EFFECT OF CORPORATE GOVERNANCE ATTRIBUTES ON SOCIAL AND ENVIRONMENTAL DISCLOSURE OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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ABSTRACT

The study examined the effect of corporate governance attributes on social and environmental accounting disclosure quality of listed industrial goods firms in Nigeria. Specifically, the study examined the extent to which social and environmental accounting disclosure of firm is influenced by board size, board composition, board meetings and managerial ownership. The population of the study consisted of all the 13 firms that are listed on the Nigerian Exchange Group (NGX), under industrial goods firms. After applying two filters, six (6) firms were studied based on census approach. Data were collected from the annual reports and accounts of the firms for the period 2004-2021. The study employed ex-post facto design and content analysis approach was utilized to analyze the social and environmental accounting information disclosure in the annual reports. Weighted disclosure index was used for measuring of social and environmental accounting disclosure. The results of the random effect models indicated positive and significant association between, board size, managerial ownership and social and environmental accounting disclosure. In contrast, social and environmental disclosure is negatively related to board composition. The study also found no significant association between board meetings and the dependent variable. Based on the findings, the study recommended the need for Accounting Standard setting bodies and other regulatory agencies to set up a framework for social and environmental reporting in order to improve the level of social and environmental disclosure and transparency among listed industrial goods firms in Nigeria.

Keywords: *Social and Environmental Accounting Disclosure, Corporate governance, Industrial Goods Firms, Nigeria*

1. INTRODUCTION

The emergence and enormous interest globally in social and environmental accounting disclosure have given rise to the increasing need for disclosure and accountability from corporate organizations. Despite the fact that industrialization plays an important role in achieving meaningful economic development of a nation, Uwuigbe (2012) argued that economic development comes along with social and environmental related hazards such as global warming, environmental degradation, accusations and counter-accusations of unfair treatment of host communities, and pollution, among others. Therefore, firms are expected to behave in a responsive manner to social and environmental issues parallel to business issues. Organizations can achieve this by voluntary disclosure on information about social and environmental accounting in their annual reports, in addition to the regulatory requirements.

Generally, studies on factors influencing organizations' social and environmental accounting disclosure primarily focused on the effect of firm attributes such as size of the firm, profitability, and leverage on social and environmental disclosure, while little attention was given to corporate governance attributes, which are considered as a good explanatory variable that might influence firms to voluntarily improve the level of disclosure relating to social and environmental accounting information in their annual financial reports (Susi, 2005; Echave & Bhati, 2010). Corporate governance mechanisms play an important role in disclosure on social and environmental issues in the annual report. Good corporate governance is a critical issue for corporate success.

Due to the nature and activities carried out by industrial goods firms in terms of production processes, such firms are more likely to negatively affect the environment in which they operate. Much is expected from these firms, particularly relating to enhancing social and environmental responsibilities within the society in which they operate. Therefore, it is imperative to conduct a study that will look at the relationship between Corporate Governance characteristics and predicted variable of industrial goods firms in Nigeria.

Earlier research work on factors influencing organizations to make disclosures on social and environmental accounting issues examined various company attributes but failed to consider corporate governance variables as possible factors that could influence companies to disclose social and environmental accounting information in annual financial reports. Little was known about the association between firm attributes and disclosure quality in developing countries' capital markets, such as Nigeria, particularly with the aid of data on industrial goods firms. Therefore, it is pertinent to carry out a study to fill this gap. Studies conducted by Umoren and Okougbo (2011) and Ajibolade and Uwuigbe (2013), which considered the incorporation of corporate governance variables, did not concentrate on a particular sector of the Nigerian economy. As a result, their findings appeared too generic and not sector specific. Hence, a study that will extend its analysis to corporate governance attributes and similarly focus on firms other than the financial sector is therefore desirable. This study is aimed at filling these gaps that are evident in the literature.

Based on the problem observed, the following questions guide the study. Does a relationship exist between size of the board, board composition, board meeting, managerial ownership and social and environmental accounting information disclosure of listed industrial goods firms in Nigeria? The study seeks to analyze the influence or otherwise of board member size, board composition, and other explained variables of industrial goods firms in Nigeria. To achieve the stated objectives and research questions, hypotheses are constructed in null form to guide the study. Board size, board composition, board meetings and managerial ownership have no significant influence on social and environmental accounting information disclosure of industrial goods firms in Nigeria.

The study covered eighteen (18) year period from 2004 to 2021. The selection of these firms is based on their nature of operation and, most importantly, their market capitalization. Only board size, board composition, board meetings and managerial ownership are used as proxies for corporate governance attributes. The study is motivated by the expected contribution to the frontier of knowledge, future researchers, academia, listed industrial goods firms, as well as government with regards to the effect of corporate governance attributes on the social and environmental accounting information disclosure of industrial goods firms in Nigeria.

