EFFECT OF BOARD STRUCTURE ON SUSTAINABILITY REPORTING OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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Abstract: This study ascertained 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 of board members shareholding, board independence, female board representation and number of board meetings 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. Ex-post facto research design was employed. Inferential statistics using Pearson Coefficient Correlation, Multicollinearity test, Panel Least Square Regression analysis and Hausman test were applied to test the hypotheses of the study. The specific findings showed that Board Members Shareholding has a significant but negative effect on Environmental Sustainability Reporting (β_1 = -0.015008; p-value = 0.0000 < 0.05); Board Independence has a significant and positive effect on Environmental Sustainability Reporting (β_2 = 0.161631; p-value = 0.0076 < 0.05); Female Board Representation has a significant and positive effect on Environmental Sustainability Reporting (β_3 = 3.010202; p-value = 0.0121 < 0.05); Number of Board Meetings has a significant and positive effect on Environmental Sustainability Reporting (β_4 = 0.023787; p-value = 0.0000 < 0.05) at 5% level of significance respectively at 5% level of significance respectively. The study recommended inter alia that large boards should be prevented which can lead to a lack of coordination and communication and to slowness in decision-making, thereby prejudicing business development

Keywords: Board Independence, Female Board Representation, Number of Board Meetings, Environmental Sustainability Reporting

Background to the Study

A board of directors is essentially a panel of people who are elected to represent shareholders. In all business organizations, the board of directors is charged with oversight of management on behalf of shareholders. For an organization to run smoothly, it is important for the shareholders to be able to trust the managers while it is indispensable for the managers to be transparent on their journey to good performance. The mindset of financial investors in the economy may thus be heavily directed by a good corporate governance framework. A solid structure will encourage prospective investors to depend largely through the unwavering quality of good corporate governance. It incorporates connections between, and responsibilities of the organization's stakeholders, just as the laws, policies, methods, practices, norms and standards may influence the organization's direction and control.

The structure, responsibilities, and powers given to a board of directors are determined by the bylaws of a company or organization. The bylaws generally determine how many board members there are, how the members are elected, and how frequently the board members meet (Okudo & Amahalu, 2021). There is not a set number or structuring for a board of directors; it depends largely on the company or organization, the industry in which the company or organization operates, and the shareholders. It is widely agreed upon that the board needs to represent shareholder and owner/management interests and that it is usually a good idea for the board to include both internal and external members. Accordingly, there is usually an internal director – a member of the board that is invested in the daily workings of the company and manages the interests of shareholders, officers, and employees and an external director, who represents the opinions and interests of those who function outside of the company (Amahalu & Ezechukwu, 2020).

Sustainability means meeting the needs of the present generation without compromising the ability of future generation to meet their own needs. In other words, sustainability advocates intergenerational equity. While, sustainability report as posited by GRI (2021) is the practice of measuring, disclosing and being accountable for organizational performance while working towards the goal of sustainable development.

In today's increasingly globalised economy, with information technologies in full swing, stakeholders want every organisation to be responsible, accountable and transparent. Sustainability reporting involves assessing the economic performance in environmental and social terms, not just economic and financial. Sustainability reporting supports the process of minimising risks, increasing the corporate brand, occupying a competitive position in the market, raising staff awareness on sustainability issues, and attracting long-term financial capital and more favourable funding conditions from credit institutions. Regardless of its scope, reporting must create a coherent picture of the values, principles, governance, practices and economic performance. It is against this backdrop, that this study sought to determine the effect of board structure on sustainability reporting of listed industrial goods firms in Nigeria.

Statement of the Problem

The efficiency of corporate board as a central institution in the internal governance of a company and its impact on firm behavior is one of the most debated issues in literature today. The economy of the world is currently faced with a complex range of economic, social and environmental issues including, ozone depletion, climate change, water shortage, labour rights, poverty, forest loss, biodiversity destruction, air pollution, water pollution, oil spillage, deforestation, desertification, erosion, and flooding, environmental degradation, and resource depletion. The life-threatening implications of these challenges have drawn criticisms of the traditional capitalist paradigm, prompting calls for a "new accounting system" that recognize the social and environmental impact of organizational and business operations.

