CORPORATE GOVERNANCE AND SUSTAINABILITY DISCLOSURE: EVIDENCE FROM LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

[1]Muideen Adeseye Awodiran

[1]Department of Accounting,
Afe Babalola University,
Ado-Ekiti (ABUAD), Nigeria.

Abstract

The study examined the effect of corporate governance on sustainability disclosures. The data regarding corporate governance and sustainability reporting were gathered from annual report and accounts of 12 listed industrial goods companies on the Nigerian Stock Exchange for the period 2010-2017. Sustainability disclosure index was developed using the Global Reporting Initiatives (GRI) guidelines to score the information content of annual relating to sustainability performance. The study used descriptive and inferential (ordinary least square regression) statistical techniques to analyse the data gathered. The study concludes that large board size with independence is able to monitor and control management decisions on sustainability matter to bring about better sustainability reporting. Similarly, the presence of CSR committee was found to result in improved sustainability disclosure. The findings of the study imply that corporate governance elements are important factors affecting the level of sustainability disclosure among listed Nigerian industrial goods companies.

Keywords: *Corporate Governance; Sustainability Reporting; Listed Industrial Goods Companies; Global Reporting Initiative, Nigeria*

INTRODUCTION

Environmental degradation emerged during the Industrial Revolution of the 1700s. This was when the basic manufacturing processes and agricultural products changed and involved the use of machines. This technological advancement has heightened environmental damages and its resultant pressure. Put in other way, activities of human such as increased valuable natural resources utilisation, inadequate or lack of environmental accounting, significant population increases, as well as abject poverty are some of the immediate causes of climatic changes, befoulment and a host of other global environmental challenges. The quests to cope with growth in world's population have hugely the ecosystems and the entire earth surface. There is a serious fear and concern that if steps are not taken to ameliorate the impact of human actions on the environment, the consequences cannot be good. Hence, integrated system is required to subdue the human activity impact on the environment. One of such system is encouraging businesses and their owners to be much more mindful of the effect of their business activities on the environment. The improvement in world environmental consciousness coupled with the crusade for sustainable economic growth is redirecting the focus of business organisations towards environmental conservatism and longevity (Aggarwa, 2013).

A large number of business organisations give as much attention to environmental and social issues as they give to economic issues. This may be linked to (amongst others) the fact organisations are beginning to appreciate social responsibility demands and stakeholders expectations; as it can now be seen that financial analysts, investors and other stakeholders are increasingly demanding information on environmental, social and governance performance of companies beyond their financial results to enable them make informed economic decisions. In fact, the number of investors that are willing or scanning to invest in Socially Responsible Investments (SRI) has increased rapidly (Hubbard, 2008). Adequate non-financials on social and environmental activities of business organisation provides more knowledge on the principles that reflect its entire activities that enable it grow continuously. Sustainability has been described as" a trade-off between people (social)-planet (environment)-profit (economic), otherwise called the concept of Triple Bottom Line (TBL)" (Soelistyoningrum & Prastiwi, 2011). Corporate organisations are increasingly under pressure for good corporate governance and sustainability reporting.

Corporate governance is the way and manner companies are directed and controlled by those charged with responsibilities. It is the structure by which companies can be directed and controlled (Cadbury, 2000). Corporate governance issue came to limelight and became a subject of interest after major corporate and financial scandals such as Enron, WorldCom, Pamalat etc. the subject has emerged due to need to strengthen mechanism for sound corporate control (Carnegie, 2010; Arnold, 2012; Carnegie, 2014). Corporate governance and sustainability reporting are contemporary and emerging business research area. It has been suggested that both corporate governance and sustainability reporting are indispensable to the continued existence of any organisation and thus require great focus in applications. The two concepts are essentially intertwined; sound governance is expected to result in improved sustainability reporting and performance (Gul, Muhammad & Rashid, 2017).

