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Corporate Attributes and Sustainability Reporting: A Study of Nigerian Listed Companies

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ABSTRACT

Sustainability has become a global concern in recent years. Academics, organizations and governmental agencies worldwide are making concerted efforts in finding solutions toissues confronting this menace.This paper examines the corporate factors influencing sustainability reporting of listed companies in Nigeria. Four dimensions of the corporate attributes were investigated, namely: firm size, profitability, board size and board diversity. The methodology adopted was *ex post facto* and content analysis.Data was collected from secondary sources in particular, annual reports of companieslisted on the Nigerian Stock exchange as at April 2022. From a total population of 163, a sample of 137 companies were drawn using purposive sampling technique. Eligibility was based on online presence and availability of data. Regression model was used in analyzing the data with sustainability reporting as the dependent variable and corporate attributesas independent variables. Sector, a dichotomous variable was used to control the model, with 1 representing banking and 0 otherwise. The results revealedthat firm size, board size, board diversity and sector have positive and significant relationship with sustainability reporting, whereas profitability has negative and insignificant relationship. In conclusion, firm size, board size, board diversity and sector are the important determinants of sustainability reporting in Nigeria. It is hereby recommended that adequate legislations should be put in place to mandate the listed Nigerian companies to adopt sustainability reporting practices.
Keywords: SustainabilityReporting, Listed Nigerian Companies, Corporate Attributes

INTRODUCTION

Stakeholders now demand better knowledge on how environmental, social and economic impacts are taken into account in businesses as well as how firms are obliged to comply with daily reporting [1,2,3]. Companies generally publish disclosures relating to social and environmental issues through their traditional annual reports [4,5,6]. However, stand-alone sustainability reports have become increasingly important channels to communicate sustainability issues and initiatives.Standalone reports like the sustainability reporting have emerged in the mainstream among large and listed companies. Many stakeholders, including shareholders, customers, governments, financial regulators, and stock exchanges are paying more attention to the performance oforganisations in view of their non-financial impacts [7,8,9]. An increasing amount of financial institutions and businesspartners demand a clear assessment and articulation of thecompany's sustainability performance. The Central Bank of Nigeria mandated all banks to adopt the Nigerian Sustainable Banking Principles in 2012 [10,11]. Also, Nigeria's apex capital market regulator, the Securities and Exchange Commission (SEC) adopted the Nigerian Sustainable Finance Principles (NSFP) developed by the Financial Services Regulation Coordinating Committee (FSRCC) for the capital market in 2021 [12,13,14]. The objective of SEC was to ensure that the participants in the market operate in a transparent and sustainable manner.While the impact of sustainability reporting is not debated, the quality and scope of sustainability reporting has been called into question [15,16]. Several factors have emerged as shaping the content and depth of sustainability report. It becomes essential to ascertain what factors are impacting and deciding company sustainability reports [17,18,19]. Some of the identified factors are, company size, financial performance, industry,company age, leverage, ownership, board size, presence of women on the boardand number of meetings [20,21]. Literature has reported mixed evidence concerning the factors that could affect companies' attitude toward sustainability reporting.It is also unclear the nature of effect these factors have on sustainability, whether it is positive or negative. Failure to ascertain the factors shaping sustainability reporting by companies will mean a failed opportunity in evaluating the within effects of sustainability reporting. In this regard, this study contributes to literature by ascertaining the factors influencing sustainability reporting of listed companies on the Nigerian Stock Exchange. Specifically, the study sought to determine the influence of firm size, profitability, board size and board diversity on sustainability reporting of listed companies in Nigeria.

Based on the above arguments the following hypotheses were formulated:

Ho_1: Firm size, profitability, board size and board diversity jointly have significant effect on sustainability reporting of listed companies in Nigeria.

Ho_2:Firm Size has a significant effect on sustainability reporting of listed companies in Nigeria.

Ho_3:Profitability has a significant effect on sustainability reporting of listed companies in Nigeria.

Ho_4:Board Size has a significant effect on sustainability reporting of listed companies in Nigeria.

Ho_5:Board Diversity has a significant effect on sustainability reporting of listed companies in Nigeria.

