



IMPACT OF FIRM CHARACTERISTICS ON SUSTAINABILITY REPORTING OF LISTED MANUFACTURING FIRMS IN NIGERIA

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Abstract

This study examines the impact of firm characteristics on sustainability reporting of Listed Manufacturing firms in Nigeria from 2014-2023. The listed manufacturing firms in Nigeria are 64 as at 31st December, 2023, out of which 49 firms were selected as sample of the study after applying a filter. Specifically, the study seeks to identify the effect of firm size, leverage, managerial ownership, institutional ownership, foreign ownership and return on asset on the sustainability reporting of listed manufacturing firms in Nigeria. The study adopts ex-post facto research design and data were analyzed with the aid of multiple regression technique using 490 firm-year panel observations. Data were extracted from the audited annual reports and accounts of the selected firms. The study reveals that leverage, managerial ownership, institutional ownership and foreign ownership have positive and significant impact on the sustainability reporting of listed manufacturing firms in Nigeria at 1%, 5% and 10% level of significance respectively. The study also finds out that firm size and return on asset have no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria. The study concludes that leverage, managerial ownership, institutional ownership and foreign ownership constitute significant variables of sustainability reporting of listed manufacturing firms in Nigeria. Therefore, the study recommends among others that government should come up with a regulatory policy that will encourage managers to acquire share in companies they manage as this was found to encourage more in sustainability reporting.

Keywords: impact, firm characteristics, sustainability reporting, manufacturing firms.

1. Introduction

Sustainability is one of the most important issues affecting the world today and investors, government, creditors and other stakeholders in Nigeria and around the world require holistic and transparent view of business through financial reporting. Investors and stakeholders nowadays want information that will enable them to effectively assess the total economic value of an organization. They need to have more detailed information about the present and the expected future rather than just the past economic situation of company. Several issues such as pollution, climate change, global warming, poverty, product safety, and worker rights are also increasingly attracting public interest. Financial reports are therefore no longer sufficient for stakeholders, since they do not contain information regarding the social and environmental aspects of company operations (Bahtiar, 2019)

The Global Reporting Initiative (GRI) is a pioneer and guidance of sustainability reporting of a company since 1990 until today. The role of GRI as an independent international organization helps to understand and communicate a company's sustainability report to the government and other stakeholders. According to the Global Reporting Initiative (2013), Sustainability Reporting (SR) is



defined as a company report that summarizes the information of economics, environmental, social and governance efficiency in the company's day to day activities.

Global Reporting Initiative is a global organization that helps businesses and organizations become responsible for their impacts on the environment by communicating them through reporting. GRI helps government sector clients understand and communicate impacts on sustainability on issues such as climate change, human rights, governance, and social welfare. This enables real action to create social, environmental and economic benefits for all people. Social responsibility reports refer more to the company's effect on the welfare of employees, local communities and the environment (Purnomo, 2014).

Even though regulations on environment, activities of pressure groups and consumer awareness are weak in developing economies including Nigeria some companies in these countries are becoming more conscious of their international market and are making appreciable effort as regards environmental practices (Ezeagba et al., 2017). The operations of some companies are detrimental to the environment and these companies tend to do something to reduce the impact of their operations on the host communities. Ohodua et al. (2016) opined that companies, specifically those whose activities are said to have negative impact on the environment should disclose their financial commitments regarding improving the environment more especially those companies that their operations involve pollution and other environmental hazard.

Managers are motivated to raise business performance. To improve firm performance, a number of systems and practices, including sustainability disclosure practices, will be put in place. As a result, the level of sustainability disclosure will be influenced by management who also own stock in the company. With this defense, it is thought that managerial ownership significantly affects the degree of sustainability disclosure. The claim that managerial ownership has a significant impact on the sustainability disclosure level is supported by empirical evidence, as demonstrated, among others, by Zhou (2019), Laksmi and Kamila (2018) and Agustia et al (2018).

Large companies get more attention from the public. They are considered to have sufficient resources to prepare sustainability reports. Large companies face considerable pressure from stakeholders because they are expected to disclose more information. The bigger the company, it is expected that the quality of the sustainability report disclosure will be better. (Dewi & Pitriasari, 2019).

