

Corporate Governance Mechanisms and Sustainability Reporting Practices of Listed Non-Financial Firms in Nigeria

Abubakar Garba Razaq*
Abdulkarim Alhassan
Paul Martins Omole

Department of Accounting, Nasarawa State University, Keffi, Nigeria

**Correspondence Email : razaqabubakar123@gmail.com*

<https://doi.org/10.33003/fujaf-2023.v1i3.50.1-18>

Abstract

The Board plays a pivotal role in the administration of corporate affairs. An effective Board oversight function basically consists of proper mechanisms for providing entrepreneurial and strategic leadership as well as promoting ethical values that allow stakeholders to exercise their rights to protect their investments' sustainability. This study examined the effect of corporate governance mechanisms on sustainability reporting of listed non-financial firms in Nigeria. The study measured corporate governance attributes with board size, board independence, board gender diversity, board financial expertise and sustainability reporting was measured by sustainability disclosures metrics in line with Global Reporting Initiative (GRI) standards. The study adopted correlation research design relying on secondary data obtained from annual reports of the population, which comprised of 116 non-financial firms listed on Nigeria Exchange Group (NGX) as at 31st December 2020 with a sample size of 51 firms, covering the period of 2011 - 2020. The study employed multiple regression panel model to analyze the data with the aid of E-view 10 statistical tool. According to the results of random effect regression, board size and board members' financial expertise have positive and significant effect on sustainability reporting. Based on the findings, the study concluded that corporate governance attributes have the capacity to effectively enhance the sustainability reporting of firms. Thus, the study recommended among others that regulators in financial reporting should mandate firms to have a sizeable board with members having financial expertise as a measure of enhancing sustainability reporting in Nigeria.

Keywords: Corporate Governance Mechanisms, Sustainability Disclosure Metrics, Board Size, Board Financial Expertise, Non-financial Firms in Nigeria.

1.0 Introduction

Corporate governance is a system by which an organization is managed and controlled. Sound corporate governance is the driver for corporate transparency and accountability. The Board of Directors, being at the center piece of corporate governance and the highest governing body, plays a pivotal role in the administration of corporate affairs. An effective board oversight function basically consists of proper mechanisms for providing entrepreneurial and strategic leadership as well as promoting ethical values that allow stakeholders to exercise control over management and aims at creating an optimum balance among different economic, individual and social goals and increase transparency (Sharif & Rashid, 2014; Khan, 2010).

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.

The relationship that subsists between corporate governance mechanisms and sustainability reporting practices has been established in the literature; several corporate factors determine the nature, the extent and the frequency of sustainability reporting among corporate entities (Chalaki et al., 2014). In this study, corporate governance mechanisms (board size, board independence, board gender diversity and board financial expertise) are considered as enhancing corporate governance attributes of sustainability reporting. This study presents an evaluation of the strength of the theoretically identified corporate governance attributes in promoting sustainability reporting.

As an important determinant of board effectiveness (Allegrini & Greco, 2013; Amran et al, 2014), board size can be seen as a crucial corporate governance mechanism that may influence the level of corporate voluntary disclosure, including environmental disclosure. On the other hand, both the theoretical and empirical literature provide contradictory explanations regarding the relationship between board size and sustainability practices. From the agency theory perspective, conflict of interests exists in governance among various interest groups; this is expected to be aligned and balanced by directors, who represent the interest of shareholders (Jensen & Meckling, 1976). But Uwuigbe et al. (2011) argued that the greater number of directors on the board, the better it bears positively on the board in terms of diversity in terms of expertise and more capacity for monitoring management. Furthermore, Elzahar and Hussainey (2012) stated that the increased board size may lead to an increase in the number of directors who have a financial or accounting background, which could have a positive influence on corporate environmental disclosure.

Another major corporate governance mechanism that is widely investigated in the environmental disclosure literature is board independence (Khan et al 2013; Amran et al, 2014). The board of directors generally consists of dependent and independent members. Thus, from an agency theory perspective, 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 also increases (Jizi et al., 2014; Liao et al., 2015). It is also argued that as independent directors are less aligned to management, they can be seen as a balance mechanism to ensure that companies act in the best interests of shareholders, other stakeholders and society generally (Sharif & Rashid, 2014). From this point of view, independent directors may encourage companies to disclose more information to outside stakeholders. Therefore, a positive relationship between board independence and environmental disclosure can be expected (Michelon & Parbonetti 2012).

Also, the importance of board members education and expertise in the area of their oversight function cannot overemphasized. This importance is reiterated in the Nigerian Code of Corporate Governance (NCCG) 2018. The expertise criteria were specified in Nigeria by the 2011 and 2018 SEC Codes, 2006 Post consolidation CBN code amongst other codes. These codes specify that at least, a member of the audit committee must possess financial management and accounting knowledge. The US SEC also has a similar condition as it expects that firms must have at least one per-son with financial expertise.

A number of studies have been conducted in the areas of corporate governance attributes and sustainability reporting. Thus, Obeitoh et al. (2023); Aifuwa (2020); Onyinye and Chinelo (2019); Duarte-Atoche and Moreno(2019); Umuokoro et al. (2019); Oyedokun et al. (2019); Yahaya (2018); Innocent and Gloria (2018); Whetman (2018); Elshabasy (2017); Ghuslan and Saleh (2017); Chariri et al. (2017);

Mohammed et al. (2014); Oba and Fodio (2012) found nexus between corporate governance mechanism such as board attributes, audit attributes, firm characteristics, ownership structure, and sustainability reporting and disclosures.