Review of Related Literature

This study was hinged on Stakeholder and Agency theories. The stakeholder theory pioneered by Edward Freeman in 1984 explains why a firm may voluntarily choose to provide sustainability information to meet stakeholder concerns [22,23,24]. The stakeholder groups are diverse with varied views on the firm activities, thus firms aim to harmonise their relationships with stakeholders by voluntarily disclosing sustainability information so as to reduce the associated costs (taxes, fees and fines) and derive certain incentives such as subsidies and grants [25,26]. For example, Nakabiito&Udechukwu (2008) established that a general attitude towards sustainability reporting and the willingness of a firm to reach more than one stakeholder group are the most significant factors influencing the level of disclosure. Sustainability information is thus a critical component employed by firms in managing stakeholder relationships [27,28]. Therefore, stakeholder theory views communication of sustainability activities as a means to respond to significant pressures from stakeholders groups [29,30]. The Agency theory advocated by [31] supports existence of principal-agent relationship, whereby shareholders as principals, appoint management as agents for the day to day operations of organizations. There are possibilities of conflicts between the shareholders and management because of their heterogeneous interests. [32] is of the view that sustainability reporting may be adopted as management quality assessment tool. Management have discretion in the level of information they disclose and may try to use this information to display to their shareholders/stakeholders that they are acting optimally. To reduce information asymmetries, companies disseminate value-relevant information to a variety of stakeholders [33]. Agency theory also purports that companies enhance voluntary disclosures to avoid potential pressures and costs from regulatory bodies [34]. Thus, from the agency theory perspective companies voluntarily publish sustainability reports to reduce agency costs, to mitigate information asymmetries, and to avoid pressure from regulatory bodies. Literally, sustainability means the capacity to maintain existing status into the future. The concept also connotes improving and sustaining a healthy economic, ecological and social system for future generation [34]. Sustainability can simply be defined as a business approach to creating long-term value by taking into consideration how a given organization operates in the social, economic, and ecological environment and built on the postulation that developing such strategies foster organizationlongevity [35]. Increasing demand for corporate accountability and transparency about the impact of corporate decisions on the environment and society as a whole has given rise to the concept of Sustainability Accounting and Reporting [7]. Sustainability accounting is defined as the sub-branch of accounting which handles the activities, methods and systems of the business to record, analyze and report firstly the financial effects caused by environmental and social factors, secondly the ecological and social effects of a defined economic system (business, production facility, etc.) and maybe the most important one, the interactions and relationships between social, environmental and economic issues constructing three aspects of sustainability [8]. Sustainability reporting enables organizations to report on environmental and social performance. It is not just report generation from collected data; instead it is a method to internalize and improve an organization's commitment to sustainable development in a way that can be demonstrated to both internal and external stakeholders.

Sustainability reports have been serving as a fundamental communication tool between organizations and their stakeholders, focused on environmental and social performance [14]. Sustainability reports have provideda vital tool for organizations to provide transparentcommunication with their stakeholders, especially aboutorganizations' social and environmental performance.Some authors argue that sustainability reports also havebeen influencing the decision-making processes of differentstakeholders, concerned not only with economic aspectsbut also with environmental and social aspects [11]. Sustainability reporting and disclosure on environmental, social, and governance (ESG) issues is increasing globally. In 2011, 20 percent of S&P 500 companies published sustainability reports; by 2019, that number reached 90 percent. This dramatic increase reflects how sustainability reporting is increasingly seen as a way for companies and their stakeholders to see a changing world more clearly and create long-term value [20]. The demand for increased transparency and accountability in the private sector by markets both in developed and developing countries of the world is growing. Globalization as well as the potential health and environmental risks posed by companies and the goods and services they produce, are increasing pressure on them to generate, assess, and make information on their sustainability performance and impacts publicly available.

The Nigerian Code of Corporate Governance Principle 26, advocates that the board should project Companies as responsible corporate citizens bypaying attention to sustainability issues. These should include social, environment, occupational and community health and safety issues to ensure successful business performance. The Board is expected to make full and comprehensive disclosure of sustainability issues and ensure proper monitoring of its implementation which engenders good corporate governance practice [12]. Corporate Sustainability Reporting represents a potential mechanism to generate data and measure progress and the contribution of companies towards global sustainable development objectives. It can also help companies and organizations measure their performance in all dimensions of sustainable development, set goals, and support the transition towards a resource efficient and inclusive green economy [26]. The title and scope of such reports have varied considerably, including ''sustainability reports'', ''social reports'', ''corporate social responsibility reports'', ''social and community reports'', and ''environmental reports'' [27]. There has also been factors that has impacted the quality and scope of sustainability report disclosures by companies. Some of these factors as identified by this study are sector (industry), firm size, leverage and profitability.