It is argued that, a company's ability to disclose sustainability as a means of ensuring its survival and future growth is stronger the larger it is, and the larger the firm, the more of an impact it is thought to have on the amount of sustainability disclosure. With this defense, it is thought that the level of sustainability disclosure is significantly influenced by the firm's size. According to empirical evidence, firm size significantly affects the amount of sustainability disclosure, as stated by Zhou (2019), Anatami et al.(2019) and Muttakin et al (2015). In addition to firm size, the company's age is also assessed into one of the decisive factors in encouraging the presentation of sustainability reports (Kolk, 2003; Jenkins & Yakovleva, 2006). The age of the company usually refers to the length of time from the date of incorporation up to present moment. The longer the company has been in existence, the company is expected to produce more sustainable reporting. This statement is in accordance with the results of research conducted by Delaney and Huselid (1996) that older companies will have a tendency to provide more sustainable information, when compared to newly established companies.

Leverage is also believed to affect the sustainability disclosure level with the argument that the higher the leverage, the greater the creditor's demands on the company to make sustainability disclosures as a mechanism for creditors to obtain more comprehensive information about the company such as information disclosed through sustainability reports. With this argument, it is believed that leverage has a significant effect on the sustainability disclosure level. This argument is supported by



empirical evidence as shown by Zhou (2019), Salehi et al(2018) which states that leverage has a significant effect on the sustainability disclosure level.

Profitability is a business measure that evaluates a company's capacity for generating profits (Paramitha and Rohman, 2014). The relationship between profitability and disclosure, according to Hackston and Milne (1996) as cited in Suhardjanto (2010), is a reflection that demonstrates the requirement for a social response in order for a company to be profitable. Because of this, it is thought that being transparent about sustainability is a good management strategy for easing societal pressure and meeting social requirements. Suhardjanto and Miranti's (2007) revealed proof that sustainability disclosure is significantly impacted by profitability.

In spite the heightened interests in sustainability reporting, there are still paucity of research in the area of firm characteristics in relation to sustainability reporting in Nigeria as most researches (Okafor, 2018; Oshiole et al., 2020; Dioha et al., 2018; Nwobu, 2017; Falope &Offor, 2019; Nwaiwu & Oluka, 2018; Agboola & Oroge, 2019) were carried out on environmental disclosure in relation to corporate performance. Besides this, many of these researches carried out on firm characteristics in relation to sustainability reporting were done within a short-term period without ascertaining the long run effect. For instance, Elshabasy (2018) covered 2007 – 2011; Damak & Ayadi (2009) covered 2000 – 2005; Akbas (2014) covered 2011; Sulaiman et al. (2014) covered 2009; Lamidi et al. (2020) covered 2014 – 2017; Moruff et al. (2021) covered 2012 – 2018; Ohidoa et al. (2016) covered 2012 – 2015; Atang & Eyisi (2020) covered 2011 – 2016; Nwobu (2017) covered 2010 – 2014.

The main objective of this study is to examine the impact of firm characteristics on sustainability reporting in Nigeria for the period of ten years covering 2012-2021. Specifically, the study seeks to achieve the following objectives:

- i. To evaluate the impact of firm size on the sustainability reporting of listed manufacturing firms in Nigeria.
- ii. To examine the impact of leverage on the sustainability reporting of listed manufacturing firms in Nigeria.
- iii. To assess the impact of managerial ownership on the sustainability reporting of listed manufacturing firms in Nigeria.
- iv. To evaluate the impact of institutional ownership on the sustainability reporting of listed manufacturing firms in Nigeria.
- v. To assess the impact of foreign ownership on the sustainability reporting of listed manufacturing firms in Nigeria.
- vi. To examine the impact of return on asset on the sustainability reporting of listed manufacturing firms in Nigeria.

In line with objectives of the study, the following hypotheses were formulated.

- H_{01} Firm size has no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria.
- H_{02} Leverage has no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria.
- H_{03} Managerial ownership has no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria.
- H_{04} Institutional ownership has no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria.
- H_{05} Foreign ownership has no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria.



H₀₆ Return on asset has no significant impact on the sustainability reporting of listed manufacturing firms in Nigeria.

2. Literature Review

Sustainability reporting (SR), unlike financial reporting, is a more recent concept. Saji (2014) observed that sustainability reporting is a systematic tool for putting together and presenting sustainability information needed for the process of management, and is also useful to stakeholders. Elkington (1997) explains “sustainability reporting” or “triple bottom-line reporting” in a layman's perspective as a mechanism of evaluating and disclosing the performance of a firm to meet “social, economic and environmental” parameter, however, in a broader perspective, it covers completely the values, issues and procedures which organizations are required to attend to so as to cut down on the negative impacts associated with their activities and thereby giving better social, economic and environmental values, where the three lines symbolize society, economy and the environment.

