The Influence of Corporate Governance Attributes on Financial Performance of Nigerian Listed Manufacturing Companies

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Abstract
This research examines the impact of corporate governance attributes on the financial performance of listed manufacturing companies in Nigeria. The research employed secondary data from 32 selected manufacturing companies in Nigeria for a period of 1 year (2018). The study employed multiple regression analysis to answer the research question and to test the study's hypotheses. The result from the study indicated that board diversity and board independence has significant positive relationship with financial performance, while board size and board meetings do not indicate significant relationship with financial performance. Accordingly, the study recommended that, board members of listed manufacturing companies in Nigeria should be reduced to a maximum of thirteen members in order to avoid possibility of members taking longer time to make decision. Also, companies should work towards reinforcing their corporate boards by ensuring heterogeneity in terms of diversity, experience, knowledge and proficiency in conduct of board functions. Similarly, companies should appoint more independent directors to corporate boards as independent directors can contribute more towards guaranteeing the interests of shareholders. Thus, suggestions were made which is expected to provide a fruitful avenue for future research.

Keywords: *financial performance, return on asset, board size, board diversity, board independence and board meeting.*

1.0 Introduction

In recent time, various strategies of enhancing corporate governance have been at the forefront of international debate (Jensen, Murphy & Wruck, 2004). These strategies of enhancement which has become a public and academic subject of discussion focuses on board characteristics (Board Size, Board Independence, Board diversity), board committees (audit committee, remuneration committee, risk management committee), remuneration of directors, and ownership structures of businesses (Duztas, 2008). This unprecedented interest on corporate governance mechanisms and standards inevitably started because of corporate failures around the world specifically, because of the six (6) key findings of the United State Senate Permanent Investigation Subcommittee on the role of Enron board of directors in Enron's collapse and other cases (Belkhir, 2005).

The highlighted reasons for Enron's collapse include inappropriate conflict of interest, excessive remuneration of company executives and lack of board independence (Ogbechie, 2012). This has been referred as a historic period of corporate greed, unprecedented fraud, widespread "gatekeeper" failure, and poor organizational governance (Laufer, 2006). This onslaught of corporate scandals has forced the World to recognize and acknowledge the place of corporate governance practices on the global economy (Abdullah, 2004). Following the revelation of the fraudulent actions and self-servicing behavior of managers at the expense of shareholders and also owing to wide spread ownership of the business, stakeholders in corporate business started taking corporate governance serious (Garba & Abubakar, 2014). Developing economies (such as Nigeria) have come to recognize the need for sound corporate governance as international investors and many domestic investors are hesitant to invest in companies which subscribe to good corporate governance principles (McGee, 2010).

Nonetheless, the role of corporate governance has been identified as indispensable to firm performance and this is so because of the tendency for managers and some other stakeholders to engage in unethical business practice that may undermine the rights of "less informed" stakeholders in corporate organizations (Agbonifoh, 1999). These unethical practices include tampering with the financial statements to give a false impression of the financial health of the organization to the recipients of these reports, a good example in the case of Nigeria, when the African Petroleum (AP) gave misleading information on its financial statement (Onyenankeya, 2003). Corporate governance is about promoting corporate fairness, transparency and accountability (Glossary, 2013). Corporate governance enhance the performance and ensure the conformance of corporate to creating and maintaining a business environment that motivate managers and entrepreneurs to maximize firm operational efficiency, return on investment and long- term productivity growth. The ultimate outcome of these corporate governance benefits are higher cash flows and superior performance of the firm (Love, 2011). Emerging economy like Nigeria needs well governed and managed business enterprises or organizations that can attract investment, create jobs and wealth for the youth, remain viable, sustainable and competitive in the global market. Thus, a good corporate governance is a prerequisite for national economic development.

Besides, studies have been carried out on the effect of corporate governance mechanisms on firms' performance. On the average, these studies documented that financial performance is a product of corporate governance mechanisms. However, most of these studies were either sourced from the western economies or from Asian perspectives. Differences between countries in term of financial reporting system, capital market development and legal system make corporate governance fundamentally different. Therefore, it is arguable whether corporate governance practice advocated in these countries are applicable in developing countries (e.g., Nigeria) or not. This study addresses this concern by examining the relationship between corporate governance mechanisms and financial performance in the Nigeria context. In addition, there is scanty or no empirical literature on corporate governance addressing listed Manufacturing companies in Nigeria. Most of the existing literature in Nigeria focused on the banking sector, oil and gas and other related sectors. For this reason, the present study focusses on examining the influence of corporate governance mechanisms on financial performance of listed manufacturing companies in Nigeria. Accordingly, this paper is structured as follows: section two contains a review of the prior literature which includes a review of the concept of corporate governance, historical development of corporate governance in Nigeria then followed by a hypothesis development on the relationship between board characteristics and financial performance. Section three discusses the methodology adopted by the study and section four presents the discussion of findings. Conclusion and recommendations are delineated in section five.