A major corporate attribute that might influence sustainability reporting is firm size [29] Firm size is usually measured by the value of a company's asset and investment. Firm size is one of the most frequently used factors to understand the disclosure behaviors of companies. A considerable number of empirical studies have suggested a positive association between firm size and corporate social and environmental disclosures [30]. The explanation for this positive association has many factors. First, larger companies face tremendous pressure to disclose their social activities from wider stakeholder groups due to their high public visibility [17]. Large companies are more politically visible and attract more concern from governments, the general public, and other stakeholders. Large companies are more likely to create greater social problems because of their scale and excellence. Size also tends to affect acompany's strategic response to stakeholder demands [19]. Sustainability reporting impacts on performance, this includes profitability. Profit is the net income derived from the deduction of revenue generated by the business from all related expenses. Profitablity is mostly measured by the return on assets (ROA) and return on equity (ROE). [12] pointed out that if a company is profitable in its operations, it can afford to disclose more information. More so, profitable companies are subject to higher public scrutiny than their counterparts, and this leads them to engage in activities contributing to sustainable development. Further, profitable companies tend to publish additional information to signal success to the capital market [11]. The larger the company in expressing sustainability reporting, the greater is the firm performance [18]. Based on stakeholder theory, sustainability initiatives including sustainability reporting impact positively on financial performance [18]. This is related to the reputation of the company. Board size is the number of directors on the Board of a company. There is no explicit law on the exact members that constitute a board but the Nigerian code of corporate governance states that the Board should be of a sufficient size to effectively undertake and fulfil its business of overseeing, monitoring, controlling and directing the Company's activities and should be relative to the scale and complexity of its operations [7]. Boardsize induces less optimal monitoring processes in company governance as the size increases [9]. The empirical studies show mixed results for the relationship between board size and sustainability reporting.There seems to be no clear consensus in the existing literature regarding this. Agency theory argued that the larger the board size, the less effective the communication, controlling, monitoring and decision-making [14]. [18], claim that larger board size is detrimental to governance efficiency [12] are of the view that a smaller board size are more effective. They make communication more efficient, resulting in increased accountability and commitment On the contrary, [8] are of the view that, a smaller board represents a higher workload for each board member, which may reduce their ability to monitor and control effectively [13] opined that smaller boards have less diversified expertise as compared to larger boards, which may affect the quality of their decision making.

Board diversity has been interpreted in several ways that usually relate to diversity in the board composition in terms of gender. [17] claimed that the presence of women on the board as a measure of diversity have been found to be positively associated with corporate social responsibilities. Williams argue that women are more sensitive towards philanthropic initiatives and CSR in general. [19] noted that women are more socially orientated than men. More women on the board may push the board members to develop effective stakeholder management by meeting a wider range of customers' expectations. This could lead to better corporate decision-making and economic performance. [23] finds a positive relationship between a high share of female directors and sustainability reporting. With respect to sector, different industrial sectors have different characteristics, due to potential growth, employment opportunities, competition, and government interference which has the capacity to influence the quality and scope of sustainability reporting [27]. Furthermore, the industrial environment, location and prevalent business practice including the composition of its stakeholders all play a role in the content and practice of sustainability reporting. Industrial sector is used as the control variable.