The objective of a sustainability report is to provide sufficient information to stakeholders to hold the organization's sustainability performance accountable. According to Gnanaweera et al. (2018), sustainability reporting is the mechanism through which sustainability information pertaining to firms' sustainability performance is conveyed to the stakeholders of firms. To Daub (2007), sustainability report is referred to as the level to which the report provides valid and reliable data to satisfy information needs of stakeholders, more so the decision-model used by stakeholders to assess the organization, and the recorded data is a credible and accurate measure of the sustainability success dimensions used in that model.

There are many terms that are related to the phrase “firm characteristics”. Its context and connotation vary depending on the industry. According to Mgni and Nayak (2016), there is no agreement on the definition or content of firm characteristics, which makes it very contentious and up for debate among academics and practitioners. Market, capital, and company structures are tightly intertwined to create firm characteristics. The most prevalent structural firm characteristics are firm size, firm age, and firm ownership. Similar to how industry type, environmental unpredictability, and market environment are taken into account by industry-related factors. Liquidity and capital intensity are additional capital-related variables (Wang, 2017).

The size of a company is a reflection of its size in terms of assets and personnel. More people are involved in the organizational field of larger firms. They are therefore more open to investigation by additional corporate stakeholders. A wider spectrum of stakeholders is also more aware of larger enterprises (Wang 2017; Souha & Anis 2016; Dioha et al., 2018). As a result, they have a propensity to look for legitimacy from additional stakeholders that have influence over the resources needed for organizational functioning. The size of a firm in terms of assets, employees, and global reach are all variables that might affect its profitability and sustainability reporting. Organizations with a foreign presence may face mimetic pressures. Consequently, businesses that are located abroad could adopt the same reporting methods.

Theoretical Framework

Stakeholder Theory

Freeman (1984) defines stakeholders as a group or individual that can impact or be affected by the results of the company's goals. Stakeholder theory is a theory that describes which parties the company is responsible for. The company must maintain relationships with its stakeholders by accommodating their desires and needs, especially stakeholders who have the power to the availability of resources used for operational activities of the company, for example labor, markets for company products and others. Thus, according to stakeholder theory, a company must manage itself in a way that benefits all its stakeholders and must treat them fairly. Therefore, no shareholder overrides the interests of other stakeholders. Is a theory that explains the interaction between an organization and its



constituents, where constituents are any group or person who influences and has an impact on organizational goals.

Legitimacy Theory

Legitimacy theory is a valuable tool for assessing business behavior. Since corporations are a component of the social system, their values and norms must be modified to reflect the values and norms of society. The social contract between business and community can be considered as social legitimacy. Both implicitly and stated, this shows how society's expectations about how a company should act are necessary for the company to continue operating in the future. According to this theory, a business can stay in business if its operating principles are in line with social ideals and consider the effects of its actions on the environment and society as well as its financial performance (Rankin, 2010).

Empirical Review

A number of researchers have provided insights into the sustainability reporting. A study conducted by Bahtiar (2015) aims to examine the characteristics of the company consisting of leverage, profitability, company size, and company age to the extent of disclosure of sustainability report using 48 companies engaged in manufacturing of chemical and animal feed sub-sectors during 2012-2017 period. The samples of the study were selected using the purposive sampling method and the data was analyzed using multiple regression methods. The results of the study indicate that leverage, profitability, company size, and company age do not affect sustainability reporting.

Similarly, a study conducted by Sely (2021) aims to examine the effect of good corporate governance and company characteristics on the disclosure of sustainability reports. The data used in this study are secondary data in the form of financial reports of basic and chemical manufacturing companies during the period of 2016-2018 obtained from the Indonesia Stock Exchange. Good corporate governance is proxied by board of commissioners and audit committee and while company characteristics is proxied by profitability and board size of the company. The data was analysed using multiple regression and the results of this study indicate that profitability has a significant effect on the sustainability report while company size has no significant effect on the sustainability reporting.