2. LITERATURE REVIEW

Conceptual Framework

Corporate Governance Attributes

Corporate governance is defined as the processes that are responsible for the decision that, in long term, have most influence, on the composition of management team, on capital structure, and on taking of important risks for the owners of the company (Shehu and Musa, 2014). Corporate governance is a mechanism that protect the interests of the shareholders. It entails rules, process and practice by which a firm is controlled and directed. Good corporate governance is a critical issue for corporate success. The main issue here is the information asymmetry between the principal (stockholders) and the agents (managers) where managers consider their own interest in exercising their managerial judgment and thereby leading to social and disclosure gap. Information disclosure is an efficient means of safeguarding shareholders and it is the major responsibility of managers.

Board Size

Board size is one of the corporate governance mechanisms considered to be vital in determining firms' behavior toward social and environmental disclosure. Board size refers to the total number of directors in the corporate board. Halme and Huse (1997) are of the view that the role of the board may be linked to companies' environmental attention, the environmental group and corporate activist may ask the board to make their companies behave in a socially acceptable manner. A sizable board of directors would lead to greater monitoring and bring better recommendation that will lead to long term corporate sustainability. In line with the guideline issued by SEC (2003), all listed firms in the Nigerian Stock Exchange should have a sizeable number of board relative to the scale and complexity of the firms' operation. Effective and efficient board of directors in a firm lead to greater monitoring and consequently to a high level of corporate social disclosure.

Board Composition

Board composition refers to the proportion or ratio of non-executive directors to total number of directors on the board. The inclusion of non-executive directors on the board would result in more individuals having the incentive to protect their reputation by promoting higher transparency through disclosure of material information including social and environmental impact of business activities (Ajibolade & Uwuigbe, 2013). Board meetings is one of the apparatus board of directors can make use of to address the issue of strength and weakness affecting the firm. Conger et al. (1998) opined that board meeting is an important element in increasing the effectiveness of the performance directors and commissioners in the company. When directors and commissioners hold regular meeting, more information and knowledge will be obtained related to company performance to influence and direct the company to fit the established company goals.

Board Meeting

Board meeting is a good medium for monitoring company performance, the more frequent board meeting is, the problems related to the duties of directors and commissioners as well as social and environmental problems faced by the company can be immediately resolved (Vafeas, 1999). In addition, board meeting can be a tool for directors and commissioners to improve the quality and credibility of corporate CSR reporting.

Managerial Ownership

Ownership Structure of a company refers to the distribution of control and ownership in the company (Shehu & Farouk, 2014). Control is seen as the ability to affect decisions and for shareholders it is represented by voting power. The proportion of directors' shareholding in a firm (managerial ownership) may also have some influence on information disclosure behavior exhibited by such company. Fama and Jensen (1983) proposed that where there is diffusion in ownership, the potential for conflict between the management and owners is greater. On the other hand, Uwuigbe (2011b) observed that the higher the proportion of directors' equity interest in a firm, the more they will be socially friendly to the environment in which they operate. In addition to that the greater the managerial ownership the less inclined the managers are to divert resource away from value maximization.

Empirical Review

Salawu (2021), examined the firm attributes and commitment to environmental disclosure among conglomerate firms in Nigeria. KLD environmental rating system was adopted by the NSE. It was discovered that board size has no significant influence on firm commitment activities and environmental disclosure. The study recommends the need for the regulatory agencies to speed up on adoption of the guidelines for environmental disclosure by listed conglomerate firms in Nigeria. Harymawan et al (2020), investigated the effect of board of directors meeting on corporate social responsibility disclosure (CSRD) of firm listed on Indonesia Stock Exchange (IDX) for the period 2010-2017. The study used OLS fixed year and industry effect regression model. The study shows that number of the board of directors meeting has a negative and significant effect on CSRD. It implies that the higher the number of board of directors' meetings, the lower the CSRD scores.

Asori and Atta P.H. (2019) investigated the effect of company characteristics on reporting index of corporate social and environmental disclosure in Indonesia public company. The regression analysis revealed that managerial ownership has significant positive effect on the extent of corporate social responsibility and environmental disclosure. 2008-2009. No clear theory underpinning the study. Nurulyasmin, Afzalur and Jeff (2017), conducted a study aims at determining the effectiveness of board meeting frequency on corporate social responsibility (CSR) reporting by public listed companies on the main market of Bursa Malaysia. Content analysis was used. The result of the study reveals that the frequency of board meeting was not associated with CSR. The study emphasizes the need for the authorities to be more stringent in monitoring the reliability and confidence of the owners of the company toward the role of the board directors. Halil (2016) analyzed the association between selected board characteristics and the extent of environmental disclosure in annual reports of Turkish companies. The study used content analysis to measure the extent of environmental disclosure. The independent variables of the study include board size, board independence and audit committee independence among others. The regression analysis result reveals that only board size has a statistically significant and positive relationship with the extent of environmental disclosure. It implies that firms with larger boards disclose more environmental information in their annual report than firms with smaller boards. The study concentrates on the quantity rather than quality of the environmental disclosure.