For over a decade, researches on corporate attributes and sustainability reporting had gained attention worldover. [29], examined the effect of sustainability disclosure on firm value of selected listed deposit money banks in Nigeria. Using data drawn from ten banks, for the period 2014-2018. They used content analysis to elicit data from the audited reports and accounts, to measure sustainability using three dimensions (environmental, social and economic). Descriptive tools and ordinary least square fixed-effects regression were used for analysis. The results showed that banks with high overall sustainability tend to have low firm value. Also it was seen that social sustainability showed positive impact while economic sustainability was insignificant. It was also seen that environmental sustainability disclosures were detrimental, rather than beneficial, to firm value. They conclude that sustainability reporting of deposit money banks in Nigeria only legitimises their operations rather than enhancing the firm value. [21] investigated the value-oriented business intelligence using the voluntary disclosure of sustainability reports. Using three approaches, Latent Dirichlet allocation (LDA, firm's sustainability maturity. and empirical analysis to conduct content analysis, estimate the statistical significance and the extent of their relationships.The study also analyzed the influence of the firm's sustainability strategic intent on financial performance. A data set of 680 firms in 3 years was used in conducting the study. Results indicate that, external stakeholder engagement is the primary motivation behind voluntary disclosure of sustainabilityreporting. They also found that discussion on social engagement activities is likely to increase a firm's strategy switching behavior and also sustainability initiatives on environmental issues can increase firms' financial performance. [23] examined the sustainability reporting practices and financial performance of listed Oil and Gas firms in Nigeria. Using content analysis they evaluated the texual contents of the sustainability reports of the firms using the GRI Standards. Findings show that major oil companies do not report sustainable environmenal performance adequately. The firms' disclosure practices fall short of the globally accepted GRI Standards [27]. Implementation laxity is most notable in the firms' disclosures in the materials, biodiversity, energy used and environmental compliance and assessment. The results showed firms disclose substantially the social impacts of their activities on the employees, local communities and customers. The results also show that there is sustainability implementation laxity concerning sustainable economic performance, most especially the financial implications due to climate change and other risks and opportunities. They concluded that most firms have not fully embraced the GRI Standards. [7] examined the determinants of environmental sustainability disclosure of Saudilisted companies. The research study utilized the content analysis approach using a sample of 119 listed non-financial companies. The determinants investigated were size, age, profitability, type of industry, leverage, board size, independence and annual number of meetings. The findings reveal that profitability, company size, the type of industry and company age are important determinants of environmental sustainability for Saudi non-financial companies He concluded that factors related to the identity of a group of companies might influence the disclosure for such type of companies, particularly when the disclosure is voluntary in nature. [8] assessed the impact of sustainability reporting on the financial performance of listed Deposit Money Banks in Nigeria from 2012 to 2018. The sample of the study were seventeen deposit money banks out of the twenty one quoted on the Nigerian Stock Exchange as at December, 2018. Data were collected from audited annual financial statements and sustainability reports of the selected Deposit Money Banks for the period of study. Specifically, the study focuses on the economic, environmental and social dimensions of sustainability reporting using "Return on Assets", "Return on Equity" and "Earnings per Share" as proxies for financial performance.The descriptive and least squares regression analysis were adopted for the study.The results show that social and economic dimensions of sustainability exerts positive and significant influence on performance of Nigerian banks, while the environmental sustainability exerts positive but insignificant influence. The study concludes that enabling legislations should be put in place to mandateenhanced sustainability practices among all deposit money banks in Nigeria as well as facilitatemeaningful evaluation and measurement of earnings, social and environmental impacts in all areas ofbank operations in Nigeria.

[12] investigated the factors that influence the adoption of new sustainability reporting practices and external assurance. They used a sample of 366 large Asian and African companies which have addressed the Sustainable Development Goals (SDGs) of Global Reporting Initiative (GRI) in their sustainability reports published in 2017.The study used logit and regression models in analyzing the data. The results reveal that operating in themanufacturing sector and having a higher percentage of women directors are positively related to the adoption of sustainability reporting. They also discovered, contrary from previous studies, that age of the company's board of directors does not have influences on the use of sustainability reporting. [22] assessed sustainability reporting practices in seven universities in the regions of China. An integrated framework was used to evaluate the sustainability reporting of these universities. Content analysis and comparative approaches was adopted. The results show that all of the sampled universities in the seven regions displayed sustainability information on their official websites to a large extent but none of them published explicit sustainability reports. It was discovered that South China University although have the lowest average ranking, performed much better than the other universities in the seven regions of China. They also found that the environmental dimension of sustainability was mostly significant. It was concluded that government should pay attention to sustainability reporting of universities and also encourage the sustainable development of the urban environment. [8] reviewed literatureon sustainability reporting and firmperformance in developing climes. Measures used mainly as proxies for financial performance include return on assets, return on equity, earnings per share and dividend per sharewhile proxies for sustainability reporting are the fourth version of the Global Reporting Initiative (GRI) framework which was used in calculating sustainability disclosure index. Findings revealed thatsustainability disclosure level was low in developing climes comparedto other developed climes. Alsoextant literature showed that there were inconclusivefindings on the impact of sustainability reporting on firm performance. It was discovered that a large number of works found positive relationship between sustainability reportingand firms' performance.