Furthermore, another study conducted by Uyagu et al. (2017) examines the effect of firm characteristics on environmental reporting practices of listed manufacturing firms in Nigeria. The population of the study comprises of sixty-one (61) manufacturing firms with a sample size of 29 firms drawn using judgmental sampling technique. Data were gathered using annual reports and accounts of the sampled firms and analysed using multiple regression technique. The study found that the characteristics of firm size, leverage, return on assets and firm age have significant and positive effect on environmental reporting practices of listed manufacturing firms in Nigeria. Based on the findings, the study recommends that listed manufacturing firms should be raising fresh funds by retaining a good portion of their profits for the acquisition of assets to enhance environmental reporting practices in Nigerian listed manufacturing firms.

A study carried out by Onyinwe and Amakor (2019) examines the impact of firm attributes (firm size, leverage and profitability) on sustainability reporting in Nigeria. This study employs the ex-post causal research design. The sample consist of 35 manufacturing companies listed on the Nigerian Stock Exchange. These companies are selected because they could be regarded as environmentally sensitive companies. The study employed secondary data retrieved from corporate annual reports of the environmentally sensitive companies quoted from 2011-2017. The analysis of coefficients reveals that on the overall, only firm size is seen as the only variable to having a positive and significant impact on sustainability reporting. The study recommends the need for improved sustainability disclosures for companies in Nigeria.

In the same vein, Ilham and Nengzih (2022) ascertained how company characteristics, financial performance, and corporate governance affect the quality of sustainability report disclosures in



Manufacturing Companies Listed on the Indonesia Stock Exchange during 2017-2020. Purposive sampling was used to determine the sample in this study, which used data from the annual reports of the Indonesia Stock Exchange from 2017 to 2020 as the population and sample. The analytical approach of this study uses statistical techniques and the application of Eviews 12. The findings of this study indicate that although company size has no significant effect on the quality of sustainability report disclosure, other factors such as return on assets (ROA), independent commissioners, and audit committees have an effect. Based on the studies that have been conducted, it is evident that many businesses are starting to disclose their launch reports to provide more significant data because the volume of disclosures and the quality of reports are improved and validated.

Ronny and Akmad (2021) examined the effect of firm characteristics (managerial ownership, firm size and leverage) on the sustainability disclosure level and its implications for firm value. The population of this study is all companies listed on the Indonesia Stock Exchange during 2016-2019. Purposive sampling technique was used to determine the sample. Data from 40 companies were obtained for hypothesis testing. Path analysis with SPSS v. 26 is used for data processing. The results show that managerial ownership, firm size and leverage have no significant effect on the sustainability disclosure level. Furthermore, leverage has a significant effect on firm value, while managerial ownership, firm size and sustainability disclosure level do not have a significant effect on firm value.

Bakr and Redhwan (2016) investigated the effect of Corporate Characteristics on Environmental Reporting of Beverage companies in Nigeria. Using company's specific Corporate Characteristics. Firm Age (FA), Firm Size (FS) and Return on Assets (ROA) were used to proxy Corporate Characteristics. The study selected all 3 companies out of four (4) quoted Beverage companies in Nigerian Stock Exchange as at 2021. Ex Post Facto research design was adopted and the secondary data were collected from annual reports of sampled firms from 2010 to 2019 through content analysis. The data were analyzed with descriptive statistics and regression analysis. Eviews version 8 was applied in testing the hypotheses. The study showed that Firm Age has a significant positive effect on environmental reporting while Firm Size has a significant positive effect on environmental reporting. The study also reveal that Return on Assets has no significant positive effect on environmental reporting. Based on these findings, the study recommended that companies should carter for the wellbeing of its employees, adopt practicable waste management plans, insure the environment against degradation, as well make valuable contributions to the society.

Erna (2020) examined the influence of firm characteristics on environmental disclosures of Southeast Asian countries. The firm characteristics in this research include of profitability, company size, and leverage. This research is quantitative research on non-financial listed companies in the year of 2017. The sampling method is purposive sampling. The final sample consist of 27 listed companies from Indonesia, 17 companies from Malaysia, and 49 companies from Singapore. Multiple regression analysis is performed to analyze the data. The result shows that firm profitability and size positively influence environmental disclosure, leverage shows insignificant relation.

3. Methodology

The study uses ex post facto research design. The population of the study comprises of 64 listed Manufacturing firms on the Nigeria Exchange Group as at 31st December, 2023. After applying a filter, we arrived at a sample size of 49 companies. The secondary data were collected from the published annual reports and accounts of the sampled banks. The annual reports were retrieved from the websites of the banks as well as the Nigeria Exchange Group Fact Book.