Sartawi, Hindawi, Bsoul and Ali (2014) investigated the impact of board composition and firm characteristics on the level of voluntary disclosure in the annual reports of listed Jordanian firms. Board composition variables considered includes: board size, board independent, board ownership concentration, institutional ownership, foreign ownership, member's age and gender. Board ownership concentration was measured as the percentage of shares outstanding held by the board of directors. The annual reports of 103 sample firms listed on Amman Stock Exchange (ASE) for the year 2012 was content analyzed. The result showed that board ownership concentration has a significant negative relationship with voluntary disclosure. The effect of institutional ownership on the level of voluntary disclosure was found to be negative and insignificant. The study also concludes that, the amount of voluntary information disclosed by Jordanian firms in their annual reports varies according the firm's business sector.

Soheilyfar, Tamimi, Ahmadi and Takhtaei (2014) investigated the effect of governance attributes on disclosure quality. The result did not reveal any association between board size and the disclosure quality among the selected firms. On the hand, study conducted by Hassan (2010), revealed that corporate social disclosure is associated with size of the board members. Al-Janadi, Abdul Rahman and Omar (2013) investigated the effect of internal and external corporate governance mechanisms on voluntary disclosure based on a sample of 87 companies listed on Saudi Stock Market. The factors examined are board size, board composition, independent audit committee, CEO duality, audit quality, government and foreign ownership. Content analysis was carried out for annual reports between 2006 and 2007. The study used three level of disclosure in measuring the level of quality of voluntary disclosure. The empirical results revealed that there is a highly positive significant relationship between the proportion of non-executive directors on the board and voluntary disclosure. Statistically positive significant association was obtained between board size, audit quality and voluntary disclosure among the selected Saudi Arabian firms.

Juhmani (2013) analyzed the relationship between the ownership structure variables and corporate voluntary disclosure within annual financial statement from a sample of 44 companies listed with Bahrain Stock Exchange (BSE) for the year 2010. The study analyzed three major ownership structure variables: block holder ownership, managerial ownership and government ownership while company size, leverage and profitability as control variables. The study employed dichotomous approach to measure the voluntary disclosure (the dependent variable). The empirical result revealed that managerial ownership and government ownership were not associated with voluntary disclosure. A significant negative association was found between block holder ownership and corporate voluntary disclosure.

Htay, Rashid, Adnan and Meera (2012) examined the impact of various corporate governance mechanisms on social and environmental information disclosure of Malaysian listed Banks using panel data analysis during the period 1996-2005. Using content analysis weighted social and environmental information disclosure score was used as a dependent variable and questionnaire was developed to obtain views from financial analyst and accountants. The selected explanatory variables were leadership structure, board composition, board size, director ownership, institutional ownership and block ownership. A sample of 12 listed Malaysian banks was drawn for the analysis. Generalized least square (GLS) analysis showed that director ownership was negatively related to social and environmental information disclosure. While board size, board composition were found to be significant and positively associated with social and environmental information disclosure among selected firms.

Rouf (2010) empirically examined the linkage between corporate characteristics, corporate governance attributes (Independent non-executive directors, audit committee, board leadership structure, board size and ownership structure) and voluntary disclosure in Bangladesh companies. A sample of 120 listed non-financial companies in Dhaka Stock Exchange (DSE) was used. The annual reports of companies were content analyzed for the year 2008. An un-weighted disclosure index was utilized for measuring voluntary disclosure among the selected firms. Multiple regression result showed a positive and significant association between board size, board audit committee and voluntary disclosure which suggest that larger board is positively related to the level of voluntary disclosure.

Barako (2007) examined factors that influence voluntary disclosure of four types of information. Content analysis was deployed. The empirical results obtained from the pooled regression analysis revealed that board composition has significant negative relationship with the disclosure of financial information. Zhou (2008) who examined the linkage between board composition and several types of voluntary disclosure among companies in the Shanghai Stock Exchange (SSE) of China and OMX Nordic exchange Stockholm, Swedish discovered no significant association between the proportion of independent directors in the board and the three categories of voluntary disclosure in companies' annual reports.