Board directors play a key role within private organisations' boardrooms, yet their tasks are not always straight forward. Risk management, getting a grasp on competitive intelligence and defining a company strategy are some of the key challenges they face. Environmental degradation by company's activities and neglect on social welfare of both employees of the companies and public at large has been on the increase, yet the present reporting framework fails to capture company's performance on these issues. Meanwhile users of accounting information needed information on these emerging issues for proper assessment of firms' performance. Externalities caused by a business organization cannot be accurately measured, neither are they entirely recognized in financial accounting; also the likelihood of scarcity caused by resources used in the production process do not reflect in market prices of such resources. Consequently, financial accounting alone is inadequate to portray a holistic picture of organizational performance, except it takes cognizance of sustainability reporting. The accountability that financial results of companies communicate is an important aspect of their transparency that cannot be ignored; but financial results alone cannot communicate a company's social, environmental and sustainability impacts.

Several studies has been done on the link between different aspect of corporate governance and sustainability disclosure The studies generated mixed result on whether board structure has link with sustainability reporting. The first strand of literature found a positive relationship between board structure and sustainability disclosure (for instance, Okudo & Ndubuisi, 2021; Uddin, Hosen, Chowdhury, Chowdhury & Alam-Mazumder, 2021; Alsurayyi, & Alsughayer, 2021). The second strand of literature found a negative relationship between board structure and sustainability disclosure (Otero-Gonzalez, Dur, Rodriguez-Gil & Lado-Sestayo, 2021; Tiron-Tudor, Hurghis, Lacurezeanu & Podoaba, 2020). Yet some other studies found no link between board structure and sustainability disclosure (Dunay, Ayalew & Abdissa, 2021; Kouaib, Mhiri & Jarboui, 2020). The inconsistencies in the findings of these studies created a gap in knowledge which this study sought to fill.

Objectives of Study

The main objective of this study is to investigate effect of Board Structure on Sustainability Reporting of listed Industrial Goods firms in Nigeria.

The specific objectives are to:

i. To ascertain the effect of Board Members Shareholding on Environmental Sustainability Reporting of listed Industrial Goods firms in Nigeria.

ii. To determine the effect of Board Independence on Environmental Sustainability Reporting of listed Industrial Goods firms in Nigeria.
iii. To assess the effect of Female Board Representation on Environmental Sustainability Reporting of listed Industrial Goods firms in Nigeria.
iv. To evaluate the effect of Board Meetings on Environmental Sustainability Reporting of listed Industrial Goods firms in Nigeria.

Research Hypotheses

The following hypotheses in their null form were formulated for the study.
Ho_1: Board Members Shareholding has no significant effect on Environmental Sustainability Reporting.
Ho_2: Board Independence has no significant effect on Environmental Sustainability Reporting.
Ho_3: Female Board Representation has no significant effect on Environmental Sustainability Reporting.
Ho_4: Number of Board Meetings has no significant effect on Environmental Sustainability Reporting.

Conceptual Review

Corporate Sustainability Reporting

Sustainability reporting is the disclosure and communication of environmental, social, and governance (ESG) goals as well as a company's progress towards them. The benefits of sustainability reporting include improved corporate reputation, building consumer confidence, increased innovation, and even improvement of risk management (Nzekwe, Okoye & Amahalu, 2021). Sustainability reporting enables organizations to report on environmental and social performance. It is not just report generation from collected data; instead it is a method to internalize and improve an organization's commitment to sustainable development in a way that can be demonstrated to both internal and external stakeholders (Okudo, Omojolaibi & Oladele, 2021; Amahalu, Ezechukwu & Obi, 2017). Sustainability reports help companies build consumer confidence and improve corporate reputations through social responsibility programs and transparent risk management. Through sustainability reporting, companies communicate their performance and impacts on a wide range of sustainability topics, spanning environmental, social and governance parameters. It enables companies to be more transparent about the risks and opportunities they face, giving stakeholders greater insight into performance beyond the bottom line.