Variable Measurement

The study uses one dependent and six independent variables. The dependent variable is sustainability reporting, while the independent variables include: firm size, leverage, managerial ownership,



institutional ownership, foreign ownership and return on asset. The table below presents the summary of these variables and their measurements as used in the study.

Table 1

Variables Measurement

Variable	Nature	Measurement& Source
Sustainability Reporting	Dependent	No of sustainability disclosure/Maximun number of disclosure as used by Maury (2017); Ofoegbu and Megbulu (2016) and Ofoegbu and Odoemelum (2018).
Firm Size	Independent	Natural logarithm of total asset
Leverage	Independent	Total loans/Total asset
Managerial Own	Independent	Ratio of shares owned by managers
Institutional Ownership	Independent	Ratio of shares owned by institutions
Foreign Owners	Independent	Ratio of shares owned by foreign investors.
Return on asset	Independent	Net income/total asset

Source: Compiled by Author
Model Specification

$SR = F(FS, LEV, MO, IO, FO, ROA)$. That is:

$$SR_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 LEV_{it} + \beta_3 MO_{it} + \beta_4 IO_{it} + \beta_5 FO_{it} + \beta_6 ROA_{it} + \epsilon_{it}$$

Where; SR_{it} = Sustainability Reporting for firm i in time t ; FS_{it} = Firm Size for firm i in time t ; LEV_{it} = Leverage for firm i in time t ; MO_{it} = Managerial Ownership for firm i in time t ; IO_{it} = Institutional Ownership for firm i in time t ; FO_{it} = Foreign Ownership for firm i in time t ; ROA_{it} = Return on Asset for firm i in time t ; α_0 = Intercept; $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6$ = Model coefficients. ϵ_{it} = Error term.

Techniques for Data Analysis

The major tool of data analysis used is multiple regression analysis which was carried out with the aid of STATA14 statistical software. Robustness tests for Collinearity, normality and Heteroskedasticity were conducted to ensure reliability of the study results. To address panel effect of the data, fixed effect and random effect options were explored. Hausman specification test was used to provide direction as whether fixed effect or random effect would be used. The essence of these analyses is to improve the validity of all the statistical inferences that would be made.

4. Results and Discussions

This section presents and discusses descriptive statistics, correlation matrix and regression results. The overall aim is to examine whether firm size, leverage, managerial ownership, institutional ownership, foreign ownership and return on asset affect sustainability reporting of listed manufacturing firms in Nigeria. The section contains analysis of descriptive statistics, correlation matrix, robustness test, Hausman specification test, regression results, test of hypotheses, discussion of findings and policy implications.



Descriptive Statistics

The various descriptive statistics are displayed in table 2 below. The essence of the table is to provide understanding on the nature of data used.

Table 2

Descriptive Statistics

Variables	Min	Max	Mean	Std Dev	N
SR	0.0001	0.0848	0.0189	0.0182	490
FS	8.2009	12.412	10.1734	0.8206	490
LEV	0	0.8622	0.1933	0.1967	490
MO	0	0.9672	0.1911	0.2752	490
IO	0	0.9154	0.4991	0.2547	490
FO	0	0.8729	0.2788	0.3018	490
ROA	0.5066	0.7927	0.0495	0.1516	490

Source: Author's Output, 2024

Table 2 reveals that the mean value of sustainability is 0.0001. The minimum value of sustainability for the firms is about 0.0001. This implies that the lowest level of sustainability of the firms is 0.0001. The maximum value of sustainability is about 0.9956. The standard deviation of sustainability is 0.2846, which implies that there is low variability in the level of sustainability reporting by the studied firms.

Firm size has mean value of 10.1734 which shows that on average, the size of the manufacturing firms in Nigeria is about 10.1734. The minimum value is 8.2009 while the maximum value is 12.412. The standard deviation is about 0.8206 which means that there is low variability in the size of the manufacturing firms in Nigeria.

LEV has mean value of about 0.1933, minimum value of about 0, and maximum value of about 0.8622, with a standard deviation of about 0.1967. The standard deviation of 0.1967 suggests low variability in the level of leverage of the studied firms over the period of study. Managerial Ownership has a mean value of 0.1911, minimum value of about 0 and a maximum value of 0.9672, with a standard deviation of 0.2752. The standard deviation of 0.2752 implies that there is low variability in the managerial ownership of manufacturing firms in Nigeria over the period of study.