2.0 Literature Review and Hypothesis Development

The issue of corporate governance and firms' financial performance has dominated much of intellectual discussions in the last two decades (Obembe & Soetan, 2015). This may not be unconnected to the several corporate scandals that affect giant corporations in US and other part of the globe. These incidences has challenged the efficacy of existing corporate governance structures in protecting the interest of shareholders (Hitt, Ireland & Hoskisson, 2009). From this moment, the issue of corporate governance became a much concern for the developed nations where most of the interests emanated. However, the issue is also gradually becoming of utmost important to developing countries where many constituents are demanding for more accountability from their corporate institutions. Over the years, several forms of meanings has been provided to corporate governance which include words like: manage, govern, governance, regulate and control. These suggest that definition of corporate governance is relative. For instance, the way a manager in the firm will define the term may differ from an investor in the firm. In any case, Corporate Governance is defined as the process and structure used to direct and manage business affairs of the company towards enhancing prosperity and corporate accounting with ultimate objective of realizing shareholder long term value while taking into account the interest of other stakeholders (CAMA, 2004). The aim of "Good Corporate Governance" is to ensure commitment of the board in managing the company in a transparent manner for the purpose of maximizing long-term value of the company for the benefits shareholders and other parties. Good corporate governance ensure higher rate of return on invested capital. This is a prelude for attracting foreign investment. In addition, Companies who respond positively with corporate governance enjoy better goodwill and attract investment of foreign capital in the world (Vijay & Gaurav, 2011).

Good Corporate Governance increase transparency accountability, enforceability in the market place. It equally built confidence among stakeholders. Good corporate governance ensures country's long term success on financial platform as well on social responsibilities platform. It boosts or establishes investor confidence in the economy (Izora, 2013). The credibility offered by good corporate governance procedures on investors both foreign and domestics is to attract more long term capital. Corporate Governance help create a conducive environment for investors in the country, and also shield investors from sudden crisis. Effective Corporate Governance reduces perceived risks which reduces cost of capital and enhances quick and better decision, which ultimately improves the bottom line of the corporate entities. Therefore, by raising the bar in the public and private sectors and with stiff penalties for executives or corporation, Corporate Governance attracts foreign direct investment inflows, and enhance countries' competiveness and international perception. Sound Corporate Governance is a back bone of countries which strongly rely on stock market to raise foreign capital and Nigeria not an exception. Besides, emergence of Institutional Investors (pension funds, hedge funds, exchange traced fund, other investors group, insurance companies, banks, brokers and other financial institution) has brought professional diligence in investment sector. Large number of individuals invest their money indirectly through these institutional investors, hence, majority of investment is described as "Institutional Investors". It also plays a great role in enrichment of corporate governance.

2.1 Historical Development of Corporate Governance in Nigeria

The determination of companies' corporate governance structure in each country depends on the legal and regulatory framework outlined in the rights and responsibilities of that country. In Nigeria, corporate governance practice was given less emphasis prior to1999 despite much efforts by several stakeholders to institutionalized sound corporate governance system in the country (Ilori, 2012). Therefore, the renewed interest in Nigerian corporate governance may perhaps be attributed to the change in government from military rule to civilian rule in the year 1999. The return to civilian rule alters the general feelings about the political environment in the country. Expectations were high and the need for a total reform in the country's socio-political environment was pressing (Ilori, 2012). Therefore, as part of the reforms embarked by the Obasanjo-led civilian government (1999-2007) is the constitution of a committee chaired by Mr. Peterside Atedo to review the corporate governance system in the country. Consequently, the committee submitted its report and this led to issuing of Nigerian corporate governance code in 2003. The code was developed mainly to instill basic corporate governance in accordance with the general global best practices. The code concentrates more on the role of boards and management, the rights and privileges of shareholders and also the role of the audit committee in the corporate governance process.