Environmental Sustainability Reporting

Environmental sustainability reporting is the communication of environmental performance information by an organisation to its stakeholders. Information on environmental performance includes among others: impacts on the environment; performance in managing those impacts; and contribution to ecological and sustainable development (Oshiole, Elamah & Amahalu, 2020). Environmental reporting is the process by which management reports to the public about environmental impacts of business activities and environmental initiatives undertaken to mitigate them by disclosing the environmental information related to those activities. Environmental reporting allows enterprises to fulfill their accountability to society as businesses that use natural resources, to provide stakeholders with useful information that may affect their judgement, and to promote environmental communication with them. Environmental reporting should provide relevant information systematically and comprehensively and in accordance with the general principles for environmental reporting specified in the guidelines (Amahalu, Okoye & Obi, 2018).

Board Structure

Board structure distinguishes between those directors who hold management positions in the company and those who do not. The board of directors is the highest governing authority within the management structure at a corporation or publicly traded business. In most cases, directors either have a vested interest in the company or work in the upper management of the company (so-called "executive directors") (James, 2021; Ecowas, Omojolaibi, Oladipupo & Okudo, 2019). Section 149 of the Companies Act states that every company's board of directors must necessarily have a minimum of three directors if it is a public company. Two directors if it is a private company and one director in a one person company (Chen, 2021). The board of directors should have a good balance of both executive and non-executive directors (ideally, 50% of each). If the chairman of the board is a non-executive director, then at least one-third of the board should comprise independent directors. The board of directors is an elected panel in a company representing the company's shareholders and includes high-level corporate position holders (Nwafor & Amahalu, 2021). The board of director's composition differs as per organizations. Usually, there is a chief executive officer, board's chairman, directors, non-executive director, chief finance officer, vice-president, zonal heads, and so on.

Board Members Shareholding

Directors typically (say for Independent Directors) are not precluded from holding shares in companies on whose Boards they serve. Indeed, some companies by their Articles of Association prescribe shareholding qualification for Directors. Section 251 (1) & (2) of the Companies and Allied Matters Act, 2004 (CAMA) provides a basis for this. Where so fixed, the Director is obliged by the provisions of CAMA to obtain his qualification within two months of appointment or vacate the office. In practice, most Directors are shareholders either in their personal capacity or as nominees of corporate shareholders. Many private companies are owner-managed businesses such that a majority if not all the shareholders also sit on the Board. Typically, Shareholder Agreements and indeed Articles of Association provide for "substantial shareholder" Board representation. Upon reaching a particular threshold (usually 5%) shareholders are invited to make nominations to the Board (Amahalu & Obi, 2020a)

Board Independence

Board independence is the state in which all or a majority of the members of a board of directors do not have a relationship with the company except as directors. For example, they may not be relatives of the company's founders, key players or major employees. In the Nigeria, the SEC and individual exchanges require board independence. Board Independence is corporate governance concept that calls for a majority of board members to be independent from the company (Amahalu, Abiahu, Nweze & Obi, 2017). Independence occurs when a board member has not been and is not currently employed by the company or its auditor and the board member's employer does not do a significant amount of business with the company. Each company creates its own definition of significant.

Female Board Representation or Women on Board

The concept of gender diversity is always used to explain the proportion of men and women who occupy board member position. To measure gender diversity on corporate boards, studies often use the percentage of women holding corporate board seats and the percentage of companies with at least one woman on their board (Amahalu, Okoye, Obi & Iliemena, 2019). One benefit of having female directors on the board is a greater diversity of viewpoints, which is purported to improve the quality of board deliberations, especially when complex issues are involved, because different perspectives can increase the amount of information available.