Institutional ownership has a mean value of 0.4991 which shows that on average, the institutional ownership of the manufacturing firms in Nigeria is about 0.4991. The minimum value is 0 while the maximum value is 0.9154. The standard deviation is about 0.2547. On the other hand, foreign ownership has a mean value of 0.2788. This means that, on average 0.2788 of manufacturing firms is owned by foreigners. The minimum value is 0 and the maximum value is 0.8729, while the standard deviation is 0.3018. The mean of ROA is 0.0495, which means that on average, manufacturing firms in Nigeria have return on asset of about 0.0495. The minimum ROA is 0.5066 and maximum is 0.7927 while the standard deviation is 0.1516, which indicates low variability in the ROA among manufacturing firms in Nigeria.

Correlation Matrix

The correlation matrix reveals the correlation between the dependent variable and each of the independent variables as well as among the independent variables themselves.



Table 3

Correlation Matrix of Dependent and Independent Variables

Variables	SR	FS	LEV	MO	IO	FO	ROA
SR	1.0000						
FS	-0.0418	1.0000					
LEV	0.1554	-0.1111	1.0000				
MO	0.2404	-0.0417	0.1651	1.0000			
IO	-0.0710	0.2164	-0.3095	-0.3107	1.0000		
FO	-0.1283	0.2972	-0.0890	-0.2161	0.4506	1.0000	
ROA	-0.0891	0.2974	-0.3440	-0.1252	0.1492	-0.0035	1.0000

Source: Author's compilation generated using STATA14

The above table shows that leverage and managerial ownership are positively correlated with sustainability reporting of the listed manufacturing firms in Nigeria with a coefficient of 0.1554 and 0.2404 respectively. This means the above variables move in the same direction with the sustainability reporting of listed manufacturing firms in Nigeria. On the other hand, firm size, institutional ownership, foreign ownership and return on asset are negatively correlated with sustainability of listed manufacturing firms in Nigeria with a coefficient of -0.0418, -0.0710, -0.1283 and -0.0891 respectively. This implies that they move in the opposite direction with sustainability reporting.

Fixed and Random Effect Tests

In order to decide between fixed and random effect models output, Hausman specification test is conducted. The Hausman test is designed to detect violation of the random effects modelling assumption that the explanatory variables are orthogonal to the unit effects. If there is no correlation between the independent variables and the unit effects, then the estimates of β in the fixed effects model should be similar to estimates of β in the random effects model. The Hausman test statistic H is a measure of the differences between the two estimates. Under the null hypothesis of orthogonality, H is distributed chi-square with degrees of freedom equal to the number of regressors in the model. A finding that ($p < 0.05$) is considered evidence that at conventional levels of significance, the two models are different enough to allow us reject the null hypothesis, and thus to reject the random effects model in favour of the fixed effects model. Where the Hausman test does not depict a clear difference ($p > 0.05$), however, it does not necessarily emphasize that random effects estimator is 'safely' free from bias, and thus to be preferred over the fixed effects estimator. Therefore, the result obtained from Hausman specification test conducted in this study indicates that ($p > 0.05$) and as such the random effect is chosen over the fixed effect model. Langrangian multiplier test was further conducted and it was found to be significant and consequently we now interpret our OLS regression.



Regression Results

Fixed Effect Result

Table 4

Fixed Effect Model

The result of the fixed effect is presented in Table 4.

VAR	COEFF	T-value	P-value
FS	0.0017	0.10	0.917
LEV	0.1827	2.61	0.009
MO	0.2270	4.73	0.000
IO	0.0588	1.72	0.085
FO	-0.1057	-2.19	0.029
ROA	-0.0631	-0.69	0.492
C	0.1291	0.77	0.439
R-Squared	0.831		
Adjusted R ²	0.717		

Source: Author's Output, 2024.

In table 4, it can be observed that the R² is 0.831 which means that 83% of variation in sustainability reporting of listed manufacturing firms in Nigeria is explained jointly by the independent variables captured in the model.