However, a few studies have investigated the relationship between board characteristics, firms' characteristics, audit attributes, board attributes or firm value on corporate social responsibility, environmental accounting and sustainability disclosures in Nigeria focused on oil and gas, services and financial services subsectors. It has been noticed that sectoral peculiarities of non-financial firms have not been given wide coverage and due attention as many studies concentrated on services, oil and gas industries. Thus, the sectoral peculiarities of non-financial firms have not been given its due wide coverage and due attention. Non-financial firms are an amalgam of more than 13 different sectors, providing a platform for sustainability disclosures practices.

This study is therefore motivated by the need to fill the gaps by exploring corporate governance attributes on sustainability reporting of listed non-financial firms in Nigeria. In this connection, the objective of this study is to examine the effect of corporate governance mechanism 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 presents theoretical framework. Section 3 discusses the research methodology. Section 4 discusses the results. Finally, conclusions and recommendations are drawn in Section 5.

2.0 Literature Review

Concept of Sustainability Reporting

Evidence from the review of extant literature has shown that there is a plethora of definitions and concepts of Sustainability Disclosures. Thus, there is no universally accepted definition of Sustainability Reporting. Conceptual focus and definitions, empirical emphasis and theoretical frameworks of Sustainability Disclosures cut across the countries, geographies and literary appreciation depending on the level of environmental, economic, governance and social development of countries and priorities of social concerns being considered.

Although, according to United Nations Environment Programme (2016) Sustainability Reporting is an amorphous expression, a terminology which is having different meanings to different people such that there is no generally accepted definition of Sustainability Reporting as a number of definitions have been identified. Saji (2014) defined sustainability reporting as a systematic tool for putting together and presenting sustainability information need for the process of management, and is also useful to stakeholders. In his own definition, Uwuigbe et al. (2018) define sustainability reporting as "a tale disseminated by a firm about the environmental, social and societal efforts brought about by its ordinary exercises. A sustainability reporting also shows the firm's quantities and management model and exhibits the connection between its procedure and its duty to an economical worldview.

Empirical Review

Board Size and Sustainability Reporting

Adebayo et al (2023) investigated the influence of board and board composition on voluntary disclosures of quoted manufacturing firms in Nigeria within the period of 2015 to 2019, sampling 33 firms listed companies. The study found positive and statistically significant relationship between board size and board composition on the level of voluntary disclosures of firms in the quoted manufacturing companies in Nigeria. However, the duty did not cover other corporate governance mechanism such as board financial expertise and board independence on voluntary disclosures of firms. This study considers

corporate governance mechanism and board attributes of size, composition, gender and financial expertise.

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 board size had positive and significant relationship with sustainability reporting of selected quoted companies in Nigeria. This implies that, board size, is a significant factor influencing changes in 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. This deepened research in the role of the board on the extent of sustainability reporting and contributed to the literature in this area.

Similarly, Ghuslan and Saleh (2019) examined the influence of Board characteristics on sustainability reporting in selected industries in Malaysia, using systematic random sampling method. The study found that board size has influence on sustainability reporting of industries in Malaysia. The study provides an insight into the literature of sustainability reporting and board characteristics.

Board Independence 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 independence are positively and significantly associated with sustainability reporting of firms.

In their studies, Modozie and Amahalu (2021) examined the effect of Board Structure on Sustainability Reporting of listed Industrial Goods firms in Nigeria for a period of nineteen years (19) spanning from 2002-2020. Specifically, this study ascertained the effect, board independence, on environmental sustainability reporting. The panel data sets used in this study were obtained from annual reports and accounts and Nigerian Exchange Group (NGX) fact books for the study period. The specific findings showed that board independence has a significant and positive effect on environmental sustainability reporting; female board representation has a significant and positive effect on environmental sustainability reporting; number of board meetings has a significant and positive effect on environmental sustainability reporting.

Razaq et al. (2019) evaluated the effect of board attributes on environmental disclosure quality of quoted industrial goods companies in Nigeria. The study measured board attributes with board independence. The study adopted correlation research design relying on secondary collected from the population,

industrial goods companies quoted on the Nigerian Stock Exchange for the period 2010 -2019. The study used multiple regression analysis to test the hypotheses. The study found insignificant relationship of board independence as an independent variable to the extent of environmental disclosures of firms.

Wang (2017) examined the impact of board characteristics on sustainability disclosures in Taiwan. The study employed a multi-regression model to assess the relationship between firms' characteristics and the disclosure of sustainability reporting for the Taiwanese 50 index listed companies. The study found that corporate governance characteristics such as board size, independent directors, audit committee have positive correlation and influence on the sustainability reporting disclosure. Although, the study supported the notion that stakeholder's involvement is related to the disclosure of sustainability reporting.

Muhammad et al. (2017) studied the link between corporate governance characteristics and sustainability disclosure of listed companies in Pakistan. Using a sample of 179 financial and non-financial sectors for duration of 2009 to 2015 with the use of Binary logistic regression. The results reveal that board size, number of meetings and board independence are significant corporate governance characteristics to establish the link with sustainability disclosure.

Board Gender Diversity and Sustainability Reporting

Hanan et al. (2020) investigated the effect of gender diversity on governance, environmental and ethics disclosure of listed firms in France. Board characteristic of gender diversity was used as explanatory variable. The study was based on a sample of 82 companies listed in the SBF120 in France between 2012 and 2017. A number of econometric techniques are used such as generalized least squares to test the panel regressions. The study showed that board independence has a positive and significant influence on governance, environmental and ethics disclosures of firms. However, the study covered a period ended 2017, even though the work was published in 2020, the time lag requires an update in literature.