Before the introduction of Nigeria's corporate governance code, the Companies and Allied Matters Act (CAMA, 1990) was in existence and thus regulate the relationships between the boards, management and shareholders. The Act guides the formation of corporate entities and also set the structure and time for corporate governance. Over time, the Act became obsolete and was not effective in fostering sound corporate governance practice in Nigeria. Being that, the prescriptions in the code were unclear and as such result in systematic governance problems (Oba & Fodio, 2012). In 2008, the federal government noticed the deficiency in the existing 2003 code of corporate governance. It observed that the code is no longer adequate in addressing the emerging corporate governance challenges confronted by corporate bodies in the country (Ofo, 2011). As such, the federal government through Security and Exchange Commission (SEC) inaugurated a national committee to review the 2003 code of corporate governance and address its weaknesses and improve mechanisms for its enforceability (Oba & Fodio, 2012). Mr M. B. Mahmoud headed the committee. The committee's after much consultation with several stakeholders including regulatory bodies submitted its report. This process later translates to the establishment of a code of corporate governance for public entities in 2011. The code was issued mainly to serve as the minimum corporate governance standard expected of a public company in Nigeria. The code was developed with the intention to align Nigerian corporate governance standard with the international best practices. It is arguably the most comprehensive regulation of corporate governance in Nigeria. It has been praised for being capable of deepening corporate governance practice in the country (Ofo, 2011). However, aside from the corporate governance code 2011, other three industry-specific corporate governance codes were established. These include the corporate governance code for bank. CBN issued the Code after the post-consolidation of banks in 2006. The code applies to all banks conducting business in Nigeria. Others include the corporate governance code for Nigerian insurance industry 2009. The code was developed by the National Insurance Commission (NAICOM). The code applies to all insurance and reinsurance companies in Nigeria. Finally, a code was also issued for licensed pension operators. National pension commission issued the code in the year 2008; it applies to all Nigerian pension fund administrators and pension fund custodians.

2.2 Board size and financial performance

Board size is a characteristic of corporation that relates to the number of directors on corporate board. It is viewed as an integral part of board process that influences the effectiveness of the board. A well-structured board with an appropriate number of directors tends to be more effective in monitoring management and in enhancing shareholders value (Kumar & Singh, 2013). However, recent debates on board structure usually centered on what constitutes an optimal board size. Earliest literature on board size by Lipton and Lorch (1992) and Jensen (1993) argued in favor of smaller board size. Jensen (1993) has preference for smaller board size arguing that smaller board size stems from technological and organizational change which ultimately leads to cost cutting and downsizing. Hence, the possibility that larger boards can be less effective than small boards. A large board could also result in less meaningful discussion, since expressing opinions within a large group is generally time consuming and difficult and frequently results in a lack of cohesiveness on the board (Lipton & Lorch, 1992). On the other hand, very small boards lack the advantage of having the spread of expert advice and opinion around the table that is found in larger boards. Also, larger boards are more likely to be associated with an increase in board diversity in terms of experience, skills, gender and nationality (Dalton & Dalton, 2005).

The above arguments were empirically tested and a positive, negative and in some instances insignificant association between board size and financial performance were reported. Among others, Kajola (2008) examined the impact of corporate governance mechanisms on financial performance of 20 listed Nigerian firms. The study found a significant positive relationship between board size and firm performance. Similarly, Obiyo and Lenee (2011) found a positive and significant relationship between board size and firm performance. The study utilized corporate governance index developed from institutional investors services to examine the impact of corporate governance on the performance of ten Nigerian listed firms. Also, Najjar (2012) found that the board size has positive significant impact on insurance firms' performance. In the same manner, Al-Haddad, Alzurqan and Al-Sufy (2011) found that corporate governance is significantly added a value to the Jordanian firm.

On the other hand, Ujunwa (2012) reported a significant negative relationship between board size and performance of firms, where a sample of 122 quoted firms were said to have been utilized. Malik and Makhdoom (2016) examine the effect of corporate governance on the performance of firms using 100 global best performers firms in US. The study documented that board size had a negative and significant impact on the performance of firms. Afrifa and Tauringana (2015) provided evidence of the impact of corporate governance on the SME's financial performance. The results also show that board size has a negative impact on the firms' performance. However, Gupta and Sharma (2014) found that corporate governance has limited impact on South Korean and Indian firms' financial performance. Based on the foregoing, the present study supports the view that, board size will have a significant impact of financial performance of sampled firms given that, corporate directors are symbolical representative of other shareholders. They are believed to have more capacity to influence the financial performance of listed manufacturing companies in Nigeria. Hence, the present study posits a significant positive relationship between board size and firms' financial performance and further outlined that;

H_1: board size has a significant positive influence on financial performance.