Firm Size and Sustainability Reporting

Firm size measured as the natural logarithm of total asset was found to be positive and insignificantly associated with sustainability reporting (p-value of 0.917). This means that leverage insignificantly influences the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, firm size has not significantly influenced the sustainability reporting. Therefore, the result reported provides evidence for failure to reject the null hypothesis of the study. The regression results as depicted in Table 4 shows that firm size has a T-value of 0.10 and a coefficient value of 0.0017 with a p-value of 0.917 which is not significant at all level of significance. This reveals that firm size is positive and insignificantly affects the sustainability reporting of listed manufacturing firms in Nigeria. This implies that for every one (1%) increase in the size of Listed manufacturing firms in Nigeria, their sustainability reporting will increase by 0.0017. The findings of this study are in line with earlier studies conducted by Chukwuebuka et al. (2022) and Erna (2020), and contradicts Ronny and Akmad (2021) where firm size was found to have insignificant impact on the sustainability reporting.

Leverage and Sustainability Reporting

Leverage measured as the ratio of total equity over total liabilities was found to be positive and significantly associated with sustainability reporting (p-value of 0.009). This means that Leverage positively and significantly influences the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, Leverage has significantly influenced the sustainability reporting. The result reported provides evidence to reject the null hypothesis of the study. The regression results as depicted in Table 4 shows that Leverage has a T-value of 2.61 and a coefficient value of 0.1827 with a p-value of 0.009 which is significant at 1% level of significance. This reveals that leverage is positive and significantly affects the sustainability reporting of listed manufacturing firms in Nigeria. This implies that for every one (1%) increase in the leverage level of Listed manufacturing firms in Nigeria, their sustainability reporting will increase by 0.1827. The findings of this study are in line with earlier studies



conducted by Bahtiar (2015) and contradicts that of Erna (2020) where leverage was not found to have significant impact on the sustainability reporting.

Managerial Ownership and Sustainability Reporting

Managerial ownership measured as the ratio of total equity shares owned by managers to total number of shares was found to be positive and statistically significant at 1% level. That is, it is significantly associated with sustainability reporting of listed manufacturing firms in Nigeria. Hence, Managerial ownership significantly influences the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, the result reported provides evidence for the failure to reject the null hypothesis of the study. Hence, the study fails to reject the null hypothesis 3 of the study.

Table 4 reveals that managerial ownership has a T-value of 4.73, coefficient value of 0.2270 and a p-value of 0.000. This implies that managerial ownership significantly influences sustainability reporting of listed manufacturing firms in Nigeria. This means that 1% increase in managerial ownership will lead to an increase in sustainability reporting of listed manufacturing firms in Nigeria by 0.2270. The finding of this study is in line with earlier studies conducted by Zhou (2019), and Laksmi and Kamila (2018). However, the study contradicts the findings of Ronny and Akmad (2021) where managerial ownership was not found to have any significant impact on sustainability reporting.

Institutional Ownership and Sustainability Reporting

Institutional ownership measured as the percentage of shares held by institutions to total shares was found to be positive and significantly associated with sustainability reporting at 10% level of significance (p-value of 0.085). This means that institutional ownership positively and significantly influences the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, institutional ownership has significantly influenced the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, the result reported provides evidence to reject the null hypothesis of the study. The regression results as depicted in Table 4 shows that institutional ownership has a T-value of 1.72 and a coefficient value of 0.1014 with a p-value of 0.085 which is significant at 10% level of significance. This reveals that institutional ownership is positive and significantly affects the sustainability reporting of listed manufacturing firms in Nigeria. This implies that for every one (1%) increase in the institutional ownership of manufacturing firms, the sustainability reporting will increase by 0.1014. The findings of this study is in line with earlier studies conducted by Uyagu et al (2017), Onyinwe & Amakor (2019), Bakr & Redhwan (2016) and Erna (2020). However, the findings contradict that of Bahtiar (2015) and Sely (2021). The finding is in line with our apriori expectation and is also in line with stakeholder theory.