Baalouch et al. (2019) inquired into the impact of various variables impacting on sustainability reporting and environmental disclosures with the use of Pearson correlation matrix. The study found that gender diversity plays significant roles in explaining variables in quality of environmental disclosures in France. The study presents a good framework for the research work in sustainability reporting.

Adeniyi and Fadipe (2018) examined the effect of board diversity on sustainability reporting in the Beverage manufacturing firms in Nigeria. The study employed ex-post facto research design which was based on a panel data regression analysis. The study found that board gender diversity does not significantly affect sustainability reporting as a result of the low level of number of women on the boards of the sampled population. They study exposed the research's perspectives on the board diversity of women partial participation in the board and by extension in the area of sustainability reporting.

Grace et al. (2018) examined the influence of board characteristics on the environmental disclosure quality of listed firms in two leading emerging economies in Africa, that is, Nigeria and South Africa, using a multivariate regression model. The study found that a positive significant association existed between board characteristics and environmental disclosures in South Africa and less relevant association with companies in Nigeria. The study was apt in using a methodology useful in explaining the relationship between sustainability reporting and board characteristics.

Ali and Isa (2018) investigated the impact of board attributes such as board size, board composition and gender on corporate disclosures, based on exploratory review of environmental, social and governance

(ESG) literature. The study found that board attributes have influence on firms' corporate social responsibility disclosure. The study is rich in corporate attributes variables, the result show both positive and negative impact, necessitating a need for further studies to validate the study in a greater depth.

Board Financial Expertise and Sustainability Reporting

Awodiran (2019) examined the effect of board financial expertise on sustainability disclosure of listed industrial goods firms in Nigeria, using ordinary least square regression model. The study finds that board financial expertise is a very important factor determining and affecting the level of corporate sustainability reporting and disclosures among listed industrial goods companies in Nigeria. The study elaborated the key elements of sustainability reporting and disclosures such as economic, social and governance issues.

Umukoro et al. (2019) investigated the impact of board expertise on sustainability reporting in listed banks in Nigeria. The study examined the influence of environmentally sensitive, certified or highly educated board members on the disclosure of sustainability reporting. Using panel data regression of 10 deposit money banks in Nigeria for a 3-year period of 2014 and 2016, the study found that highly educated board members are capable of making constructive influence on sustainability reporting disclosures in the course of providing their board oversight functions on the management. The study espoused governance attributes of board characteristic to explain sustainability reporting.

AbuRaya (2017) investigated the relationship between sustainability reporting and disclosures and corporate governance (board attributes) characteristics such as director and board members status, gender and expertise (education level) in the Spain using logistic regression analysis. The study found that a relationship exists between environmental corporate disclosure and corporate governance attributes (board characteristics) in the distinct nature of corporate environmental disclosure items. The study gave a rich literature review framework.

Shamil et al. (2014) studied the influence of board characteristics on sustainability reporting as evidenced from firms listed on the Colombo Stock Exchange (CSE), Sri Lanka. The study used stratified random sampling of 148 companies in Sri Lanka. The study found that board size and dual leadership are positively associated with sustainability reporting. The study represented very good research on sustainability reporting as regressed with board characteristics.

Barros et al. (2013) evaluated the relationship between corporate governance mechanism and sustainability disclosure of listed firms in France for the period of 2006-2013. The study employed panel regression techniques. The results show a positive significant between frequency of board meetings and sustainability disclosure among listed firms in France. The study was conducted in France, the recommendations in the research may not be directly applicable to the Nigerian terrain due to different operating environments and differing regulatory frameworks between Nigeria and France, thereby necessitating research that will be domesticated 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 underpin the importance of these multifaceted concepts as they offer most suitable theoretical explanations of the relationship that subsists between corporate governance 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

Research Design

This study adopted a descriptive correlational 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	No. of Firms	Computation	No. of Firm 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 Variable Measurement

Corporate Governance Mechanisms and Sustainability Reporting

$$SUS_{it} = \beta_0 + \beta_1 BZ_{it} + \beta_2 BI_{it} + \beta_3 BG_{it} + \beta_4 BF_{it} + \varepsilon_{it} \dots \dots \dots (i)$$

Where;

SUS = sustainability reporting;

β_0 = is the intercept;

β_1 - β_4 = are the parameters estimate or coefficients in equation;

ε = error term;

BZ = Board Size;

BI = Board Independence;

BG = Board Gender/Diversity;

BF = Board Financial Expertise.

Table 2: Corporate Governance Mechanisms Measurements

S/N	Variables	Definitions	Type	Measurement	Construct validity source
1	BZ	Board Size	Independent	measured by the number of executive and non-executive directors on the board	Adebiyi (2017); Holtz and Neto (2014); Chalaki, Didar and Riahinezhad (2012).
2	BI	Board independence	Independent	measured by the proportion of independent non-executive directors on the board	Alvas (2014); Hassan and Bello (2013); Akeju and Babatunde (2017).
3	BG	Board Gender Diversity	Independent	Measured by the proportion of female directors on the board.	Shuaibu (2018); Ghazaleh and Garkaz (2015).
4	BF	Board Financial Expertise	Independent	Measured by the proportion of directors on the board with financial expertise.	Gray and Nowland (2015); Güner, Malmendier and Tate (2008);

Source: Researcher's Compilation, 2022.