Further to this, on strategic front, both corporate governance and sustainability have been integrated into business practices to attain favourable competitive position over competitors. Nowadays, Board room considerations on triple bottom line are facilitated through convergence of corporate governance and sustainability reporting (Elkington, 2006; Mitra, Dhar, & Agrawa, 2008). It is postulated that through sustainability reporting, organisations are showcasing their sustainability and governance performance. In Nigeria, sustainability reporting is at its embryonic stage and like many other developing nations; the context setting of the country featured a classic social, economic and political context. The country is faced with inadequate education, insufficient resources, insecurity, lack of political will, ethnocentrism, lack or wrongly channelled enforcement capabilities, weak government structure, weak state institutions and lack of genuine interest in sustainability related matters. There are agitations in some parts of the country as a result of perceived inequality and divide in the social developments of some communities. It is believed that the institutional context of a country has some serious consequences for corporate governance ad sustainability reporting (Mahmood, Kouser, Ali, Ahmad & Salman, 2018).

Despite the recognised interconnectedness between sustainability reporting and good governance, and the fact that policy makers are recommending mechanisms for ensuring improved governance and sustainability, assessing the impact of corporate governance surrogates on various aspects of sustainability reporting have received relatively less attention. In addition, several studies have assessed the effect of corporate governance on financial information disclosures (Anderson, Mansi & Reeb, 2004; Beekes, Pope & Young, 2004) while the role of corporate governance on non-financial and particularly sustainability disclosures has received less research attention with much still to be learnt (Hanniffa & Cooke, 2005; Michelon & Parbonetti, 2012; Mahmood, Kouser, Ali, Ahmad, & Salman, 2017). Studies (such as Cheng & Courtenary, 2006; Cerbioni & Parbonetti, 2007) claimed that company policies on disclosures comes from the board, it is postulated that attributes of corporate governance mechanism of a company are critical determinants of the extent and quality of its sustainability reporting. It is against this backdrop that this study attempts to contribute to contribute to the body of knowledge on business management research, particularly as it relates to Nigeria which has dearth of literature on corporate governance and sustainability reporting (Uzoechi & Chigozie, 2015).

LITERATURE REVIEW

Sustainability Reporting

There is no universally agreed definition of what sustainability means. However, the idea of sustainability stems from the concept of sustainable development which became common language at the World's first Earth Summit in Rio in 1992. The original definition of sustainable development as stated in the Brundtl and Report for the World Commission on Environment and Development (1992) is usually considered to as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability is one of the important challenges organisations are confronted with today. The corporate sustainability has been defined as “the commitment of business to contribute to sustainable economic development and to work with employees, their families, the local community and society at large to improve their quality of life” (World Business Council for Sustainable Development, 2002). It includes intra-generational and inter-generational equity and the notion of eco-efficiency and eco-justice. It is commitment to achieving the needs of the current generation without compromising those of generations yet unborn (Blowfield & Muray, 2008).

Global Reporting Initiative (GRI) (2011) defined sustainability reporting as “the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organisational performance towards the goal of sustainable development”.

With the current climatic situations, organisations are expected to be conscious of the impact of their activities on the environment in which they exist and the overall society. The consciousness includes embracing accountability for and disclosure of the environmental impact of their operations. This necessity is evident in the kind of momentum sustainability reporting is assuming in the global business environment. Many investors and other stakeholders alike are increasingly demanding for non-financial information on environmental, social and governance (ESG) performance of corporations over and above financial information. Most of these investors now use sustainability indices (such as Dow Jones and Dummi Social Indices) to Identify socially responsible investee companies in taking their investment decisions.

According to International Institute of Sustainable Development (IISD), the concept of sustainability reporting has evolved since 1980s; when the first environmental report was issued. It is otherwise referred to as Triple Bottom Line (TBL) reporting or Corporate Responsibility Reporting (CRR). TBL was developed by Elkington in 1998 to put emphasis on 3 areas viz profit (economic), people (social), and planet (environmental). Organisations publish sustainability reports to provide disclosures about their performance (economically, socially, and environmentally) and to show their commitment towards the wellbeing of their several stakeholders. In line with G3.1 section of the GRI sustainability guidelines, "the environmental aspect of sustainability relates to organisational impacts on living and non-living natural systems; including water, air, land and ecosystems. The economic dimension is on the impact of its operations on the economic status of its stakeholders as well as on local, national and global economic systems. However, the social aspect of sustainability relates to the impact of the organisation's activities on the social systems within which it operates.