Social and Environmental Disclosure

The concepts of social and environmental accounting information disclosure have been defined by different scholars. Guthrie and Matthew (1985) defined corporate social disclosure as a medium through which organizations report their activities, financial or otherwise, as they affect society in the annual financial report or separately. This means social and environmental disclosure is integrated into the financial report or presented separately through other medium of communication, such as a stand-alone report or an environmental report. Barako (2007) defined corporate environmental disclosure as the discretionary release of social information that has an economic effect on the activities of companies in annual reports, in line with International Accounting Standards (IAS) or any other regulatory requirement. It could be deduced that disclosure could either be mandatory or voluntary. The aim of voluntary disclosure is to promote accountability and transparency. Hassan (2010) and Aburaya (2012) indicated that the lack of a definite social and environmental information framework has given rise to several initiatives to develop a comprehensive framework for disclosure, such as the Global Reporting Initiatives (GRI) and Accountability AA1000 Assurance Standard. GRI is aimed at spreading worldwide sustainability reporting guidelines to encourage organizations to voluntary disclose their activities (GRI, 2002). The AA1000 Assurance Standard is an ethical performance framework introduced by the Institute for Social and Ethical Accounting (ISEA, 1999).

Disclosure Quality

The concept of disclosure quality is a disputed topic in academic literature and in contemporary philosophy which has different meaning to different people (Aburaya, 2012). Disclosure quality is defined as the extent to which current and potential investors perceived the information easily (Hopkins, 1996). International Organizations for Standardization (ISO 9000) defines quality as a degree to which a set of inherent characteristics fulfills requirement. Beattie *et al.* (2004) as cited in Hassan (2010) indicate that there are two principle ways to measure quality of disclosure: use subjective analyst disclosure quality ranking; and use researcher-constructed disclosure indices, in which the amount of disclosure is used as a proxy for disclosure quality. In determining disclosure quality, Cormier, Magnan and Velthoven (2004) asserts that management should considers the institutional framework of the company by focusing attention to what other companies either in the same industry or in the same country do in that respect. They should also consider what the company has done in the past as well as relevant regulations and laws governing disclosure.

Prior literature on social and environmental disclosure used various ranking system to determine the quality of disclosure in annual reports. Different point scales were used for assessing the quality of disclosed information. Cormier, Magnan and Velthoven (2004) used rating based on the score of one to three. Three for items described in quantitative terms, two where an item is described specifically and one for an item described in general terms. Yusoff and Lehman (2005) used rating base on the score of one to four; general information, qualitative information, quantitative information and combination of both qualitative and quantitative information respectively. Similarly, Barako (2007) proposed qualitative disclosure measure which denotes weight for different disclosure items based on the perceived importance of each item to various user categories; weight four to three were assigned where the information provided is highly essential, weight three to a very important, weight two moderately important, weight one slightly important and zero to un-important. Aburaya (2012) argued that as long as quality measurement is intended a weighted index is deemed appropriate in order to differentiate between varying degree of disclosure quality. The quality of disclosed information is assessed by assigning weight and defining scores that vary according to the distinct nature of the disclosed items.

Theoretical Framework

A number of different theoretical approaches have been used in prior studies to explain corporate social and environmental disclosure. Some scholars used political economy theory to explain the existence and content of environmental accounting (Guthrie & Parker, 1989), agency theory (Umoren & Okougbo, 2011; Ajibolade & Uwuigbe, 2013), legitimacy theory (Haron, Ismail & Yahya, 2008; Hassan, 2010; Yao, Wang & Song, 2011; Joshi, Suwaidan & Kumar, 2011; Suttipun & Stanton, 2012; Juhmani, 2014) and stakeholders' theory (Damak, 2004; Uwuigbe, 2012). However, stakeholders' theory, agency theory and legitimacy theory are the predominant theories employed as providing strong justification for corporate social and environmental disclosure practice.

Stakeholder Theory

Stakeholder theory has been widely employed as one of the theories used by previous researchers in the area of accounting literature. Early research in the area of stakeholder management defined stakeholders as any group or individual who can affect the achievement of the organization's objective or is affected by the achievement of the organization's objectives (Freeman, 1984 cited in Hassan, 2010). Stakeholder theory posits that disclosure on social and environmental information by firms is as a result of the pressure from various stakeholders such as shareholders, customers, employees, communities and suppliers (Watts & Zimmerman, 1978). The basic assumption behind stakeholders' theory is that a firm survival is dependent upon the successful management of all the relationship that a firm has with its stakeholders (Uwuigbe, 2012).

Unlike agency theory, stakeholder theory offered a new perspective in the context of corporate social responsibility research by suggesting that the need of shareholders cannot be met without satisfying the need of other stakeholders (Jamali, 2008 cited in Aburaya, 2012).