The study by [9] analyzed the factors impacting sustainability information (integrated or in separate reports) in Swedish organizations. They used a sample of 45 out of 50 State-owned Enterprises (SOE) and found that state ownership and corporate size have significant influence on state-owned enterprises' sustainability disclosures. Fully state-owned enterprises disclose fewer sustainability disclosures thanpartially state-owned enterprises, and small size firms disclose less amount of sustainability than the bigger ones do. Moreover, they reported that presence of state representatives on the board of directors and profitability concern affect the disclosures positively, while gender diversity affects the disclosures negatively. [7], investigated the level and factors that influence the corporate sustainability reporting in public listed companies in Malaysia for the year 2016. They postulated that type of industry and ownership structure (board, familyand institutional holdings) influence the level of sustainability reporting. Findings showed that women on board is positively significant in explaining sustainability reporting Findings also indicated a significant relationship between industry and the level of sustainability reporting among listed firms in Malaysia.. Results also showed that institutional ownership, director ownership and family ownership do not reveal a significant association with sustainability reporting. In summary, from the literature reviewed, it was observed that since sustainability is a global phenomenon and various studies had been conducted on this context in developing and developed countries such as United States of America [8,9]. However, the Nigerian based studies considered only individual sectors, such as banking sector and oil sector [9]. All the companies listed on the Nigerian Stock Exchange as not been considered as a whole, to the best of the researcher's knowledge. Moreover, literature has reported mixed evidence concerning the factors that could affect companies' attitude toward sustainability reporting.It is also unclear the nature of effect these factors have on sustainability, whether it is positive or negative.

METHODOLOGY

The research design was*ex-post facto*and content analysis. Annual reports and corporate website of companies were the main sources of data. The choice of the *ex-post facto* design was based on the fact that the data required from the annual reports are historical. Content analysis was used in extracting data from both the annual reports and the corporate websites of sampled companies. The population of the study consistedof 163 listed companies on the Nigerian Stock Exchange (NSE) on 1st of April, 2022. These comprise of firms from the oil and gas (11), banking (13) other financial services(38), service (25), ICT (10), construction and real estate (8), industrial goods(14), natural (4), consumer goods (20). health (10), agriculture (5) and conglomerate (5) sectors. This sample size was determined using purposive sampling technique since this technique allows the researcher to select the units based on the presence of the company online and availability of financial report for 2020. The sample size of 137 companies was eventually selected which comprises of oil and gas (9), banking (13) other financial services (28), service (22), ICT (9), construction and real estate (6), industrial goods (13), natural (3), consumer goods (16). Health (8), agriculture (5) and conglomerate (5). The study used secondary data which were extracted from the website in April 2022 and the annual reports of the sampled companies. Due to delay in the posting of online annual reports for 2021, the year 2020 financial statements was used for all companies. The measurement of the variables are as shown in Table 1.

Table 1: Measurementof Variables.

Type	Variable	Measurement	Source	*Apriori*Expectation
Dependent	Sustainability (SUS)	Sustainability score divided by maximum possible score (3)	Official websites and annual report	
Independent	Firm Size(LOGTA)	Log of Total Assets	Annual report	Positive
	Profitability (PRO)	Return on Assets	Annual report	Positive
	Board Size (LOGBS)	Log of Board Size	Annual report	Negative
	Board Diversity(BDIV)	Ratio of female directors to board size (BDiv)	Annual report	Positive
Control	Sector (SEC)	1 for Banking, 0 otherwise		Positive

Source (Researchers compilation, 2022)

The dependent variable was sustainability reporting while the independent variables based on corporate characteristics, were, firm size, profitability, board size and board diversity. The control was sector,1 for Banking, and 0 otherwise, banking sector being the most regulated sector in Nigeria. Sustainability is scored as follows: if Sustainability report is fully disclosed on web page and also contained in the annual report a company is scored 3; if Sustainability report is partially disclosed on web page and contained in the annual report a company is scored 2; if Sustainability report is not disclosed on web page but contained in the annual report a company is scored 1; and if Sustainability report is not disclosed on web page and not contained in the annual report a company is scored 0. The dependent variable which is the level of sustainability reporting is then measured as the sustainability score divided by the maximum possible score (3). All the independent variables data were extracted from the annual reports. The regression model was stated in line with the variables of the study:

$Sus_{it} = \beta_0 + \beta_1 LOGTA_{it} + \beta_2 PRO_{it} + \beta_3 LogBS_{it} + \beta_4 BDIV_{it} + \beta_5 SEC_{it} + \varepsilon_t$ Equation (1)

In line with the objectives of the study, the above stated model (3.1) was decomposed into the following:

$SUS_{it} = \beta_0 + \beta_1 LOGTA_{i,t} + \beta_2 SEC_{it} + \varepsilon_t$ Equation (2)

$SUS_{it} = \beta_0 + \beta_1 PRO_{i,t} + \beta_2 SEC_{it} + \varepsilon_t$ Equation (3)

$SUS_{it} = \beta_0 + \beta_1 LOGBS_{it} + \beta_2 SEC_{it} + \varepsilon_t$ Equation (4)

$SUS_{it} = \beta_0 + \beta_1 BDIV_{it} + \beta_2 SEC_{it} + \varepsilon_t$ Equation (5)

Where: i = Companies; t= Year 2020; β_0= intercept; β_1, β_2, β_3, β_4, β_5= Coefficient of independent and control variables; ε_t= error terms.