Similarly, the Nigeria Stock Exchange (NSE) in its 2016 proposed guideline on sustainability disclosure stated that sustainability encompasses economic, environmental, social and governance. Economic relates to the organisation's impact on the economic conditions of its stakeholders and the interaction with the economic systems at local, national and global levels. It does not merely focus on the financial conditions of organisations. Financial performance is fundamental to understanding an organisations and its own sustainability. However, the information is usually already reported in financial statements. What is mostly not fully reported and continuously demanded by users of sustainability reports are the company's contributions to sustainability of the larger economic system. Environmental dimension of sustainability relates to an organisation's impact on living and non-living natural systems, including ecosystems, land, air, and water. Environmental indicators cover performance related to inputs (e.g. material, energy, water) and outputs (e.g. emissions, effluents, waste). Social aspect relates to organisation's impact on social systems such as labour practices, human rights and relationship with communities within which it operates. As for governance, this includes areas such as NSE Corporate Governance Rating System. A clear indicator of sustainability integration is clear assignment of accountability and responsibilities for environmental, social and broader economic performance from the board level through the corporate or group executive to the executive and operational management of each business division within a company.

Global Reporting Initiative (GRI)

Among other standards or reporting framework, the GRI Standards for Sustainability Reporting are now the most trusted and widely used in the world (Isa, 2014). Global Reporting Initiative (GRI) is an international, non-profit, network-based organization. It is a multi-stakeholder effort to provide a comprehensive sustainability reporting framework which can be widely used by all companies around the world. The Sustainability Reporting Guidelines are the basis and spine of GRI's Framework. They promote transparent disclosure of company performance along key sustainability aspects. The GRI committee delivered the first set of sustainability reporting guidelines in June 2000. The fourth generation version – G4 guidelines has recently been launched at GRI‟s 2013 Global Conference held on 22nd May, 2013. The G4 version is the most recent, comprehensive and recommended version. It is more user-friendly and harmonises other major sustainability reporting framework. The GRI Sustainability Reports are prepared on the basis of certain principles which define the contents and quality of report. These include: Materiality, Stakeholder Inclusiveness, Sustainability Context, Completeness, Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability. The standard disclosures under GRI Sustainability Reporting Guidelines include - Strategy and Analysis, Organizational Profile, Report Parameters, Governance, Stakeholder Engagement, and Management Approach and Performance Indicators, i.e. Economic, Environmental, and Social Performance Indicators. Social indicators are further divided into four categories: Labour Practices and Decent Work, Human Rights, Society, and Product Responsibility (Priyanka, 2013).

Corporate Governance Surrogates and Sustainability Reporting

Corporate governance is a term used to describe "the way an organisation is managed, monitored, and held accountable" (Rezaee, 2008). The Cadbury report of 1992 on the financial aspect of corporate governance has set foundation of corporate governance of most countries of the world and all these countries have incorporated the main principles of Cadbury report into their own Codes of Corporate Governance (Nwagbara & Ugwoji, 2015). According to Nwanji and Howell (2004), "the main of corporate governance is ensuring that the Boards of Directors perform their duties efficiently and effectively. It equally protects the rights of the shareholders, improves information disclosure and openness, and brings about provision of effective regulatory and legal enforcement framework. It also attempts to address agency problem through a hybrid of the relevant legal framework of companies, Securities and Exchange Commission rules, and Self-regulatory codes. Consequently, corporate governance can be said to be the process through which company owners pursue and ensure that their businesses are managed in accordance with their purpose for transparency and accountability. These processes comprise of goal definition, monitoring, management, control and sanctioning.