Board Meetings

A board meeting is a formal periodic gathering of a Board of Directors. Most of the organizations, being public or private, profit or non-profit, are ultimately governed by a body commonly known as Board of Directors. The members of this body cyclically meet to discuss strategic matters. The Board of directors is the supreme authority in a company and they have the powers to take all major actions and decisions for the company. The board is also responsible for managing the affairs of the whole company. In the case of a Public Limited Company, the first board meeting has to be held within the first 30 days, since the incorporation date. Additionally, a minimum of 4 board meetings must be held in a span of one year. Also, there cannot be a gap of more than 120 days between two meetings. It is at such meeting that key issues including that of sustainability are being discussed and decision on disclosures reached (Amahalu & Obi, 2020b).

Board Structure and Sustainability Reporting

The independent status of a board member is satisfied if that member does not have personal or business connection with the firm, its management, its major shareholders, or an enterprise that may cause conflicts of interests. The independence of board members plays a significant contribution in firm's activities, especially on firm information transparency. Abu-Hasan and Azuddin (2018) discover board with more independent members tends to be more responsible on social issues. Mbonu & Amahalu, (2021a) assert that independent member plays an important role in board composition. Therefore, it is supposed that higher number of independent member on board has better impact on Global Reporting Initiative adaptation.

Female directors, with different approaches and communication can create different impact during the corporate management. Female members are also considered more hardworking and concentrating on inspection than male members. Omojolaibi, Okudo and Shojobi (2019), Ezeokafor and Amahalu (2019) confirm the important position of female directors as they can comprehend the market better than male members, improve corporate reputation in the awareness of community, and enhance firm perception on business environment. To be able to counsel effectively in specific issues, board committees are formed with appropriate members who have capacity in that matter.

A board meeting is recognised as a significant component of effective corporate governance. According to the agency theory, board meeting frequency may affect firm performance. Increased meeting frequency promotes idea sharing, performance disclosure, and debate to resolve agency problems. Whilst the minimum number of meetings is not prescribed, it would be in the company's best interest for the board to meet regularly (i.e., at least five meetings if not more frequently as circumstances dictate).

Theoretical Review

Agency Theory

This theory was developed by Jensen and Meckling in 1976. They suggested a theory of how the governance of a company is based on the conflicts of interest between the company's owners (shareholders), its managers and major providers of debt finance. In general, the starting point for any corporate governance debate is the principal agent theory (Mbonu & Amahalu, 2021b). The agency's theory describes the most relevant agency issues in today's institutions, particularly since separation of ownership and control exist. Modern companies suffer from control and ownership separation, as they are managed by professionals who are not owners. Empirical evidence to explain both the nature of these agency problems and how to settle them has been documented by Jensen and Meckling's (1976) fundamental work through proposing the theory of the firm which is based on conflicts of interest among the stakeholders involved, equity holders, executives and debt holders.

Stakeholders Theory

This theory was propounded by R. Edward Freeman in the year 1984 to address morals and values in managing an organization. Stakeholder theory is also considered as an explainable theory for corporate environmental accounting. It involves the recognition and identification of the relationship existing between the company's behaviors and its impact on its stakeholders. Stakeholder theory is one of the major approaches to social, environmental, and sustainability management research, and scholars describe stakeholders as those groups and individuals who can affect or be affected by the actions connected to value creation and trade or as the individuals and groups who depend on the firm to achieve their personal goals and on whom the firm depends for its existence. Stakeholder theory contributes to understanding stakeholders' influences on organizations' actions and how organizations respond to these influences.

Methodology

Research Design

The study employed *ex-post facto* research design to investigate the effect of Board Structure on Sustainability Disclosure of firms in the Industrial Goods Sector of Nigeria.