2.3 Board independence and financial performance

In general terms, the strength of board of directors is closely linked to the degree of independence of its members (Kang, Cheng & Gray, 2007). An independent board is one that has majority number of independent directors who are assumed to be less affiliated with a top executive of an organization and also have a minimal conflict of interest in the organization they are serving (Koerniadi & Tourani, 2012). An independent board is generally composed of members who have no ties to the firm in any way. Therefore, there is no or minimum chance of having a conflict of interest because independent directors have no material interests in a company. Hence, the board is presumed to be more independent as the number of outside directors increases proportionately. The independent directors are responsible for reviewing the performance of both the board and executive directors. Their positions are usually part time as they often sit on many boards, and they are typically paid less than executive directors (Davies, 2002).

Although the use of independent directors has become increasingly accepted, especially in Anglo-American countries where the stock market performance of listed companies attracts a great deal of interest from the public, some scholars question its rationale (Coles, Daniel & Naveen, 2008). The critics argue that monitoring by independent directors can be ineffective. However, a positive relationship between board independence and firm performance was also established by scholars and empirically, there are studies that document these views showing a significant linkage between the higher level of board independence and firm performance. Among others, Jackling and Johl (2009) examined the effect of board independence on performance of firms. The study found a positive association between board independence and firm performance. Similar study was also conducted by Mishra and Kapil (2018) which utilized 391 Indian listed companies. The study provide evidence to support the significant positive relationship between board independence and firms' financial performance. Also, Usman and Yakubu (2019) provide strong evidenced that they are positive and significant relationship between board composition and post-privatization financial performance of firms listed on Nigerian stock exchange. In a more recent study conducted by Duppati, Scrimgeour and Sune (2019) on firms listed on Ireland and Spain stock exchange. The study established that, a significant positive relationship exist between independent directors and financial performance.

On the other hand, Palaniappan (2017) conducted a study to examine if certain board characteristics have an impact on the financial performance of manufacturing firms in India. The study found a significant negative relationship between board independence and firms' financial performance. Kumar and Singh (2013) on their own part reported that, the presence of independent directors in governing body is unable to change the board dynamics in the Indian context. Allam (2018) empirical evidence provides no firm relationship between board independence and firm performance. While, Waheed and Malik (2019) affirms that higher representation of independent directors in the board is found to be detrimental for Pakistani firms. Thus, with conflicting empirical findings we hypothesize as follow:

H_2: board independence has a significant positive influence on financial performance.

2.4 Board diversity and financial performance

Board diversity is a characteristic of companies' board of directors that relates to the existence of different traits in corporate boards. The different traits mostly considered are board gender and nationality (Lorenzo & Sanchez, 2010). For this study, board diversity is defined as the percentage of women on corporate boards. Women bring a variety of knowledge, skills and experience to the board (Liu, Wei & Xie, 2014). Women improve the monitoring function of the board by offering different ways of thinking and motivating the board to study other potential solutions, thereby improving decision-making (Faccio, Marchica & Mura, 2016). Women also contribute to strengthening relationships with stakeholders, improving external legitimacy and reputation as well as providing new ideas and creative thinking, thereby improving the financial performance of corporate organization.

Besides, various extant literature has studied board gender which relates to the participation of women on corporate boards. The proponent of gender diversity in corporate board argues that heterogeneous boards have wider understanding of environment complexities compared to boards that are homogeneous (Carter, Simkins & Simpson, 2003). Therefore, a well diverse board approach a wider group of stakeholders with the view to strengthening the relationship between companies and stakeholders which in turn improve the financial performance on a firm. However, going through gender diversity literature many empirical studies investigates the influence of gender diversity on financial performance. According to Dominguez, Alvarez and Sanchez (2010), most of the literature concluded that participation of women in the management of corporate board positively impacts companies' financial performance. Although, in some instances, a negative or insignificant relationships were observed in the literature.

Accordingly, Bathula (2008) carried out a study to investigate the relationship between key board characteristics and firms' performance in the context of New Zealand. The findings of the study suggest that, gender diversity positively influence firms' performance. Similar study was conducted by Galbreath (2016) which utilized data from Australia's largest publicly traded firms. The result demonstrates that women on board has a positive relationship with the firm's financial performance. Also, Perryman, Fernando and Tripathy (2016), using data from the USA between 1992 and 2012 and Tobin's Q as a measure of financial performance, indicate that firms with greater gender diversity in their leadership take fewer risks and achieve higher performance. While the outcome of an empirical research by Mintah and Schadewitz (2019) shows that the presence of females on the corporate boards of UK financial institutions has a positive and statistically significant relationship with firm value.