Descriptive statistics, correlation and multiple linear regression modelwereadopted for data analysis.Descriptive statistics include mean, minimum, maximum, and standard deviation. Regression analysis includes Adjusted R-squared, t-Statistics, Durbin-Watson Statistics, Variance Inflation Factor (VIF), Tolerance and P-value. The level of significance is 5%.

Data Analysis and Discussion of Findings

Table 2: Descriptive Statistics for the Variables

Variables	Number	Minimum	Maximum	Mean	Std. Deviaton
Sustainability	137	0	1	0.2696	0.35147
Total Assets	137	N110m	N8,679,747m	N460,151m	N1,482,976
Profitability	137	-0.44	6.17	0.0587	0.54408
Board size	137	4	16	8.6058	2.9290
Board Diversity	137	0	0.67	0.1837	0.1455

Source: Researcher's Computation (2021)

The descriptive statistics of the variables are presented in Table 2. The descriptive statistics were mean, median, maximum, minimum and standard deviation. The minimum level for sustainability is 0 while the maximum is 1.The mean is 0.2696 with a standard deviation of 0.35147. This shows that the level of sustainability reporting is low at the Nigerian stock exchange with an average of only 27%. The minimum total assets (firm size) of the sampled listed was ₦ 110m while the maximum value was ₦8,679,747m. The average total assets (firm size) was₦ 460,151m. The standard deviation of total assets (firm size) which shows the degree of dispersion was ₦1,482,976. It was observed that the least firm size is in the consumer goods sector while the maximum firm size is in the banking sector. The profitability of the companies was proxied by Return on Assets (ROA). The minimum ROA was seen as -0.44 (ICT) while the maximum was 6.17 (consumer goods), the mean ROA was 0.06, while the standard deviation was 0.54. The board sizehad minimum value of 4 members, maximum value of 16 members, a mean value of about9 members and standard deviation of 2.93.This indicated that the listed entities in average had board size of about 8 membersand a minimum of 4 members. The board diversity which is measured by the ratio of female board members total number of directors shows an average of 0.18 with a minimum of 0 and maximum of 0.67. The standard deviation is 0.15. This shows that the female members of the board constitute only 18% of the board members on the average. This is quite too low. It shows that there was gender disparity among board members.

Table 3: Correlation Analysis

	Sustainability Reporting	Log of Firm Size	Profitability	Log of Board size	Board Diversity	Sector
SUS	1					
LOGTA	0.612**	1				
PRO	-0.040	-0.174*	1			
LOGBS	0.442	0.597**	-0.028	1		
BDIV	0.248**	0.232**	-0.033	0.181*	1	
SEC	0.580**	0.608**	-0.026	0.356**	0.174*	1

** Correlation is significant at 0.01 level, * Correlation is significant at 0.05 level

Source: Researcher's Computation (2021)

The simple correlation of each of the variables were computed and presented as depicted on Table 3. The relationship between the variables were all below 0.612. The relationship between sustainability reporting and the independent variables, that is,log of firm size, profitability, log of board size, board diversity and sector were 0.612**, -0.040, 0.442, 0.248** and 0.580** respectively. Log of firm size shows a correlation of -0.174*, 0.597**, 0.232** and 0.608** withprofitability, log of board size, board diversity and sector respectively. Profitability correlates negatively with log of board size (-0.028), board diversity (-

0.033) and sector (-0.026). The correlation between log of board size and board diversity was 0.181*; while with sector was 0.356**. The relationship between board diversity and sector was 0.174*.