Agency Theory

Agency theory as proposed by Jensen and Meckling (1976) concerns the difficulties in motivating one party, the agent, to act on behalf of another, the principal. The two parties have different interests and asymmetric information, where the agent having more information, such that the principal cannot directly confirm that the agents are always acting in principals' best interests, particularly when activities that are useful to the principal are costly to the agent, and where elements of what the agent does are costly for the principal to observe. Moral hazard and conflict of interest may arise. Therefore, by disclosing information, the management can reduce the asymmetric information and, hence, agency costs. This means, agency costs are incurred in order to reduce or eliminate the effects of agency conflicts which exist when managers or agents undertake opportunistic actions to maximize their own interest.

Legitimacy Theory

Legitimacy theory is one of the most adopted mechanisms for explaining corporate social and environmental information disclosure. Legitimacy is a generalized perception that the action of an entity are desirable, proper or appropriate within some socially constructed systems of norms, value, benefits and definition (Suchman, 1995). Legitimacy theory is derived from the idea of social contract that every company operates in a society through an expressed or implied social contract (Elmogla, 2009). The term social contract reflects the expectation of society about how an organization should conduct its operation. These expectations could be explicit or implicit (Elmogla, 2009). This theory relates to the extent and types of corporate social disclosure in annual report to be directly related to the management perception about the concerns of the community. Patten (1992) asserted that organization disclose information as a means of establishing or protecting the legitimacy of such entity in that they may influence public opinion. Tilling (2004) as cited in Hassan (2010) argued that there are two major classes of legitimacy theory: Institutional legitimacy which refers to the type of organizational structure that has gain acceptance from the society as a whole; and organizational legitimacy which refers to the strategy adopted by the company seeking legitimacy by approval by approval or avoidance of sanction from group in society.

The theory that underpins this study is legitimacy theory. Legitimacy enables the organization to perform its activities in alignment with the interests of the stakeholders (Suchman, 1995). Unlike stakeholder and agency theory, legitimacy theory provides a more comprehensive view point on corporate social disclosure as it clearly recognizes that organizations are bound by the social contract in which they agree to perform various socially desired action in returns for approval of their objectives, which will guarantee their continued existence and their success (Deegan, 2002). The theory suggests a relationship between corporate social disclosure and community concerns so that management must react to community expectations and changes. Corporation continually seek to ensure that their activities are perceived by outside parties as legitimate (Juhmani, 2014).

3. METHODOLOGY

An ex-post facto design was adopted. The descriptive statistics method was used because the study aimed at observing, describing, and interpreting the results obtained. The paradigm is based on a positivism approach anchored on quantitative research methods. Four (4) explanatory variables were used against one explained variable in order to assess their relationship. The population of the study consists of all the thirteen (13) industrial goods firms on the floor of the Nigerian Exchange Group (NGX). A census approach was used in selecting the six (6) listed industrial goods firms. The six firms, which represented the adjusted population, were all studied based on the census approach. Secondary data as contained in the annual financial statements of six firms for the period 2004–2021 was used. The panel dataset comprised 108 observations which were subjected to different tests for analysis.

The predicted and independent variables of the study and the proxy used to represent them are given in table 1

Table 1: Proxies for dependent and independent variables

Variable	Type of Variable	Measurement	Source
Disclosure quality (DIS_ QLTY)	Dependent variable	Ratio of weighted disclosure score of individual company to maximum score obtainable by the firm	Cormier, Magnan and Velthoven (2004), Barako (2007)
Board Size (BS)	Independent Variable	Total number of Directors	Hassan (2010), Umoren and Okougbo (2011).
Board Composition (BC)	,,	Ratio of non-executive directors to total number of directors on the board	Zhou (2008), Hassan (2010)
Board Meeting (BM)	,,	Total number of meetings held by Board members in a year	Ju Ahmad, N. B., Rashid, A., & Gow, J. (2017).

Managerial Ownership (MO)	,,	Proportion of directors' shareholding to total number of outstanding shares	Ghazali (2007), Juhmani (2013)

Source: Compile by Author, 2023

In order to find out the effect between different variables, the data was analyzed using multiple regression analysis via the use of econometric model. The model used in testing the hypotheses of the study is specified mathematically below:

$$DIS\_QLTYi_t = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 BM_{it} + \beta_4 MO_{it} + \varepsilon_{it} \qquad (1)$$

Where: DIS_QLTY = Total social and environmental disclosure quality; β_0 = Intercept; β_1 to β_4 = coefficient of slop or regression coefficient; ε = error term; BS_{it} = Board size of firm i at year t; BC_{it} = Board composition of firm i at year t; BM_{it} = Board composition of firm i at year t MO_{it} = Managerial ownership of firm i at year t

4. RESULT AND DISCUSSION

Descriptive and inferential statistics of the data for the study are presented, discussed and interpreted. The discussion of major findings of study and the policy implications of the findings forms the last discussion under the heading. Table 1 shows summary of the descriptive statistics of the data.