Foreign Ownership and Sustainability Reporting

Foreign ownership measured as the percentage of shares held by foreign investors to total shares was found to be negative and significantly influenced sustainability reporting at 5% level of significance (p-value of 0.029). This means that foreign ownership negatively and significantly influenced the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, foreign ownership has significantly influenced the sustainability reporting of listed manufacturing firms in Nigeria. Therefore, the result reported provides evidence to reject the null hypothesis of the study. The regression results as depicted in Table 4 shows that foreign ownership has a T-value of -2.19 and a coefficient value of -0.1057 with a p-value of 0.029 which is significant at 5% level of significance. This reveals that institutional ownership is negative and significantly affects the sustainability reporting of listed manufacturing firms in Nigeria. This implies that for every one (1%) increase in the



foreign ownership of manufacturing firms, the sustainability reporting will decrease by -0.1057. The findings of this study is in line with earlier studies conducted by Uyagu et al.(2017), Onyinwe & Amakor (2019), Bakr & Redhwan (2016) and Erna (2020). However, the findings contradict that of Bahtiar(2015) and Sely (2021). The finding is in line with our apriori expectation and is also in line with stakeholder theory.

ROA and Sustainability Reporting

Return on asset which is measured as net income to total asset was found to be negative and was not found to be statistically significant at all levels. This signifies that it is not associated with sustainability reporting of listed manufacturing firms in Nigeria. This therefore means that return on asset negatively and insignificantly affects the sustainability reporting of listed manufacturing firms in Nigeria. As a corollary to the result reported with respect to return on asset depicting that it is not strongly influential in determining the sustainability reporting of listed manufacturing firms in Nigeria, the result provides evidence for failure to reject the null hypothesis which says that return on asset has no significant impact on sustainability reporting of listed manufacturing firms in Nigeria. Table 4 reveals that return on asset has a T-value of -0.69, coefficient value of -0.0631 and a p-value of 0.492. This implies that return on asset does not significantly influence sustainability reporting of listed manufacturing firms in Nigeria. This means that 1% decrease in return on asset will lead to a decrease in sustainability reporting of listed manufacturing firms in Nigeria by 0.0631. The findings of this study is in line with earlier studies conducted by Chukwuebuka et al. (2022) and Erna (2020) but contradict that of Bahtiar(2015).

Policy Implication of major Findings

Several policy implications can be gleaned from the findings of the study. The analysis shows that leverage is positively and significantly influencing sustainability reporting of listed Manufacturing Firms in Nigeria. This implies that leverage plays an important role in sustainability reporting of listed Manufacturing firms in Nigeria. The result reveals that firms that employed more debt in their capital structure are more likely to engage in sustainability reporting than firms with little or no debt in their capital structure. Moreover, the analysis conducted in the study reveals that managerial ownership has a positive and significant impact on the sustainability reporting of listed Manufacturing firms in Nigeria. This implies that in firms where we have managers that owned shares in the company, they are more likely to engage in sustainability reporting than firms where managers do not own any share. This is might be due to the fact that managers that owned shares in the company feel that they are owners of the company and they can do whatever it takes to protect the image of the company and attract investors by engaging in sustainability reporting.

The analysis further revealed that institutional ownership was found to be statistically significant in influencing sustainability reporting of listed manufacturing firms in Nigeria. This implies that institutional ownership has a significant impact on the sustainability reporting of listed manufacturing firms in Nigeria. It implies that firms that have large institutional investors are more likely to engage in sustainability reporting than firms that do not have institutional investors. This because, they are more exposed and likely to be more sensitive to the environment. Similarly, foreign ownership was found to be statistically significant. That means, firms that have foreign investors are more likely to engage in sustainability reporting than those that do not have foreign investors.

5. Conclusion and Recommendations

This study used stakeholder theory, OLS regression analysis to examine the impact of firm characteristics on sustainability reporting of listed manufacturing firms in Nigeria. The empirical results showed that leverage, managerial ownership, institutional ownership and foreign ownership significantly impacted on sustainability reporting, whereas firm size and ROA insignificantly impacted



on the sustainability reporting. This study concludes that some firm characteristics such as leverage, managerial ownership, institutional ownership and foreign ownership positively and significantly influence sustainability reporting while return on asset is negative and do not appear to have any significant effect on sustainability reporting.

The following recommendations have become necessary in view of the findings of the study:

- i. Government should come up with a regulatory policy that would encourage firms to employ more debt in their capital structure as levered firms are found to participate more in sustainability reporting.
- ii. Government should come up with regulatory policy that will encourage managers to take shares in the company they manage as this is capable of encouraging more sustainability reporting.
- iii. Government should come up with regulatory policy that will encourage institutions to invest in other companies as this is capable of encouraging more sustainability reporting.
- iv. Government should come up with more policies that will ease doing business in Nigeria so as to attract foreign investors to come and invest as this is capable of encouraging more sustainability reporting.

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