Table 4. Regression Analysis

Model	Variable	Beta	t-Stat	p-value	Tolerance	VIF	R^2	F Ratio	DW
Model 1	CONSTANT	-0.868	-4.247	0.000			0.463	22.564 (0.000)	1.624
	LOGTA	0.111	3.444	0.001	0.437	2.287			
	PRO	0.021	0.503	0.616	0.951	1.052			
	LOGBS	0.259	1.390	0.167	0.636	1.573			
	BDIV	0.231	1.452	0.149	0.942	1.062			
	SEC	0.385	3.967	0.000	0.623	1.606			
Model 2	CONSTANT	-0.782	-3.996	0.000			0.443	53.392 (0.000)	1.585
	LOGTA	0.137	5.074	0.000	0.631	1.586			
	SEC	0.394	4.064	0.000	0.631	1.586			
Model 3	CONSTANT	0.205	7.859	0.000			0.337	34.080 (0.000)	1.641
	PRO	-0.016	-0.346	0.730	0.999	1.001			
	SEC	0.692	8.237	0.000	0.999	1.001			
Model 4	CONSTANT	-0.353	-2.351	0.020			0.400	44.642 (0.000)	1.657
	LOGBS	0.624	3.759	0.000	0.873	1.145			
	SEC	0.579	6.764	0.000	0.873	1.145			
Model 5	CONSTANT	0.139	3556	0.001			0.359	37.512 (0.000)	1.706
	BDIV	0.367	2.162	0.032	0.970	1.031			
	SEC	0.662	7.884	0.000	0.970	1.031			

Source: Researcher's Computation (2021)

From Table 4, Model 1 indicated that R^2 was 0.463. This means 46.3% changes in Sustainability reporting can be explained by the influence OF LOGTA, PRO, LOGBS, BDIV and SEC. With the F-ratio of 22.564, R^2 was observed to be significant in the model. The null hypothesis, which states that firm size, profitability, board size, board diversity and sector does not jointly and significantly influence sustainability reporting of listed companies in Nigeria, was rejected and the alternative hypothesiswas accepted. Thus, corporate attributes have a significant influence on sustainability reporting of quoted entities in Nigeria when considered together. Model 2 showedthe relationship between firm size and sustainability reporting of listed companies in Nigeria .R^2 indicated that 44.3% variation in sustainability reporting(SUS) was caused by the influence of firm size (LOGTA) and Sector (SEC). The F-ratio of53.392computed showed that R^2 was significant in explaining the influence ofLOGTAand SECon SUSof the quoted entities in Nigeria. Firm Size (t=5.074, p=0.000) and Sec (t=4.064, p=0.000) had positive and significant influence on SUS ($p<0.05$) of the listed entities in Nigeria. This was because the t-statistics computed was found to be significant in the model. This was in line with the *apriori* expectation stated. This showed that an increase in LOGTA brought about 44.3% increase in SUS for the period of study. The constant value of -0.782indicated the value of SUS when LOGTA and SEC were zero and was significant ($p<0.05$). The null hypothesis, which stated that firm size does not significantly influence sustainability reporting of the listed companies in Nigeria, was rejected and the alternative hypothesis, which stated that firm size significantly influence sustainability reporting of the listed companies in Nigeria, was accepted on the basis of the computed values of t-statistics being greater than 1.96 and p-value being less than 0.05 level of significance. Model 3 showed the relationship between profitability and sustainability reporting of listed companies in Nigeria. R^2 indicated that 33.7% variation in sustainability reporting (SUS) was caused by the influence of profitability (pro) and Sector (Sec). The F-ratio of 34.080 computed showed that R^2 was significant in explaining the influence of PRO and SECon SUSof the quoted entities in Nigeria. PRO (t=-0.346, p=0.730) had negative and insignificant influence(p>0.005) while and SEC (t=8.237, p=0.000)had positive and significant influence on FP (p<0.05) of the listed entities in Nigeria. The negative significance of profitability was not in line with the *apriori* expectation stated. The null hypothesis, which stated that profitability does not significantly influence sustainability reporting of the listed companies in Nigeria, was not rejected. Model 4highlighted the influence of board sizeonsustainability reporting of listed companies in Nigeria. R^2 showed a 40% variation in sustainability reporting (SUS) was caused by the influence of board size (LOGBS) and Sector (SEC). The F-ratio of 44.642 computed showed that R^2 was significant in explaining the influence of LOGBS and SECon SUS of the quoted entities in Nigeria. LOGBS (t=3.759, p=0.000) and SEC (t=6.764, p=0.000) had positive and significant influence on SUS (p<0.05) of the listed entities in Nigeria. T-statisticscomputed (3.759) was found to be significant in the model, which is contrary with the *apriori* expectation earlier stated. The constant value of-0.353indicated the rate of SUS when LOFBS and SECwere zero and was significant (p<0.05). The null hypothesis, which stated that board size does not significantly influence sustainability reporting of the listed companies in Nigeria, was rejected and the alternative hypothesis, which stated that board size significantly influence sustainability reporting of the listed companies in Nigeria, was accepted on the basis of the computed values of t-statistics being greater than 1.96 and p-value being less than 0.05 level of significance. The result of Model 5 showed that board diversity significantly influences sustainability reporting of listed companies in Nigeria . The R^2 showed that 35.9% variation in sustainability reporting(SUS) was influenced by board diversity (BDIV) and Sector (SEC). The F-ratio reveals a significant value of 37.512(p<0.05). The t-statistics reveal positive and significant influence of BDIV (t = 2.162, p = 0.032) and SEC(t=7,884. p = 0.000)on SUS (p<0.05) of the listed entities in Nigeria. This was in line with the *apriori* expectation stated. The constant value of 0.139 indicated the rate of SUS when LOGTA and Sec were zero and was significant (p<0.05). The null hypothesis, which stated that board diversity does not significantly influence sustainability reporting of the listed companies in Nigeria, was rejected and the alternative hypothesis, which stated that board diversity significantly influence sustainability reporting of the listed companies in Nigeria, was accepted on the basis of the computed values of t-statistics being greater than 1.96 and p-value being less than 0.05 level of significance.