Population of the Study

The population for this study will consisted of all the fifteen (15) Industrial Goods Firms quoted on the Nigerian Stock Exchange as at 31st December 2020. The time period of the study is nineteen years covering from 2002 to

2020 financial periods. The firms are: Adswitch Plc, Austin Laz & Company Plc, Berger Paints Plc, Beta Class Plc, Cement Company of Northern Nigeria Plc, Chemical & Allied Product, Cutix Plc, Dangote Cement Plc, First Aluminum Nigeria Plc, Greif Nigeria Plc, Lafarge Africa Plc, Meyer Plc, Paints & Coatings Manufacturing, Portland Paints & Product Nigeria Plc, Premier Paints Plc

Sample and Sampling Technique

Purposively, twelve (12) industrial goods firms that consistently filed their annual reports with Nigerian Exchange Group Plc (NGX) for the period of interest (2002 - 2020) were used as the sample size of this study. They include: Adswitch Plc, Austin Laz & Company Plc, Berger Paints Plc, Chemical & Allied Product, Cutix Plc, Dangote Cement Plc, First Aluminum Nigeria Plc, Greif Nigeria Plc, Lafarge Africa Plc, Paints & Coatings Manufacturing, Portland Paints & Product Nigeria Plc, Premier Paints Plc.

Data Source

This study used secondary data that were disclosed in the annual report and website of the firms selected for the study covering a period of nineteen (19) years from 2002 to 2020. The data were obtained from the annual reports of the sampled companies together with the use of Nigerian Exchange Group Plc (NGX) Fact Books in order to achieve the objectives of the study.

Description of Variables

Table 1: Variables and their Measurement

Variables	**Code**	**Measurement**
Dependent Variable (Sustainability Reporting)		
Environmental Sustainability Reporting	ENVSR	$\frac{\text{Total Environmental Disclosure Score}}{\text{Maximum Environmental Disclosure Score Possible for a firm}}$
Independent Variables (Board Structure)		
Board Members Shareholding	BMSH	Directors Shares/Outstanding Shares
Board Independence	BIND	Proportion of non-executive directors to total directors
Board Female Representative	BFRP	Proportion of Female to Numbers of Directors
Board Meeting	BGMT	Number of times that the Board met during a financial year

Model Specification

The multiple regression model of this study was adapted from the work of D˘anescu, Sp˘at˘acean, Popa and Sîrbu (2021):

$$CSR = \beta_0 + \beta_1 OWNS + \beta_2 FMBR + \beta_3 BIND + \beta_4 BSZ + E_{it}$$

Where:
CSR = Corporate Social Responsibility
OWNS = Ownership Structure
FMBR = Female Board Representation
BIND = Board Independence
BSZ = Board Size

Consequently, the model of this study was specified as thus;
$ENVSR_{it} = f(BMSH, BIND, FBRP, BDMT)$
$ENVSR_{it} = \beta_0 + \beta_1 BMSH_{it} + \beta_2 BIND_{it} + \beta_3 FBRP_{it} + \beta_4 BDMT + €_{it}$
Where:
$ENVSR_{it}$ = Environmental Sustainability Reporting of firm i in period t
$BMSH_{it}$ = Board Members Shareholding of firm i in period t
$BIND_{it}$ = Board Independence of firm i in period t
$FBRP_{it}$ = Female Board Representation of firm i in period t
$BDMT_{it}$ = Board Meetings of firm i in period t
β_0 = Intercept estimates
$\beta_{1-}\beta_4$ = Coefficient of the independent variables
€ = error term

Method of Data Analysis

The inferential statistical test was carried out using: Pearson Coefficient Correlation, Multicolinearity Test, Multiple Linear Regression Analysis, Hausman Test: was used to determine which of the effect models; random or fixed to be used. The Hausman Test is used to detect endogenous regressors in a regression model. An endogenous regressor is one that is correlated with, or has non- zero covariance with, the random error term ui in equation. Content analysis was also employed adopted in this study. Environmental Reporting was evaluated by 12 indicators: Materials; Energy; Water; Biodiversity; Emissions; Effluents and Waste; Products and Services; Compliance; Transport; Overall; Supplier Environmental Assessment; Environmental Grievance Mechanisms. The environmental reporting indicators were rated on a scale from 0 to 3 points. When a company does not take into account the specific indicator at all, it is rated with 0 (i.e non-reporting). A company is ranked 1 or 2 depending on the broadness of the description (e.g. 1 if the company only names the indicator and 2 if there is a very poor or unclear description (partial reporting). The company is rated 3 if it takes the indicator into consideration with a satisfying description (full disclosure). So, a total score for environmental reporting could reach the maximum score of 36.

