This finding aligns with stewardship theory, legitimacy theory and agency theory. Managerial shareholder report on sustainability information in order to tell the investing public that they are conducting the business in a legitimate manner, also, report on sustainability issue in order to give stewards of their activities to the investors.

Institutional ownership was found to have significant positive effect on sustainability reporting of listed non-financial firms in Nigeria. This is because shares of most corporations are owned by institutions rather than individual. Many institutional investors fulfill an active monitoring function within the corporate governance system due to their main shareholder influence, strategic goals, and increased financial experience and expertise, Also, institutional investors invest in firms that engage in high level of disclosure on sustainability because investors want to know about the sustainability issues as it pertains to firms, they want to invest in. This finding supports the work of Yusuf, Fodio and Nwala (2018) and contradicts the works of Ali and Isa (2018); Malik, Ahsan and Khan (2017); Mgammal (2017). This finding supports stakeholder theory.

Foreign ownership showed significant positive effect on sustainability reporting of listed non-financial firms in Nigeria. This means that foreign investors stake in domestic firms that take the issue of sustainability reporting serious. Foreign investors are interested in firms that disclosure sustainability information. This finding supports the work of Malik et al. (2017) and also align with agency and stakeholder theories.

The panel regression result revealed that board size has significant positive effect on sustainability of listed non-financial firms in Nigeria. This indicates that large board improves sustainability reporting of listed non-financial firms in Nigeria This finding is in line with the works of Alkabas (2016); Muhammed, Huanping and Fizzah (2017); Ghuslan and Saleh (2019); Hanem, Bassem and Jabr (2020). This finding is in line with agency theory.

Board independence shows an insignificant effect on sustainability reporting of listed non-financial firms in Nigeria. Independent board has nothing to do with sustainability reporting of listed non-financial firms in Nigeria. This finding is inconsistent with the findings in previous study of Ghuslan and Saleh (2019); Hanen, Bassem and Jabr (2020). This finding does not align with agency theory because an independent board is supposed to ensure full disclosure of sustainability information.

The panel regression model again shows that board gender diversity has no significant effect on sustainability reporting of listed non-financial firms in Nigeria. The inclusion of women on the board does not translate to increase in sustainability reporting. This finding is contrary to the studies of Hanem et al (2020); Baalouch, Damak and Khaled (2019).

Based on the regression result, board members' financial expertise has significant positive effect on sustainability reporting. This means that sustainability reporting increases with the increase in board members financial expertise of listed non-financial firms. Result shows that the higher the ratio of accountant and financial expert in the board, the greater is the ability of companies to produce more sustainability reports. It is evident that corporate boards should have members who are proficient in areas of accounting, auditing, and finance. The knowledge in those areas is necessary in meeting the main responsibility of the board committee which includes monitoring of financial reporting, auditing, and internal control. The qualification in the area of accounting or auditing helps the board to understand corporate reporting. This finding also supports agency theory because the quality of the board in terms of their knowledge of accounting and finance will improve their quality of work which translates to improve sustainability reporting.

5.0 Conclusion and Recommendations

Attempt has been made in this study to examine the effect of corporate attributes on sustainability reporting of listed non-financial firms in Nigeria. This study concludes that firm attributes significantly determine the extent and level of sustainability reporting of listed non-financial firms in Nigeria. The study offers the following recommendations based on the findings of the study:

i. Regulators such as Financial Reporting Council (FRC) of Nigeria, Nigerian Exchange Group (NGX), Corporate Affairs Commission (CAC), Central Bank of Nigeria (CBN) and other regulators should monitor corporate attributes of firms closely as a measure of enhancing and monitoring the extent of sustainability reporting of listed non-financial firms in Nigeria.
ii. Listed non-financial firms should have board members with adequate knowledge in financial reporting expertise should be appointed into the board. Likewise, the board membership should be robustly composed. Hence, it is recommended that non-financial firms should reasonably have a sizeable board which might contain individuals with diverse competences including accounting and finance.
iii. The Federal Government of Nigeria through relevant regulatory authorities to have a harmonized sustainability reporting for all listed firms for the purpose of comparability, uniformity and transparency.

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