DISCUSSION OF FINDINGS

Result of analysis reveals the firm size, profitability, board size, board diversity and sector jointly and significantly influence sustainability reporting of listed companies in Nigeria. Firm size represented by log of total assets, indicated positive and significant influence on the sustainability reporting of the listed companies in Nigeria.This implies the larger the firm size the higher the disclosure of sustainable activities [8,9]. Findings are in line with the studies of [7,9]. The latter opined that larger companies face tremendous pressure to disclose their sustainable activities to stakeholders due to their high public visibility. Profitability represented by return of assets (profit for the year divided by total assets) showed negative and insignificant influence on sustainability reporting of the listed companies in Nigeria. This was at variance with the *apriori* expectation. This results contradicts the stakeholder theory, which assumes that sustainability reporting impact positively on financial performance [15,18]. The results of this model are at variance with the studies of [12,17], that revealed that profitability is a determinant of sustainability for Saudi Arabian companies. Board size proxied by the log of board size shows positive and significant relationship with sustainability reporting of listed companies in Nigeria. This result supports the results of [9], who found a significant relationship between the board size and the extent of environmental disclosure. On the other hand, this result is inconsistent with the results reported by [18], arguing that the board size does not affect sustainability reporting.Board diversity represented by the ratio of female directors to total directors showed a positive and significant influence on sustainability reporting of listed companies in Nigeria. This result is consistent with the studies of [19] who states that percentage of women directors are positively related to the adoption of sustainability reporting. The control variable, sector (SEC) which was a dichotomous variable, 1 representing banking while 0 for otherwise reveals a positive and significant influence on sustainability reporting for all the models as seen on Table 3.This was because the banking sector is the mostly regulated sector in Nigeria.All the banks complied with the Central Bank of Nigeria CBN) sustainable principles. The Nigerian Sustainable Banking Principles was adopted and implemented by all banks as directed by CBN in 2012.

CONCLUSION AND RECOMMENDATIONS

The main objective of the study was to examine the influence corporate attributes on sustainability reporting of listed companies in Nigeria. The core variables for liquidity management used in this study were firm size, profitability, board size and board diversity. Sector was used as the control variable. Results from the studies show that firm size, board size, board diversity and sector have positive and significant influence on sustainability reporting individually and jointly. Profitability has negative and insignificant relationship with sustainability reporting. Hence, it is hereby concluded that firm size, board size, board diversity and sector are the important determinants of sustainability reporting in Nigeria. Profitability is therefore not a good determinant of sustainability reporting in Nigeria. It is hereby recommended that Securities and Exchange Commission (SEC) and Financial Reporting Council of Nigeria (FRCN) should enforce the Sustainable Financial Principles for the Nigerian capital market. Adequate legislations should be put in place by these regulatory bodies to mandate all sectors and companies listed on the Nigerian Stock Exchange to adopt and implement sustainability reporting practices. Listed companies should consider enlarging the membership of the board of directors and female directors should be given utmost priority. Sustainability committee should be established by the Board of listed companies, which focuses on sustainability issues and thereby improve sustainability reporting practices.

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