Table 1: Summary of Descriptive Statistics of the Variables

Variables	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
SED_QTLY	0.5323	0.3390	0.2857	0.7843	0.0605	2.0686
BS	9.2037	2.7977	6	17	0.9756	3.4981
BC	0.7522	0.0893	0.5454	0.8889	-0.0803	2.4770
BM	5.2500	1.1284	4	10	0.9483	4.6446
MO	0.9374	0.1767	0.0001	0.5625	1. 7755	4.2808

Source: Stata Output, 2023

The Table 1 shows the summary of descriptive statistics for the dependent and independent variables. The table reveals that the mean of social and environmental disclosure quality for the firms is 0.5323 with standard deviation of 0.3390 signifying that the data deviate from the mean value by 0.3390. It can be deduced from the result that there is no wide dispersion between the mean and the standard deviation. The minimum social and environmental disclosure quality among the firms is 0.28 with a maximum value of 0.78. However, the coefficient of skewness 0.0605 implies that the data is positively skewed which deviate the condition of being symmetrically distributed that suggests a value of 0 for skewness. In terms of the kurtosis statistics the dataset with respect to social and environmental disclosure quantity is not normally distributed. This is because the value of kurtosis is 2.069 which do not fall within the range of ±3 as suggested by Landau and Everitt (2004).

The descriptive statistics also indicate that the number of directors ranges between 5 and 17, with an average value of 9.20, which is in line with the 2009 Securities and Exchange Commission (SEC) Code of Corporate Governance, which recommends that board members should be of sufficient size relative to the scale and complexity of the company's operation and that membership of the board should not be less than five (5). The standard deviation of 2.798 implies that the data is widely dispersed. Similarly, the skewness value of 0.9756 signifies that the data is not normally distributed. On the other hand, the kurtosis value of 3.4980 shows that the value does not fall within the acceptable range.

Table 1 also shows a mean value board composition of 75.22%, which implies that a larger number of the board's membership are non-executive directors, which agrees with the SEC's recommendation. The standard deviation of 0.089 implies that the data is positively skewed. This indicates that there is not too much of a gap between the numbers of non-executive directors among industrial goods firms. The minimum and maximum values of board composition among firms stood at 0.5455 and 0.8889 respectively. This implies that non-executive directors occupied a minimum of about 55% of the total number of the board of directors. The coefficients of skewness and kurtosis are -0.08031 and 2.4770 respectively.

For board meeting, the minimum number of times they met was four (4) and highest number of times they met was ten (10) times in a year. The table further reveals that the overall average of shares held by management within the study period is 9.38% with standard deviation of approximately 0.0004. The highest shares own by the management for the period is 56% while the minimum shares held was 0%. On the other hand, the coefficient of skewness of 1.9875 implies that the data is positively skewed, and thus, the data meet the symmetrical distribution, which suggests a value of 0 for skewness. The kurtosis value of 4.2807 also shows that the data is leptokurtic and does not fall within the acceptable range of ±3 as suggested by Landau and Everitt (2004).

The study used the Shapiro-Wilk test to find statistical evidence as to whether the data follows the normal curve or not. The result obtained from the normality test of the variables is presented in table 2.

Table 2: Result for Normality Test

VARIABLES	N	W	V	Z	Prob>Z
SED_QLTY	108	0.9787	2.167	1.723	0.04249
BS	108	0.9221	6.862	4.291	0.00001
BC	108	0.9841	1.395	0.742	0.22917
BM	108	0.9385	5.415	3.763	0.00008
MO	108	0.5529	39.375	8.186	0.00000

Source: Stata Output, 2023

Table 2 indicates that the data for the dependent variable is not normally distributed because the p-values are significant at less than 5%. Similarly, board size (BS), board meetings (BM) and managerial ownership (MO) are not normally distributed because they are significant because the P-values are significant at 1%. Thus, the null hypothesis that the data is normally distributed is rejected. On the other hand, board composition (BC) is normally distributed, as evidenced by the p-value of 0.22917. Table 3 depicts the statistical relationship between regressands and regressors, and also among regressors themselves. The values are obtained from Pearson's Correlation of 2-tailed significance.