Therefore,

ENVSR =TDP/MP
Where;
TDP = Total Disclosure Points of a Firm
MP = Maximum Points for a Firm

Data Presentation and Analysis

Table 2: Pearson Correlation Matrix

	ENVSR	BMSH	BIND	FBRP	BDMT
ENVSR	1.0000				
BMSH	0.1473	1.0000			
BIND	0.5075	-0.1079	1.0000		
FBRP	0.3731	0.4341	-0.5854	1.0000	
BDMT	0.4143	0.0523	-0.3876	0.6160	1.0000

Source: E-Views 10 Correlation Output, 2020

The Pearson Correlation Matrix in table 2 shows the existence of a positive relationship between BMSH, BIND, FBRP, BDMT and ENVSR as evidenced by the correlation coefficient factors of 0.1473, 0.5075, 0.3731 and 0.4143.

Table 3 Multicollinearity Test

Variance Inflation Factors
Date: 12/13/21 Time: 14:48
Sample: 2002 2020
Included observations: 19

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.019408	27.46771	NA
BMSH	0.027640	14.93196	1.411428
BIND	0.024553	9.279134	1.585531
FBRP	21.96878	5.400273	2.911152
BDMT	2.206507	9.582296	1.775108

Source: E-Views 10.0 output, 2021

The resultant output in table 3 reveals that none of Centered Variance Inflation Factors (VIF) of the variables is more than 10.0, thus making the variables fit for regression purpose.

4.3 Test of Hypotheses

Table 4: Panel Least Square Regression analysis testing the effect of Board Structure Indices on Environmental Sustainability Reporting

Dependent Variable: ENVSR
Method: Panel Least Squares
Date: 12/13/21 Time: 14:51
Sample: 2002 2020
Periods included: 19
Cross-sections included: 12
Total panel (balanced) observations: 228

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.191837	0.055762	3.440275	0.0007
BMSH	-0.015008	0.003303	-4.543054	0.0000
BIND	0.161631	0.060033	2.692347	0.0076
FBRP	3.010202	1.189633	2.530362	0.0121
BDMT	0.023787	0.002737	8.692001	0.0000

R-squared	0.571000	Mean dependent var	0.322798
Adjusted R-squared	0.554336	S.D. dependent var	0.226660
S.E. of regression	0.220416	Akaike info criterion	-0.164917
Sum squared resid	10.83402	Schwarz criterion	-0.089712
Log likelihood	23.80058	Hannan-Quinn criter.	-0.134574
F-statistic	14.60753	Durbin-Watson stat	1.715669

Prob (F-statistic)	0.000000

Source: E-Views 10 Regression Output, 2021

Interpretation of Regression Output

Table 4.shows the output of regression on the effect of Board Stricture on Environmental Sustainability Reporting and the result of the model is written as:

$$ENVSR = 0.191837 - 0.015008\ BMSH + 0.161631\ BIND + 3.010202\ FBRP + 0.023787\ BDMT + \mu_{it}$$

The model infers that 1% increase in BMSH will exert 1.5% reduction on ENVSR of listed industrial goods firms in Nigeria. On the other hand, a unit increase in BIND, FBRP and BDMT will cause a corresponding increase of 16%, 301% and 2.4% on ENVSR. It also shows that BMSH (β_1=-0.015008) has a negative relationship with ENVSR, while, BIND (β_2=0.161631); FBRP (β_3=3.010202); BDMT (β_4=0.023787). The slope coefficients reveal that; P(x_1= 0.0000 < 0.05; x_2=0.0076 < 0.05; x_3=0.0121 < 0.05; x_4= 0.0000 < 0.05). The model delineate that at 95% confidence level, there is a significant negative relationship between BMSH and ENVSR; a significant positive relationship between BIND, FBRP, BDMT and ENVSR. The Durbin-Watson Value of 1.715669 buttressed the fact that the model does not contain auto-correlation, thereby, making the regression fit for prediction purpose. The adjusted R-Squared of 0.554336 shows that 55.43% of the systematic variation in ENVSR could be explained by BMSH, BIND, FBRP and BDMT, while the remaining 44.57% is explained by the error term as part of the ENVSR which is not interpreted by the regression model.