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

Summary of Descriptive Statistics

Table 3: Descriptive Statistics

	SUS	BZ	BI	BG	BF
Mean	0.259	16.22	0.653	0.398	0.430
Maximum	0.841	25	0.789	0.600	2.661
Minimum	0.100	11	0.597	0.000	0.013
Std. Dev.	0.087	2.439	0.037	0.282	0.300
Skewness	0.747	-0.144	1.188	1.374	2.197
Kurtosis	6.088	2.460	5.165	3.468	12.32
JB	248.7	7.92	218.3	164.1	2243
Prob.	0.000	0.019	0.000	0.000	0.000
Obser.	510	510	510	510	510

Source: E-view 10 Output, 2022.

The Table above shows the mean value of Sustainability Reporting (SUS), Board Size (BZ), Board Independence (BIN), Board Gender Diversity (BGD) and Board Financial Expertise (BF) to be 0.259, 16.22, 0.653, 0.398 and 0.430 respectively. These results indicate that the average value of sustainability reporting of listed non-financial firms in Nigeria is 26%. Sustainability reporting of listed non-financial firms shows a minimum value of 0.1 and maximum value of 0.841. The standard deviation value of 0.087, the standard deviation value is less than the mean value which indicates that the data are not widely dispersed from the mean value. The maximum value of board size is 25, with minimum value of 11 and

standard deviation value of 2.439 respectively. Also, the highest value of board independence is 0.789, with minimum value of 0.597 and standard deviation value of 0.037. Board gender diversity has maximum value of 0.6, with minimum value of 0.000 and standard deviation value of 0.282. Lastly, board members' financial expertise has the highest value of 0.661 and lowest value of 0.3, with standard deviation value of 3.

Table 4: Correlation Analysis

Correlation Probability	SUS	BZ	BI	BG	BF
SUS	1.000 -----				
BZ	0.037 0.405	1.000 -----			
BI	0.008 0.858	-0.011 0.796	1.000 -----		
BG	0.007 0.876	0.022 0.622	0.005 0.909	1.000 -----	
BF	0.072 0.108	-0.053 0.230	0.002 0.948	-0.064 0.148	1.000 -----

Source: E-view 10 Output, 2022.

The Table above reveals that board size, board independence, board gender and board members' financial expertise have positive relationship with sustainability reporting of listed non-financial firms in Nigeria. However, these relationships are not statistically significant because their p values are above 0.05 significance level. The table also presents the correlation matrix of the independent variables. It is observed that the variables correlate fairly well (between 0.07 and 0.0029). The common rule of thumb is that if the correlation coefficient between two regressors is greater than 0.8, then multicollinearity is a serious issue. There is no correlation coefficient greater than 0.8. This indicates that multicollinearity might not likely be an issue in the model valuations (Neter et al., 1996; Cassey et. al., 1999; Wallace & Naser, 2005).

Regression Residual Diagnostic Tests

Variance Inflation Factor for Model

Table 5: Variance Inflation Factor for Model

Variable	VIF
BZ	1.003
BI	1.001
BG	1.005
BF	1.007
Mean VIF	1.004

Source: E-view 10 Output, 2022.

The tolerance values and the variance inflation factor are two good measures of assessing multicollinearity between the independent variables in a study. The result 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 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 (Tobachnick & Fidell, 1996).

Table 5 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).

Hausman Specification Test

Table 6: Hausman Test for Model

Test Summary	Prob. (Model I)
Cross-section random	0.592

Source: E-view 10 Output, 2022.

The Hausman Specification Test for model I indicates that Random Effect Model is most appropriate to Fixed Effect Model given the *P-value* of 0.5919 which is more than the critical value of 0.5.

Regression Results

Table 7: Random Effect Regression Results

Variable	Coefficient	Standard Error	t-statistics	Prob
C	0.222	0.075	2.950	0.003
BF	0.122	0.013	9.134	0.000
BG	0.009	0.014	0.688	0.491
BI	0.006	0.104	0.060	0.951
BZ	0.101	0.011	8.456	0.000
R ²	0.65			
Adj. R ²	0.61			
F-Statistics	11.83			
Prob(F-Statistics)	0.000			
Hausman P-value	0.592			
Lagrange Multiplier Test	0.000			
Normality Test	0.070			
Heteroskedasticity Observed R-square	0.066			
Serial Correlation LM Test	0.414			

Source: E-view Output, 2022. Dependent Variable: SUS (Sustainability Reporting).

The regression line shows that $SUS = 0.222471 + 0.121778BF + 0.009795BG + 0.006290BI + 0.101187BZ$. This regression line indicates that sustainability reporting (SUS) will increase by 0.121778 units for every unit increase in board financial expertise, increase by 0.009795 units for every 1 unit increase in board gender diversity, increase by 0.006290 units for every 1 unit increase in board independence, increase by 0.101187 units for every 1 unit increase in board size.

Ho: Corporate Governance mechanism have no significant effect on sustainability reporting of listed non-financial firms in Nigeria

The *p*-values of board financial expertise and board size 0.0000 and 0.0000 respectively. These *p*-values are less than the *t*-value of 0.05, this indicates positive significant effect of board financial expertise and board size on sustainability reporting of listed non-financial firms in Nigeria. Board gender diversity and board independence do not have statistically significance effect on sustainability reporting because their *p*-value of 0.4913 and 0.9519 are greater than the *t*-value of 0.05 respectively.