In the same vein, the Organisation for Economic Corporation and Development (1999, Para 14) defines corporate governance as the arrangement of relationships and similar responsibilities among a core group consisting of shareholders, board members and managers, designed to best foster the competitive position and performance necessary in achieving the company's primary objective in an accountable and responsible manner. This definition describes corporate governance in its all-encompassing terms so as to embrace quite a number of corporate governance aspects. From the above definition, it is further stressed that corporate governance is an indispensable key to having a successful business operations and expansions by directing corporate actions to think of internal and external pressure for accountability and transparency (Visser, 2013)

Aras and Crowther (2008) argues that both corporate governance and sustainability is essential for the continuous operation for any corporation and that therefore much attention should be paid to these concepts and their applications. They also pointed out that the concept of sustainability is less clear than the concept of corporate governance, which is well established. They call for the empirical research that explores the relationship between these two concepts. According to them, these two concepts are fundamentally related to each other. Good corporate governance is generally expected to have a positive impact on the sustainability performance and disclosure (Gul, Muhammad, & Rashid, 2017). It has been observed that corporations now put corporate governance and corporate sustainability into business practice in order to achieve competitive advantage over competitors (Mitra, Dhar, & Agrawal, 2008)

The need for good corporate governance mechanism that guarantees discharging of board duties effectively and efficiently in a way that transforms to effective firm triple bottom line (TBL) performance. Attributes of corporate governance mechanism stem the characteristics of the board in terms of its size, independence, diversity, and constitution of CSR committee.

As said earlier, an efficient and effective board size is a critical need for robust company performance. An ideal board that is larger in size are able to obtain resources at low cost and lead to better performance. Decisions made at board level play vital role in determining the level of sustainability disclosures. A board that is larger offers diverse expertise and knowledge and brings different perspectives into the company in a way that seems to reduce agency problem (Said, Zainuddin, & Haron, 2009; Ahmed Haji, 2013). According to Janggu, Darus, Zain and Sawani (2014), large boards of directors have more influence on sustainability matters. In the same vein, Shamil, Shaikh, Ho and Krishnan (2014) reported that most large corporations with large board size are always willing to improve on their sustainability reporting. A weak association was found between board size and sustainability reporting (Said, Zainuddin, & Haron, 2009) while Htay, AbRashid, Adnan, and Meera (2012) reported a negative relationship between board size and sustainability reporting. The existing literature appears to be scanty and inconclusive about the effect of board on sustainability disclosures. It was said that most of the previous studies outside the shore of Nigeria established a positive association between them (Esa, AnumMohdGhazali, 2012).

Furthermore, another key element of corporate governance is the representation of independent director on the board. Independence of a director is generally presumed to exist where such director does not have business or family connected or linked to the top management of company. Directors that are independent are able to scrutinize and play an imperative role in ensuring that the company is well managed (Said, Zainuddin, & Haron, 2009). Such directors bring strength to the board and ensure that investors and stakeholders interests are protected. Generally, a board that is composed majorly of independent directors is presumed to be much more effective in managing the affairs of the company through effective monitoring and controlling of mangemnt actions (Cheng & Courtenary, 2006; Ahmed, Hossain & Adams, 2006). It is widely believed that independent directors' monitoring mechanisms extend to management activities on voluntary disclosures like sustainability related issues. They appear to take more initiative in improving the company's sustainability reporting (Akhtaruddin, Hossain, Hossain & Yao, 2009). Dependent directors are also important because they have insider knowledge of the organization which is not available to outside directors, but they may misuse this knowledge by transferring wealth of other stockholders to themselves (Beasley, 1996).

Many studies have established a positive link between board independence and sustainability reporting. For instance, Haniffa and Cooke (2005) opined that independent directors can exert pressure on company's management on sustainability disclosures. They have higher possibility to encourage companies to publish a comprehensive set of information on non-financials. On the contrary, studies such as Said, Zainuddin, and Haron (2009) found a negative association between board independence and sustainability reporting. Hence, the existing literature on this appears to be conflicting and inconclusive.