On the contrary, Adams and Ferreira (2009) reveal that, the average effect of gender diversity on the performance of a firm is negative, due to firms with fewer takeover defense. Ahern and Dittmar (2012) on their own part found that Norway's imposition of a quota of 40 per cent female directors lowered the firm value of public companies. The authors attribute these poor results to the consequences of hiring younger, less experienced female directors to comply with the law. Other empirical studies on gender diversity and firm performance show a nonsignificant relationship. For example, studies by Marimuthu and Kolandaisamy (2009) on Malaysian firms indicate a nonsignificant relationship between gender diversity and the performance of the firm. Carter, D'Souza, Simkins and Simpson (2010) show evidence of a positive relationship of the number of women on board with return on assets (ROA) but not with the indicator of Tobin's Q. Based on these findings, Carter et al. (2010) conclude that there is no association between gender diversity and company performance. Also, Post and Byron (2015) find no significant link between female board representation and performance in their meta-analysis study of 140 different studies that investigate the association between gender diversity and firm performance. Finally, Joecks, Pull and Vetter (2013) find that the relationship between female board participation and firm performance is U-shaped, i.e. when the number of women on the board is less than 30 per cent, firm performance is negative, and when the percentage of female directors on the board increases, firm performance become positive. However, given the mixed international evidence, we predict a positive and statistically significant association between board gender diversity and firm financial performance. Therefore, our main hypothesis to be tested in this study is that:

H_3: board diversity has a significant positive influence on financial performance.

2.5 Board meeting and financial performance

The board meeting is an important dimension of board operations (Tong, Junarsin & Davidson, 2013). It is perceived as the primary function of the board of directors with confounding effect on the existing dynamics between directors and between directors and company's management (Cagan, 2013). Board meetings is seen as an important aspect of board operations and also identified as having a significant effect on company's performance. It is seen as a forum where board members meet to discuss strategic issues that affect the overall activities of a company. In the case of a Public Limited Company, the first board meeting has to be held within the first 30 days after 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. In the case of small companies or one person company, at least two meetings must be conducted, one in each half of the financial year. Additionally, the gap between the two meetings must be at least 90 days. In a situation where the meeting is held at a short notice, at least one independent director must be attending the meeting.

However, the extant literature on board meeting mostly centered on the frequency of board meetings. Therefore, the effect of frequency in board meetings is seen from two different perspectives. One view is that frequency of board meeting is a positive signal from companies and is beneficial to shareholders. Accordingly, a group of researchers believes that frequency of board meeting is an indication of the effectiveness of corporate boards (Conger, Finegold & Lawler, 1998). According to Vafeas (1999) frequency in board meetings is an indication of company's activeness in maximizing company's value and shareholders wealth. As such, a board that meets more frequent is more likely to work for the interest of shareholders. Therefore, an increase in the frequency of board meetings will likely result in higher managerial monitoring quality and thus impact positively on companies' financial performance (Ntim & Osei, 2011).

An opposing view was cited by Fama and Jensen (1983) who construes that boards are usually not reasonably active. Therefore boards become active only when companies are confronted with problematic situations. This implies that board meetings are usually reactive instead of a proactive measure. This view was reinforced by Vafeas (1999) who demonstrated that more frequent board meetings are not quite necessary. This is why the excess time board members spent is not utilized for exchange of meaningful ideas within themselves or with companies' management. Such time is absorbed by routine tasks and various formalities which is capable of reducing the number of hours available to outside directors for monitoring management activities.

Empirically, the finding in the various literature on the relationship between board meetings and financial performance was equally conflicting just as the views of various researchers (Dienes & Velte, 2016). Therefore, it is still difficult to draw a clear-cut finding given that literature evidenced positive, negative and in some instances insignificant relationship between board meetings and financial performance. For instance, Vafeas (1999) found board meetings having a statistically significant associated with the performance of the firms. In the same manner, Mangena and Tauringana (2008) showed positive association between activities of the board and firm performance. Meanwhile, El-Mehdi (2007) found that board activities do not have a necessarily positive relation with firm performance. Added to this study, Jackling and Johl (2009) also stated that the poor performance of the firm often result in the increased board activity, in the form of frequent meetings, and this is linked to improved operating performance in the next years, which highlights a lag effect. Besides, Rebeiz and Salameh (2006) also laid stress on the board meeting quality and not frequency. In the same path, some previous studies found that there were negative association between board meeting and performance (Malik and Makhdoom, 2016; Rodriguez-Fernandez, Fernandez-Alonso & Rodriguez-Rodriguez, 2014). Overall, although the prior research is conflicting with regards to the impact of board meetings on financial performance, the majority of works tend to conclude that they do enhance the financial performance of firms. This is predominantly due to the fact that the performance of the boards relies on how they carry out their activities, which can be indicated by regular meetings. The above discussion leads to this study proposing the following hypothesis for testing;