Table 3: Correlation matrix for dependents and independent variables

VARIABLES	SED_QLTY	BS	BC	BM	MO
SED_QLTY	1.0000				
BS	0.5678* (0.0000)	1.0000			
BC	-0.1119 (0.2489)	0.3496* (0.0002)	1.0000		
BM	0.5244* (0.0000)	0.3656* (0.0001)	-0.3018* (0.0015)	1.0000	
MO	-0.1482 (0.1258)	-0.3472* (0.0002)	-0.2025* (0.0356)	-0.2374 (0.0134)	1.0000

Source: Stata Output, 2023

Table 3 shows that the quality of social and environmental accounting disclosure is 56%, which is strongly and positively associated with board size and significant at 1% level. This signifies that a larger board will provide more voluntary information than a smaller one. Table 3 also shows a correlation coefficient between board composition and the dependent variable of -0.1119. This negative correlation is not significant, indicating that, the presence of high number of non-executive directors in the board does not influence disclosure of information on social and environmental related issues. Board meeting is positively associated with the explained variable and is significant at 1%. It also demonstrates a negative relationship between the dependent variable and managerial ownership, with a correlation coefficient of -0.1482 that is not significant at all confidence level (p-value 0.1258). It suggests that managerial ownership decreases the level of social and environmental accounting information disclosure. Similarly, board size is positively associated with the quality of social and environmental accounting information disclosure with a correlation coefficient of 0.5015 and statistically significant at 1%.

The table, however, shows that the correlation among the explanatory variables ranges between-0.36564 and 0.5678. Board size has the highest positive correlation with board meetings which is significant at a 1% level. Board size also has the next highest positive correlation with board composition, which is also significant at a 1% level. However, these high correlations would not pose any problem to the analysis. The correlation coefficient among other explanatory variables indicates that there is mild multicollinearity among them.

Table 4 presents a summary of the results obtained in respect of the robustness tests conducted in order to improve the validity of all the statistical inferences made in the study. Robustness checks are applied to examine the results under different circumstances. The tests carried out are the multicollinearity and heteroskedasticity tests on the OLS results and the Hausman specification test to select the best model between fixed and random effects models.

Table 4: Summary of Result

VAR	Multicollinearity Test		Heteroskedasticity Test	Hausman specification test
	VIF	TV	Breusch& Pagan/Cook-Weisberg Test for Heteroskedasticity: Chi2 (1) = 0.22 Prob>Chi2=0.6395	Hausman Chi2 31.75 Prob>chi2 =0.000
BS	1.62	0.6164		
BC	1.59	0.6302		
BM	1.55	0.6434		
MO	1.19	0.8376		

Source: Stata Output, 2023

In a bid to confirm the existence or absence of collinearity among the regressors, two tests were conducted: Variance Inflation Factor (VIF) and tolerance value. According to Gujarati and Porter (2009), there is no problem if the VIF is less than 10 and the tolerance coefficient is greater than 0.10. From table 5, the values for VIF and tolerance coefficients in respect of each of the independent variables indicate the absence of multicollinearity in the data. The table shows that the highest VIF is 1.62 and the mean VIF is 1.49. Moreover, the lowest tolerance value is 0.6164. Therefore, the results of the VIF and tolerance value confirmed the absence of multicollinearity. The heteroskedasticity test was conducted using the Breuch-Pagan/Cook-Weisberg method, which returned a coefficient value of 0.22 and a p-value of 0.6395. The large P-values, which are not statistically significant indicate the absence of heteroskedasticity, that is, there is constant variance in the residuals. The result is in conformity with assumption number four of classical linear regression model which states that there must be constant variance, that is, the disturbances u_i appearing in the population regression function are homoscedastic.

The result obtained from the Hausman specification test as per table 4 reveals a chi-square value of 2.09 with (p 0.7200). This shows that the Random Effect Model (REM) is preferred to Fixed Effect Model (FEM) for the purpose of analysis. The summary of the Random Effect models is presented in table 5.

Table 5: Fixed Effects Regression Results

Variables	Disclosure Quality		
	Coefficient	**t-values**	**P-value**
Board Size	0.0465	5.04	0.000
Board composition	-0.0903	-0.49	0.406
Board meeting	0.0136	1.02	0.208
Managerial ownership	0.1731	2.01	0.057
R^2 Within			0.2427
R^2 Between			0.6144
R^2 Overall			0.4065
F-Statistics			34.65
Prob> F-Statistics			0.0000

Source: Stata Output, 2023

The result from Table 5 indicates that the explanatory variables are capable of describing 40.65% of the variability in the disclosure of social and environmental information among listed industrial goods firms in Nigeria. This could be deduced from the overall coefficient of multiple determinations (R-squared value of 0.4065). Similarly, the table shows that the models are fitted as evident by the F-Statistics of 34.65 and P-value of 0.0000. This implies that there is 99% confidence in the ability of the models to explain the regressand. Therefore, it can be deduced that the dependent variable was well explained by the regressors.