The F-Statistic value of 11.83 and its corresponding *p*-value of 0.0000 indicate that the model is fit. The Coefficient of Determination (R^2) of 0.65 indicates that about 65% of variation in sustainability reporting can be explained by board independence, board size, board gender diversity and board financial expertise or the ability of the regression line to predict sustainability reporting is about 65%. In the absent of board attributes identified above, sustainability reporting will remain by 0.222471 as indicated by intercept of the regression line. The decision to choose between the pooled OLS and the panel random effect model is dependent on the probability value of the Langrage multiplier LM test. The *p*-value for the Langrage multiplier LM test LM test is 0.0000; this value is less than 0.05, so it can be concluded that the panel random effect model is accepted. Therefore, the panel random effect model is appropriate.

The Breusch Pagan-Godfrey Test of Heteroskedasticity test showed *p*-value of 0.0659, it indicates that the data are homoscedasticity. Thus, the *p*-value of 0.0659 which is greater than 0.05 makes the study to accept the hypothesis that the residuals are not heteroskedasticity, but homoscedasticity and is desirable. The Breush--Godfrey serial correlation LM test for serial correlation as shown in the above table was performed on the residuals and the results showed observed R-squared of 0.4144, which is in excess of 0.05, which lead us to reject the presence of serial correlation in the residual. The application of the Jarque-Bera test shows the probability value of Jarque-Bera test to be 0.0701, this value is greater than 0.05. Therefore, the error terms are normally distributed.

Board Size and Sustainability Reporting

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 Mohammed et al. (2017); Ghuslan and Saleh (2019); Hanem et al, 2020. This finding is in line with agency theory.

Board Independence and Sustainability Reporting

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 et al, 2020. This finding does not align with agency theory because an independent board is supposed to ensure full disclosure of sustainability information.

Board Gender Diversity and Sustainability Reporting

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 et al, 2019.

Board Financial Expertise and Sustainability Reporting

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 relationship that subsisted between corporate governance mechanisms and sustainability reporting of listed non-financial firms in Nigeria. Based on the findings, the study concluded that corporate governance attributes have the capacity to effectively enhance the sustainability reporting of firms thereby significantly determining the extent and level of sustainability reporting of listed non-financial firms in Nigeria.

The study therefore offers the following recommendations based on the findings of the study:

- i. This study recommends that that 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.
- ii. This study also recommends that regulators in the financial reporting 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 governance mechanisms and practices of firms closely as a measure of enhancing and monitoring the extent of sustainability reporting of listed non-financial firms in Nigeria.
- iii. It is recommended that Federal Government of Nigeria through relevant regulatory authorities to develop a harmonized sustainability reporting framework for all listed firms for the purpose of comparability, uniformity and transparency.



References

- Aburaya, R. (2017). *Corporate Environmental Disclosure and Corporate Governance: A Critical Review*. 1(1). Durham University.
- Adebayo, A.O, Mbah, F.I, Adamu, D & Abidoye, D. (2023). Board Size, Board composition and Voluntary Disclosure: Evidence from Listed manufacturing firms in Nigeria. *FUDMA Journal of Accounting & Finance Research (FUJAFR)*, 1(2), ISSN: 2992-4693 (online), 2992-2704 (print)
- Adebiyi, M.A (2017), "Institutional Framework, Interest Rate Policy and the Financing of the Nigerian Manufacturing Sub-Sector" 'African Development and Poverty Reduction: The Macro-Micro Linkage, Forum Paper.
- Adeniyi, S.I. & Fadipe, A. O. (2018). Effect of board diversity on sustainability reporting in Nigeria- A study of Beverages Manufacturing firms. *Indonesia Journal of corporate Social Responsibility and Environmental Management* 1 (1), 43-50.
- Aifuwa, H. O. (2020). Sustainability reporting and firm performance in developing climes: A review of literature. *Copenican journal of finance and accounting, uniwersytet Mikolaya, Kopernika*, 9 (1), 9 – 29.
- Akeju, J. B., & Babatunde, A. A. (2017). Corporate governance and financial reporting quality in Nigeria. *International Journal of Information Research and Review*, 4(2), 3749-3753.
- Allegrini, M., & Greco, G., (2013). Corporate boards, audit committees and voluntary disclosure: evidence from Italian Listed Companies. *Journal of Management & Governance*. 17(1): 187-216.
- Ali, S. M., Isa, M. A., & Ali, S. M. (2018). *Firms Attributes and Corporate Social Responsibility Disclosure: A Literature Review*. 8(4), 312–325. <https://doi.org/10.6007/IJARBS/v8-i4/4016>.
- Ali, S.M., & Isa, M.A. (2018). Firm Attributes and Corporate Social Responsibility Disclosure: A Literature Review. *International Journal of Academic Research in Business & Social Sciences*, 8(4), 310-322.
- Amran, A., Lee, S. P., & Devi, S. S., (2014). The influence of governance structure and strategic corporate social responsibility toward sustainability reporting quality. *Business Strategy and the Environment*, 23 (4), 217-235.
- Alves, S. M. G. (2014). The effect of the board structure on earnings management: evidence from Portugal. *Journal of Financial Reporting & Accounting*, 9 (2), 141-160. Argyris, C. (1964). *Integrating the Individual and the Corporation*. New York: Wiley and Sons.
- Awodiran, M.A. (2019). Corporate governance and financial performance of listed Consumer goods firms in Nigeria. *Nigeria studies in Economics and management sciences*, 2(1), 2019, ppp – 17 ISSN: 2645 – 3061.
- Azmi, A., & Barrett. M. A. (2013). Women on Boards and Company Financial Performance: A Study on Malaysian SMEs. In: Md. Mahbubul Hoque Bhuiyan (ed.) *Proc. of 3rd Global Accounting, Finance and Economics Conference*. Melbourne: World Business Institute. 1-8.
- Baalouch, F., Damak, S., & Khaled, A. (2019). A study of the determinants of environmental disclosure quality: evidence from French listed companies. In *Journal of Management and Governance* (Vol. 23, Issue 4). Springer US. <https://doi.org/10.1007/s10997-019-09474-0>