Decision

Following the F-statistics of 14.60753 with an associated P-value of 0.000000 ($p<0.05$) which is less than 5%. Therefore, hypothesis H_1 is accepted while Ho is rejected. Hence, board structure has a significant effect on environmental sustainability reporting of listed industrial goods firms in Nigeria at 5% level of significance.

Table 5 Hausman Test between Board Structure Indices and Environmental Sustainability Reporting

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

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	32.468184	4	0.0000

Source: E-Views 10.0 Output, 2021

The resultant output of the Hausman test in table 5 has a p-value of 0.0000 which is statistically significant at the conventional level of 0.05. This posits that Fixed Effect Model (FEM) is more appropriate than the Random Effect Model (REM) in analysing the relationship between board structure and sustainability reporting of industrial goods firms listed on Nigeria Stock Exchange at 5% level of significance.

Findings, Conclusion and Recommendations

Findings

In consonance with the analysis of this study, the following findings were deduced:

i. Board Members Shareholding has a significant but negative effect on Environmental Sustainability Reporting of listed industrial firms in Nigeria at 5% level of significance (β_1 = -0.015008; p-value = 0.0000 < 0.05)
ii. Board Independence has a significant and positive effect on Environmental Sustainability Reporting at 5% level of significance (β_2 = 0.161631; p-value = 0.0076 < 0.05)
iii. Female Board Representation has a significant and positive effect on Environmental Sustainability Reporting at 5% level of significance (β_3 = 3.010202; p-value = 0.0121 < 0.05).
iv. Number of Board Meetings has a significant and positive effect on Environmental Sustainability Reporting at 5% level of significance (β_4 = 0.023787; p-value = 0.0000 < 0.05).

Conclusion

The thrust of this study was to ascertain 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. Sustainability reporting which is the dependent variable was measured using environmental sustainability reporting, while board members shareholding, board independence, female board representation and number of board meetings were the proxies used to measure the independent variable; board structure. Panel data were obtained from annual reports and accounts of the sampled firms for the study period, using thirteen (13) listed industrial goods firms in Nigeria. Multiple Regression analysis was employed via E-Views 10. The results of the tested hypotheses revealed that; Board Members Shareholding has a significant but negative effect on Environmental Sustainability Reporting (β_1 = -0.015008; p-value = 0.0000 < 0.05); Board Independence has a significant and positive effect on Environmental Sustainability Reporting (β_2 = 0.161631; p-value = 0.0076 < 0.05); Female Board Representation has a significant and positive effect on Environmental Sustainability Reporting (β_3 = 3.010202; p-value = 0.0121 < 0.05); Number of Board Meetings has a significant and positive effect on Environmental Sustainability Reporting (β_4 = 0.023787; p-value = 0.0000 < 0.05) at 5% level of significance respectively. In conclusion, the study found that board structure has a significant effect on sustainability reporting of listed industrial goods firms in Nigeria at 5% level of significance.

Recommendations

Based on the findings of this study, the following recommendations were made:

i. In an attempt to reverse the negative relationship between board members shareholding and environmental sustainability reporting, large boards should be prevented which can lead to a lack of coordination and communication and to slowness in decision-making, thereby prejudicing business development.

ii. Considering the positive relationship between board independence and environmental sustainability reporting, there is need for increased level of board independence which will lead to more effective management supervisions by the board, thereby improving the level of sustainability reporting.

iii. Firms should consider increasing the proportion of female directors since diversity contributes value by providing access to a greater volume of information or skills by incorporating the best board members regardless of gender, age or nationality.

iv. Considering the result of the descriptive statistics, the number of board meetings a firm should hold in a year should not be more than five (5) times for an effective performance and enhanced reporting.

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