Correspondingly, board diversity complements board independence. It is believed that individuals of different genders, culture, and ethnicities usually raise queries that might not have been ordinarily raised by members of the board with more traditional background. Diversity of the board is an important tool for corporate governance, and facilitates better decision making that come from directors' diverse knowledge, idea, and perception (Post, Rahman & Rubow, 2011). Over time, the role of gender in board room became noticeable as a significant corporate governance mechanism. As a result, gender became a widely accepted attribute of board diversity. For instance, Buss (2005) opined that female directors are less self-driven, and that they are different from men in terms of personality, education, style of communication, expertise and professional experience. Going by this, it is expected that woman participation in leadership can have a positive impact on organisation's social behaviours. It should however be noted that female presence on the board may not command socially responsible behaviour; since they do not have equal quota of power with males (Kapotas, 2010).

Literature on disclosure has observed female directors on a board, Terjesen, Sealy and Sigh (2009) reported that organisations with females on the board are more socially responsible. Women are inclined to responding to social needs and that the presence of female directors on a board enhances corporate reputation and social responsibility ratings (Bear, Rahman, and Post, 2010). In the SamiVein, Nadeem, Zaman, and Saleem (2017) revealed a significant direct association between women's representation on a board and corporate sustainability practices. However, Khan (2010) could not establish an association between female director and CSR disclosure. Findings in this regards are equally mixed and inconclusive.

In addition, the growing trend is that many organisations now have a committee on social responsibilities (CSR committee). This committee assist the board in carrying out corporate sustainability programme. The committee is generally responsible for environmental and social information reporting procedures, as well as for review of policies and performance with respect to social responsibility and sustainability issues. Accordingly, creating a CSR committee is seen as a corporate governance mechanism for the company. In setting such a committee, the skills, experience, and knowledge of the committee must be such that is capable of ensuring that sustainability issues are incorporated into the strategic management process of the organisation. The committee facilitates engagement of all stakeholders and brings about accountability and transparency in reporting social and sustainability issues. Amran, Lee and Devi (2014) established that the presence of a CSR committee is positively related to the extent and quality of sustainability reporting.

Similarly, Adnan, Vanstaen and Hay (2010) concluded that organisations with committee on environmental related issues are expected to reveal greater information about greenhouse emissions when compared with companies with no such a committee. Although, studies such as Michelon and Parbonetti (2012) found a weak connection between having CSR committee and sustainability reporting, it is undoubtedly expected that having a CSR committee will serve as an effective governance tool in improving the extent and quality of sustainability disclosures.

Studies on sustainability reporting have been guided or discussed along a number of theories; legitimacy theory, political economy theory and stakeholder theory, with these theories sharing many similarities and overlap with each other. The most widely advanced theories in social and environmental literature have been legitimacy and stakeholder theories (Joshi & Gao; Islam & Deegan, 2010). The two theories see corporation as a part of a broad social system in which the corporation and the society influences each other. Because of the similarities between legitimacy and stakeholder theories, it is wrong to consider them as competing theories (Gray, Owen & Adams, 1996). The main difference between them is that legitimacy theory discusses the expectations of the society in general while stakeholder theory highlights a more refined resolution by referring to particular groups within society (Deegan & Blomquist, 2006). Despite above similarities, stakeholder theory fits particularly well and considered most relevant to the study. This is because community influential board members serve as boundary spanners linking a company to specific stakeholders.