- Barros, C. P., Boubaker, S., & Hamrouni, A. (2013). Corporate governance and voluntary disclosure in France (2013). *The Journal of Applied Business Research*, 29(2), 561-578.
- Cassey, R., & Anderson, R. B., (1999) Economic Development among the Aboriginal Peoples of Canada: Hope for the Future. Toronto: *Captus University Press*.
- Chalaki, P., Didar, H., & Riahinezhad, M. (2014). Corporate governance attributes and financial reporting quality: Empirical Evidence from Iran. *International Journal of Business and Social Sciences*, 3(15), 223-229.
- Chariri, A., & Ghozali, A., (2007). *Teori Akuntansi*. Yogyakarta: Penerbit Andi.
- Chariri, A., Januarti, I., Nur, E., & Yuyetta, A. (2017). *Firm Characteristics, Audit Committee, and Environmental Performance: Insights from Indonesian Companies*. 7(6), 19-26.
- Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E., (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management journal*, 42(6), 674-686.
- Daltoni, Catherine, Alan & Jonathan (1998). Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal*, 19, 269-290.
- Dhaliwal, D. S., Naiker, V., & Navissi, F. (2006) 'Audit committee financial expertise, corporate governance and accruals quality: An empirical analysis.
- Dobbin, S., & Jung, K., (2010). Ownership Structure and Earnings Informativeness Evidence from Korea. *The International Journal of Accounting*, 301-325.
- Dozie, P. (2003). Corporate Governance in Nigeria: A status report on the financial services sector. In O. Alo (Ed.), *Issues in Corporate Governance* 190-200.
- D'Onza, G. & Lamboglia, R., (2014). The Relationship between CSR Communication and Corporate Reputation in the Credit Lending Process: A Qualitative Study Based on Italian Banks. In *The True Value of CSR* (pp. 129-146). Palgrave Macmillan, London.
- Dowling, J. & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behaviours. *Pacific Sociological Review*, 18, 122-136. <https://doi.org/10.2307/1388226>
- Duarte, T. & Moreno, M. L. P. (2019). Relationship between sustainable disclosure and performance - An extension of Ulmann's model, sustainability, MDPI, *Open access journal*, 11 (16), 1 - 33.
- Elshabasy, Y.N. (2017). The Impact of Corporate Characteristics on Environmental Information Disclosure: An Empirical Study on Listed Firms in Egypt. *Business and Management Review*, 8(4), 181-191.
- Elzahar, H., & Hussainey, K., (2012). Determinants of narrative risk disclosures in UK interim reports. *The Journal of Risk Finance*. 13 (2): 133-147.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and Control. *Journal of Law and Economics*, 2(26), 301-325.
- Firoozi, M., Magnan, M. & Fortin, S. (2016). Board Diversity and Financial Reporting Quality.
- Firth, M., Fung, P. M.Y., & Rui, O. M. (2007). Ownership, two-tier board structure, and the informativeness of earnings - evidence from China. *Journal of Accounting and Public Policy*, 26 (4), 463-496.
- Fodio, M. I., & Oba, V. C. (2013). Corporate governance mechanisms and reported earnings quality in listed Nigerian insurance firms, *International Journal of Finance and Accounting*, 2(5), 279-286.

- Ghazaleh, E., & Garkaz, M. (2015). The association between presence of female members on the board of directors and earning management with discretionary accruals index on the listed companies in Tehran stock exchange. *Journal of Current Research in Science*, 3 (1), 39-43.
- Ghuslan, A., & Saleh, M. M. A. (2019). The Role of the Environmental Awareness in the Application of Environmental Accounting Disclosure in the Jordanian Industrial Public Contribution Companies and Its Impact on Investor's Decisions in the Amman Financial Market. (Unpublished doctoral dissertaton), University of Jinan. Tripoli, Lebanon
- Ghuslan, M. I., & Saleh, N. M. (2017). The Influence of Board Characteristics on Sustainability Reporting in Selected Malaysian Sensitive and Non-sensitive Industries, 7, 33-47.
- Grace N. O., Ndubuisi O., & Regina G. O., (2018) Corporate board characteristics and environmental disclosure quantity: Evidence from South Africa (integrated reporting) and Nigeria (traditional reporting), *Cogent Business & Management*, 5 (1), 1551510.
- Githaigi, P.N. & Kosgi, J.K. (2023). Board characteristics and sustainability reporting. A case of listed firms in East Africa. Corporate governance Published by Emerald print ISSN: 1472-0701.
- Gray S. & Nowland, N., (2015) ownership structure and corporate voluntary disclosure in Hong Kong and Singapore. *International journal of accounting*, 37(2), 247-256.
- Goodland, R. (1995). The concept of Environmental sustainability. *Annual review of ecology and systematics*, 26, 1 - 24.
- Governance, E. S. (2020). ESG Objectives and Progress Environmental Social Governance. 1-4. governance. Working paper, European Corporate Governance Institute (ECGI).
- Grace, N., & Campus, E. (2018). *Corporate Board Characteristics and Environmental Disclosure Quantity: A comparative Analysis of Traditional and Integrated Reporting Evidence*. August. <https://doi.org/10.20944/preprints201808.0419.v1>
- Grace, N. O., Ndubuisi, O. & Regina, G. O. (2018). Corporate board characteristics and environmental disclosure quantity: Evidence from South Africa (Integrated Reporting) and Nigeria (Traditional Reporting). *Accounting, corporate governance and business ethics journal*, ofoegbue et al., cogent business and management 2018.
- Guner, A. B., Malmendier, U. & Tate, G (2008). Financial Expertise of Directors. *Journal of Financial Economics*, 88, 323-354.
- Hassan, H. & Bello, M., (2013), "Financial Reporting Quality, Does Monitoring Characteristics Matter? An Empirical Analysis of Nigerian Manufacturing Sector", *A Paper presented at the International Conference in Accounting and Finance, Dubai, UAE*.
- Hanen, K., Bassem, S., & Jabr, A., (2020). Impact of board characteristics on governance, environmental and ethical disclosure. Department of Accounting, College of Business Administration, Majmaah University, AlMajma'ah, Saudi Arabia, and Anis Jarbouy University of Sfax, Sfax, Tunisia.
- Hoang, H., (2014). *Assessing actual audit quality*, PhD thesis, Drexel University Philadelphia, USA.
- Holtz, L. & Nieto, S. A. (2014), "Effects of board of directors' characteristics on the quality of accounting information in Brazil", *Revista Contabilidade & Finanças*, (25) 66, 255-266.