The Table 5 is used to discuss the coefficient of P-value of each of the variables and subsequently test the hypotheses of the study as follows: The result reveals a positive relationship between board size and social and environmental disclosure of listed industrial goods firms in Nigeria. The relationship strong based on the coefficient of 0.0.04120 which is significant at 1% level of significance. The finding provides evidence that board size play an important role in determining the social and environmental information disclosure of the firms. The study therefore reject the null hypothesis that board size has no significant effect on social and environmental disclosure of listed industrial goods firms in Nigeria. The result aligned with findings by Hassan (2010), Umoren and Okougbo (2011), and Ajibolade and Uwuigbe (2013) that a large number of boards of directors play a significant role in influencing social and environmental information disclosure. The result is, however, contradicted with the findings of Soheilyfar, Tamimi, Ahmad, and Takhtaei (2014).

Table 5 indicates a negative relationship between board composition and the level of social and environmental disclosure quality of industrial goods firms. This is evident from the coefficient of -0.14478, which is not significant from the p-value of 0.406. This means the higher the number of outside directors, the lower the social and environmental disclosure of industrial goods firms in Nigeria. Thus, based on the statistical evidence, the association appeared to be not significant. This study failed to reject the hypothesis. The negative effect observed could be attributed to non-executive directors probably being too busy with other commitments elsewhere. This contradicts the view that the inclusion of a higher proportion of non-executive directors in the board would result in more individuals having the incentive to protect their reputation by promoting higher transparency through disclosure of material information. This also confirms that the presence of outside directors has no significant effect on a firm's decision to voluntarily disclose social and environmental information in the annual report. Possibly, non-executive directors may also have a shallow idea of what is actually going on inside the company, so their effect on managers' decisions is limited. The finding agrees with the study of Zhou (2008), who did not document a strong positive association between board composition and disclosure. It also contradicts the studies of Htay, Rashid, Adnan, and Meera (2012) and Ajibolade and Uwuigbe (2013), whose findings show a significant positive association between board composition and social and environmental disclosure. The finding is, however, in line with the studies of Jouirou and Chenguel (2014) and Mounira (2014), who found a significant negative relationship between the variables.

Table 5 shows that there is no statistically significant association between board meetings and social and environmental disclosure quality of listed industrial goods firms in Nigeria, as indicated by the coefficient of 0.01277 with a probability value of 0.21, which is statistically not significant at all. It signifies that social and environmental disclosure is not affected by the number of meetings held by the board. In line with these findings, the study fails to reject the null hypothesis, which states that board meeting has no significant effect on social and environmental disclosure of listed industrial goods firms in Nigeria. The study also infers that board meetings has not contributed to social and environmental information disclosure of the firms during the period covered by the research. The result aligned with the findings of Rouf, (2010) who found a strong positive association board meeting and disclosure level.

The result from table 5 indicates that managerial ownership has a positive effect on social and environmental disclosure of listed industrial goods firms in Nigeria, considering the coefficient of 0.1552 and p-value of 0.057. Based on the P-value the relationship is significant at 10% levels of significance. The study therefore rejects the null hypothesis that managerial ownership has no significant effect on social and environmental disclosure of listed industrial goods firms in Nigeria. The findings corroborate with the study of Ghazali (2007) who found significant positive association between managerial ownership and environmental disclosure. It however contradicts the findings of Htay, Rashid and Meera (2012) whose findings showed significant association between the variables.

5. CONCLUSION AND RECOMMENDATIONS

The study concludes that board size and managerial ownership have a positive and significant influence on the social and environmental information disclosure of listed industrial goods firms in Nigeria. Finally, the study concludes that board composition and board meetings have no significant effect on social and environmental disclosure among the listed industrial goods firms in Nigeria.

In view of our findings and conclusion, it was recommended that management and regulators should give more emphasis corporate governance variables such as board size and managerial ownership because it has been shown that it contributes to improving the quality of financial reporting. Investors should give less attention to corporate characteristics such as board composition and board meetings particularly in industrial goods firms, because it has not influenced corporate social and environmental disclosure.

The study is limited to Nigeria's listed industrial goods firms and does not provide a generalized overview of other sectors. Similar research can be carried out using firms from other manufacturing sectors of the economy, such as building materials, oil and gas, and food and beverage firms, and comparisons formed by a larger population may demonstrate and explain the trend more clearly. It will be interesting to take into account other communication channels such as stand-alone reports, press releases, websites. This study looked at some corporate governance variables, i.e., board size and board composition, board meeting and management ownership. Hence, future research might be extended by observing other corporate governance variables such as managerial ownership, board meeting frequency, and the independence of the audit committee.

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