Stakeholders can be identified by the legitimacy of their claims which is substantiated by a relationship of exchange between themselves and the organisation; hence, stakeholders include stockholders, payable, managers, employees, suppliers, local communities, customers and the general public. In addition, a stakeholder has been described as “any individual or group who can affect or is affected by the actions, decisions, policies, practices or goals of the organisation” (Becker, Harrison & Wicks, 2005). Stakeholder theory suggests that organisation will respond to the concerns and expectations of powerful stakeholders and some of the response will be in the form of strategic disclosures (Jensen, 2001; Dhaliwal, Naiker & Navissi, 2006). The theory provides solid explanation into factors that motivate board decisions that influence managerial behaviour in relation to the social and environmental disclosure practices of companies

Uzonwanne, Yekini, Yekini and Otobo (2014) assessed the perspectives of managers that are involved in sustainability reporting in Nigerian oil and gas industry. The study adopted a survey methodology and used structured interview to examine themes (hierarchical responsibility for sustainability reporting, the organisation’s objectives relative to the welfare of the people within the communities it operates, policies in place to rejuvenate the damaged environment resulting from its operations and finally how sufficient in monetary terms is the company’s effort to wipe out its operational footprint) connected with motivation for sustainability reporting within sample companies. The gathered data were analysed using qualitative approach under various themes. The study found that the general perception of a large number of the interviewed managers was that companies that engage in oil exploration have a key social responsibility and reporting role to play but it remains the role of the Nigerian government at the centre to provide the institutional framework around which the development of the affected areas is to be hinged.

Paskah and Irine (2014) examined the effect of sustainability reporting disclosure on the company’s financial performance. The study sample was taken from quoted Indonesian manufacturing firms that publish sustainability reports. Data were sourced from annual reports and sustainability reports of the firms. Linear regression was used in analysing the study data. Findings showed that sustainability reporting positively influences financial performance of the sample firms.

Ogbodo (2015) investigated whether Triple Bottom Line (TBL) reports give needed satisfactions to stakeholders when compared to conventional financial reports. Data were sourced from three distinctive groups; investors, customers and accountants. The data were analysed using one-sample Z test procedure. Findings showed that investors have no confidence in the use of TBL, also, customers do not rely on the use of TBL in assessing the impact of organisation on the society while accountants were not satisfied with the level of rigour and transparency exerted in the preparation of TBL report. The study recommended that companies should disclose more quantifiable TBL indicators comprising of social, environmental and economic performance with the aid of globally accepted sustainability guidelines.

Owolabi, Adetula, Taleatu and Uwuigbe (2016) examined the extent of sustainability reporting practiced by Lafarge Africa Plc. Data were sourced from annual reports and accounts of sample firms and the GRI G4 sustainability reporting guideline was used as a basis of assessment. The study found no disclosure on human right issues, 3% environmental disclosure and an aggregate of 30% disclosure based on 169 indicators used. The study recommended regulations and enforcement of sustainability reporting in Nigeria to bring about transparency and accountability that will enhance national development.

Onyinyichi, Kingley and Francis (2017) examined the effect of environmental cost on organisational performance of Nigerian Brewery Plc. Data on environmental cost and financial performance were gathered from annual reports and accounts of the sample company for the period 2011-2015. The study employed multiple regression analysis and found that both donation and medical expenses have negative association with return on assets while recruitment, trainings and canteen expenses are positively related to return on asset.

Nnamani, Onyekwelu and Kevin (2017) evaluated the effect of sustainability accounting on financial performance of quoted manufacturing firms in Nigeria. Data were sourced from annual reports and accounts of the three sampled firms and were analysed using the ordinary least square. The study found that sustainability reporting has positive and significant effect on financial performance of the sampled firms. The study recommended that Nigerian firms should invest a meaningful part of their earnings on sustainability related activities while professional accounting bodies develop accounting template to guide firms on reporting sustainability issues. The study also recommended that bodies like Financial Reporting Council of Nigeria should make sustainability reporting compulsory with appropriate sanctions spelt out and enforced on defaulting organisations.