- Innocent, O. C., & Gloria, O. T. (2018). *Firm Attributes and Corporate Environmental Performance: Evidence from Quoted Industrial Firms on Nigerian Stock Exchange*. 854–863. <https://doi.org/10.21276/sjebm.2018.5.9.6>
- Jensen, M.C., & Meckling, W. H., (1976). The Theory of the Firm: Managerial Behaviour, Agency Cost and Ownership Structure, *Journal of Financial Economics*, 3, 303-360.
- Jensen, M. C., (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance*, 48(3), 831-880.
- Jizi, M. I., Salama, A., Dixon, R., & Stratling, R., (2014), “Corporate governance and corporate social responsibility disclosure: evidence from the US banking sector”, *Journal of Business Ethics*, 125 (4), 601-615.
- Juhmani O. (2017). Ownership structure and corporate voluntary disclosure: Evidence from Bahrain, *International Journal of Accounting and Financial Reporting*, (3) 2, 133-148.
- Kantudu, A. S. & Samaila, I. A. (2015). Board Characteristics, Independent Audit Committee and Financial Reporting Quality of Oil Marketing Firms: Evidence from Nigeria. *Journal of Finance, Accounting and Management*, 6(2), 34.
- Khan, A., Muttakin, M. B., & Siddiqui, J., (2013). Corporate governance and corporate social responsibility disclosures: Evidence from an emerging economy. *Journal of Business Ethics*, 114 (2): 207-223.
- Khan, H. U. Z., (2010). The effect of corporate governance elements on corporate social responsibility (CSR) reporting: Empirical evidence from private commercial banks of Bangladesh. *International Journal of Law and Management*, 52 (2), 82-109.
- Kibiya, M. U., Ahmada, A., & Amran, N. A. (2016). Audit committee independence, financial expertise, share ownership, and financial reporting quality: further evidence from Nigeria. *International Journal of Economics and Financial Issues*, 6 (7S), 125-131.
- Kogan, N., & Wallach, M. A. (1966). Modification of a judgmental style through group interaction. *ETS Research Bulletin Series*, 1966(1), 1-27.
- Labelle, R., Gargouri, R. M., & Francoeur, C., (2010). 'Ethics, Diversity Management, and Financial Reporting Quality'. *Journal of Business Ethics*, 93:2, 335-53.
- Lara, J. M. G., Osma, B. G., & Penalva, F. (2009). Board of directors' characteristics and conditional accounting conservatism: Spanish evidence. *European Accounting Review*, 16 (4), 727-755.
- Liao, L., Luo, L. & Tang, Q. (2015). Gender diversity, board independence, environmental committee, and greenhouse gas disclosure. *The British Accounting Review*, 47(4), 409-424.
- Michelon, G., & Parbonetti, A. (2012). The effect of corporate governance on sustainability disclosure. *Journal of Management and Governance*, 16(3), 477-509.
- Modozie, E. C, Amahalu, N.N. (2021): Effect of Board Structure on sustainability Reporting of Listed Industrial Goods in Nigeria, *International Journal of Management Studies and Social Studies Research*, IJMSSR 2012, vol. 4, Issue 1, ISSN: 2582 – 0265.
- Mohammed, T., Olfa, B. J., & Faouzi, J. (2014). Corporate social disclosure: Explanatory Theories and conceptual framework. *International Journal of Academic Research in Management*, 3(2), 208-225.
- Neter, J., Kutner, M. H., Nachtsheim, C. J. & Wasserman, W. (1996). *Applied Linear Statistical Models*, Irwin Company Inc., Chicago, U.S.A.