Nwobu, Owolabi and Iyoha (2017) assessed sustainability reporting in Nigerian companies in banking subsector for the 5 year period ended December 2014. A disclosure index was employed to score the information content of corporate reports pertaining to sustainability disclosures. The study found an increase in sustainability reporting scores of the banks for the 5 years. Economic indicator was narrowed to direct economic value generated and economic value distributed while disclosures on climate change were few. It was recommended that banks improve their environmental disclosures. Whetman (2017) examined how sustainability reporting affects the financial performance of firms. The study reported a significant positive effect of sustainability reporting on firms' financial performance in subsequent years. This was however peculiar to firms with low institutional ownership. The study suggested sustainability reporting was an effective substitute for monitoring by institutional investors.

Mahmood, Kouser, Ali Ahmad and Salman (2018) investigated the impact of corporate governance on economic, social, and environmental disclosures. The study adopted explanatory sequential mixed method approach. Primary and secondary data were respectively gathered through interviews with 5 Boards of Directors of different companies and from the sustainability and annual reports of sample firms. Overall, the study found that corporate governance elements enhance sustainability disclosures. The study concluded that a large board size with female director and a CSR committee is better able to check and control management decisions regarding disclosure of sustainability issues.

METHODS

Population of the study comprised of companies drawn from listed Industrial Goods sector of the Nigerian Stock Exchange. The sector was preferred because its activities largely revolve around the three dimensions of sustainability reporting (i.e. economic, social and environmental). The sample size comprised of 12 companies, representing not less than 50% of each of the sectors. Secondary data regarding corporate governance and sustainability reporting were collected annual reports and account of the sample firms for the period 2010-2017; resulting in 96 firm-year observations. The choice of this period was due to the fact that the Nigerian Stock Exchange remains very active in its enforcement mechanisms regarding corporate governance and sustainability reporting. The study employed descriptive and inferential statistics in analysing the data gathered.

In order to assess the effect of corporate governance surrogates on the level of sustainability reporting, the following regression model was investigated:

$$SRI_{it}= \beta_0+\beta_1BI_{it}+ \beta_2BS_{it}+ \beta_3FOB_{it}+ \beta_4CSRC_{it}+ \beta_5FSize_{it} + U_{it} \quad \text{(i)}$$

Where:

SRI = Sustainability Reporting Index
BI = Board Independence
BS = Board Size
FOB = Presence of Female on the Board
CSRC = CSR Committee
FSize = Firm Size
U_{it} = Component error term given as $\mu_i + V_{it}$
β_0 = Intercept
$\beta_1, \beta_2 \ldots\ldots B_5$ = parameters being investigated

The subscripts i and t refer to the cross-dimension and time series dimension of the model respectively, explaining the panel nature of the model

Apriori expectation; $B_1 >0$, $B_2>0$, $B_3>0$, $B_4>0$, $B_5>0$

SRI was measured using the Global Reporting Initiative (GRI) items for economic, social and environmental sustainability disclosures, after which a disclosure index for overall sustainability was developed for use in regression analysis. Consistent with Asaolu, Agboola, Ayoola and Salawu (2011), the following scaling/ratings were applied in assessing the degree of disclosure in the sample companies.

		Rating/Score
i.	Issue not reported at all	0
ii.	Issue reported locally but in general terms	1
iii.	Issue reported locally and in specific terms	2
iv.	Issue reported globally with no specific mention of Nigeria	3
v.	Issue reported globally and with specific mention of Nigeria	4
vi.	Issue reported in both global and local reports	5

Furthermore, BI is measured as percentage of independent directors to total directors; BS is the total number of directors on the board; FOB proportion of female directors to total directors on the board; CSRC is a dummy variable representing existence of CSR committee while Fsize is measure as natural log of total assets of the company to control for size.

RESULTS AND DISCUSSION

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
BI	0.36713	0.208704	0.25315	0.48376
BS	14.4933	2.9849	7	25
FOB	0.04497	0.08207	0.05200	0.20452
CSRC	0.4267	0.4963	0	1
FSIZE	20.1937	1.0845	15.3616	22.2277
SRI	0.253387	0.116361	0.127173	0.40191

Source: Author's computation, 2019

Table 1 presents the summary statistics about the sample firms over the study period. The mean board size was 14.4933 and the mean value of the proportion of independent directors, female director and CSRC were 0.36713, 0.04497 and 0.4267 respectively. Highest percentage of women on the board is 20.452% with the lowest being 5%. The mean proportion of companies providing sustainability disclosures was 25.34% while companies with highest disclosure had 40.19% of the GRI disclosures reported. The lowest disclosure recorded was 12.72%

Table 2: Variance Inflation Factor

Variable	VIF	1/VIF
BI	1.04	0.965267
BS	1.02	0.977597
FOB	1.03	0.972362
CSRC	1.06	0.943396
FSIZE	1.09	0.917431

Source: Author's computation, 2019

Presented in table 2 reports the extent to which the standard error of regression coefficients may have been inflated due to relationship between independent variables. As a general rule (Hair, Anderson, Tatham & Black, 1995; Rogerson, 2001), a VIF in excess of 5 calls for further investigation whereas a VIF of at least 10 is suggestive of severe degree of collinearity between the predictors of interest which requires correction. A VIF of exactly 1 implies that there is absence of correlation. As can be seen from the table, the VIFs were slightly greater than 1 meaning that there is low relationship between the predictor variables. This is supported by tolerance levels (TOLs) which is the inverse of VIFs, the results being significantly higher than the common threshold of 0.20. Hence, there is no tendency that the standard errors of the regression coefficients would have been erroneously inflated.

Table 3: Regression Result for Corporate Governance and Sustainability Disclosure
Dependent Variable: SRI

Variable	Coefficient	Std. error	t-statistics	P-value
Constant (C)	0.1383	0.1794	0.7712	0.4506
BI	0.4098	0.1355	3.0245	0.0073*
BS	0.0696	0.0260	2.6741	0.0155**
FOB	0.1903	0.1760	1.0815	0.2938
CSRC	0.0016	0.0009	1.8593	0.0794**
FSIZE	0.0099	0.0020	4.9299	0.0001*
R^2	0.6203			
Adj R^2	0.5593			
F-statistics	9.725391			
Prob(F-statistic)	0.000087			

Source: Author's computation, 2019
*Note: Significant at *1%; and **10% levels*

Table 3 shows the regression results of regression analysis of the effect of corporate governance on sustainability disclosure. As expected, board independence and firm size had positive effect on the extent of sustainability disclosure (at 1% level of significance). Similarly, board size and the presence of CSR committee had positive effect on sustainability reporting (at 10% significance level). As for the overall significance of the model, the F-statistic of the model is significant (F=9.7253, $p<0.05$), indicating that a subset of the independent variables does explain the variation in sustainability disclosures. The value of R^2 was 0.62, indicating that about 62% of the variance of sustainability disclosure can be explained by the independent variables in the model.

CONCLUSIONS

The study investigated the effect of corporate governance surrogates on extent of sustainability disclosure among industrial goods firms listed on the Nigerian Stock Exchange. The empirical outcome of the study revealed that board independence had a positive and significant effect on sustainability reporting. This is contrary to the findings of Michelon and Parbonetti (2012); Majeed, Aziz and Saleem (2015), who both found that board independence does not significantly affect the extent of sustainability disclosure. Similarly, board size and presence of CSR committee exhibited a significant positive effect on the extent of sustainability disclosures. These findings are in tandem with those of Shamil, Shaikh, Ho and Krishnan (2014). However, the diversity of the board in terms of gender composition had positive but statistically insignificant effect on the extent of sustainability disclosures. This is evident in the fact that large number of companies has few women on the board. In addition, female participation in the board decisions is limited. Despite the fact that women are more inclined toward matters relating to sustainability, they lack power to influence major decision; as these key decisions are dominated by the orientation of their male counterparts on the board.

Above all, the findings of the study are suggestive of the fact that corporate governance facilitates sustainability disclosures. A large board comprising of female directors is better able to bring about decisions that result in better sustainability disclosures. The study provides empirical evidence to extend the body of knowledge on sustainability governance; especially in the context of emerging economies.

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