- Nesrine, N., & Abdelwahid, A., (2011). The governance role of the financial information: empirical evidence in the Tunisian context. *Afro-Asian Journal of Finance and Accounting*, 2(4), 283-298.
- Nguyen, T. T. D. (2020). The relationship between board of directors and sustainability reporting: An empirical study in German large listed firms. Faculty of Management and Economics, Thomas Bata University, 760 01 Zlin, Czech Republic.
- Nigerian Code of Corporate Governance (2018). *Financial Reporting Council (FRC) of Nigeria Publication*, Lagos 2019.
- Obeitoh, O. O., Yunusa, A. & Yusuf, M. A. (2023). Effect of Board and Audit committee Attributes on Earnings Management: Evidence from Listed Non-financial firms in Nigeria, *FUDMA Journal of Accounting & Finance Research (FUJAFR)*, 1(2), 33-50. <https://doi.org/10.33003/fujafr-2023.v1i2.26.33-50>
- Olayinka, O, (2022): Corporate Governance and Sustainability Reporting in Nigeria. *The journal of Developing Areas Tennessee State University college of Business*, 56(2), 77-90.
- Onyinye, E. & Chinelo, A. I, (2019). Firm attributes and sustainability reporting in Nigeria. *International journal of academic accounting, finance and managerial research (IJAAFMR)*. Issn: 2643-976x, 3(6), 33 - 44.
- Oyedokun, E. G., Elvis, E., & Abiola, T. (2019). *Environmental Accounting Disclosure and Firm Value of Industrial Goods Companies in Nigeria* Environmental Accounting Disclosure and Firm Value of Industrial Goods Companies in Nigeria. February. <https://doi.org/10.9790/5933-1001030727>
- Oyedokun, E. G., Elvis, E., & Abiola, T. (2019). *Environmental Accounting Disclosure and Firm Value of Industrial Goods Companies in Nigeria* Environmental Accounting Disclosure and Firm Value of Industrial Goods Companies in Nigeria. February. <https://doi.org/10.9790/5933-1001030727>
- Razaq, A.G, Ame, J, & Aza, S.M. (2021). Board Attributes and Environmental Disclosures of quoted industrial goods in companies in Nigeria. *International Journal of Management Studies and Entrepreneurial Development*, October, 2021 Edition.
- Saji, B.S. (2014). Corporate social responsibility and sustainability reporting trends in United Arab Emirates. *The clute institute, international academic conference*, San Anthonio, Texas, USA.
- Securities and Exchange Commission (SEC) (2011). Code of Corporate Governance for Public companies in Nigeria 2011 issued by Securities and Exchange Commission 2011.
- Shaheen, M. A. & Malik, K., (2012). Investigating the Relationship between Corporate Governance and Accounting Conservatism in the Published Financial Statements: An Application on the Egyptian Exchange. *The Scientific Journal of Economics & Commerce*.
- Shamil, M. M., Shaikh, J. M., & Ho, P. (2012). *The influence of board characteristics on sustainability reporting Empirical evidence from Sri Lankan firms*. <https://doi.org/10.1108/ARA-09-2013-0060>
- Sharif, M., & Rashid, K., (2014). Corporate governance and corporate social responsibility (CSR) reporting: an empirical evidence from commercial banks (CB) of Pakistan. *Quality & Quantity* 48 (5), 2501-2521.
- Srinidi, B., Gul, F. & Tsai, j. (2011). Female directors and earnings quality. *Contemporary accounting research*, 28(5), 1610 - 1644.

- Tamoi, J., Faizah, D., Mustaffa, M. Z. Yussoi, S. (2014). Does good corporate governance lead to better sustainability reporting? An analysis using structural equation modelling. *Academic research paper on economics and business*. Procedia – social and behavioral sciences 145 (2014).
- Tobachnick, B.G. & Fidell L.S. (1996). *Using Multivariate Statistics* (3rd Edition), HarperCollins, New York, U.S.A.
- Umukoro, O. E., Uwuigbe, O. R., Uwuigbe, U., Adegboye, A., & Ajetunmobi, O. (2019). *Board Expertise and Sustainability Reporting in Listed Banks in Nigeria* *Board Expertise and Sustainability Reporting in Listed Banks in Nigeria*. <https://doi.org/10.1088/1755-1315/331/1/012048>
- United Nations Environmental Programme (UNEP) (2006). Global status report: Towards a zero-emission, efficient and resilient buildings and construction sector. Annual Report (2016).
- Uwuigbe, U. N., Egbide, B. C., & Ayokunle, A. M., (2011). The effect of board size and board composition on firms' corporate environmental disclosure: a study of selected firms in Nigeria. *Acta Universitatis Danubius*, 7 (5), 164-176.
- Uwuigbe, U., Teddy, O., Tolulope, I., & Eyitomi, G.A. (2018). Corporate diversity and corporate social environmental disclosure of listed manufacturing companies in Nigeria. *Problems and Perspectives in Management*, 16(3), 229-244.
- Wang, M. (2017). *The Relationship between Firm Characteristics and the Disclosure of Sustainability Reporting*. <https://doi.org/10.3390/su9040624>
- Wang, Y. (2017). Sustainability Reporting and Firm Value: Evidence from Singapore-Listed Companies. *Sustainability*, 9, 2112. *Sustainability (Sustainability)*, 9 (4), 624-637.
- Wang, Z. (2013). The impact of internal attributes of corporate governance on firm performance Evidence from Pakistan. *International Journal of Commerce and Management*. 23(1).
- Wang, Z. (2015). Measuring investors' assessment of earnings persistence: do investors see through smoothed earnings? *Review of Quantitative Finance and Accounting*, 42(4), 691-708.
- Whetman, L. L. (2018). The Impact of Sustainability Reporting on Firm Profitability. *Undergraduate Economic Review*, 14(1), 4.
- Yahaya, O. A. (2018). Environmental reporting practices and financial performance of listed environmentally sensitive firms in Nigeria, *Savanna: A journal of environmental and social sciences*, 24(2), 403 - 412.