H_4: board meetings has a significant positive influence on financial performance.

3.0 Research Methodology

3.1 Sample and Data Collection

The population of this study comprises of all the fifty six (56) manufacturing companies quoted on the Nigerian Stock Exchange as at 31st December, 2018. The companies among others includes: Dangote cement, Dangote flour mills, Dangote sugar refinery, Africa prudential, Flour mills of Nigeria, FTN cocoa, Honeywell flour mill, Gunness Nigeria Nascon Allied industries NCR Nigeria, Nestle Nigeria etc. Besides, the sample size for the study was drawn for the population of the study. A filtering procedure was considered for selecting the required sample size. This technique is

Table 3.1
Summary of Variables

S/N	Variable	Measurement	Source
1	Firm performance	ROA defined as profit after taxation divided by total assets of companies	Artiach, Lee, Nelson and Walker (2010), Ling and Sultana (2015), Stuebs and Sun (2015)
2	Board Size	Total number of directors on corporate boards	Rao, Tilt and Lester (2012), Esa and Ghazali (2012), Kumar and Singh (2013).
3	Board Independence	Proportion of independent directors to total number of directors on corporate board.	Barako and Brown (2008), Chau and Gray (2010).
4	Board Diversity	Proportion of women directors to total number of directors on corporate board.	Barako and Brown (2008), Carter et al. (2010).
5	Board Meetings	Total number of meetings held by board of directors in a year.	Kamaranous and Vefeas (2005), Ntim and Osei (2011).

deemed more appropriate for this kind of study given that it allows a researcher to use companies with available information that meet certain criteria. Only companies that pass the filtering test were included in the sample. The criteria is that; a company must be listed and remain in the market for the period of the study before it will be selected. Also, a company must have a source of data (corporate annual report) for the year covered by the study before it could be selected as a sample. As stated above, the entire population of listed manufacturing companies on NSE stood at 56 as at 31st December, 2018. Thus, a total of 24 companies failed to meet the adopted criteria. Hence, these companies were excluded from the population to arrive at a final sample of 32 manufacturing companies. Besides, the study utilizes secondary data source. The secondary data were obtained basically from the published annual reports and accounts of the sampled quoted manufacturing companies in Nigeria.

3.2 Measurement of Variables

Return on Assets: Return on assets (ROA) is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. It is commonly defined as net income divided by total assets. Net income is derived from the income statement of the company and is the profit after taxes. The assets are retrieved from the balance sheet and include cash and cash-equivalent items such as receivables, inventories and the value of intellectual property such as patents.

Board Size: Board size refers to the total number of directors on the board of each sample firm which is inclusive of the CEO and Chairman for each accounting year. This will include outside directors, executive directors and non-executive directors.

Board Diversity: Prior studies measured board diversity using a number of dimensions: ethnic, gender diversity and age diversity, diversity in directors' industry experience and in education. For this study board diversity refers to gender which is the number of women on corporate board.

Board Independence: Traditionally in corporate governance and finance research, board independence is measured through the ratio of independent directors to the total directors (number of independent directors/total directors on the board). This same approach is used for this study.

Board Meeting: Board Meeting is the number of meeting/meetings held by the board of directors to carry out the control function on management. This variable is measured by the number of meetings held by the board of directors in the financial year. Nevertheless, the operationalization of the variables is as delineated in Table 3.1 below.

3.3 Techniques for Data Analysis

The technique of analysis to be used is multivariate regression, while the SPSS 20 was the tool used for the data analysis. Garson (2011) has stated that multivariate analysis be used in this type of studies, because multivariate analysis attempt to predict a normal or scale dependent variable from a combination of several scale and/or dichotomous independent/predictor variables. Morgan (2004) is of the view that there are many methods provided in SPSS to analyze panel data. This enables a researcher to determine the highest possible effect of these variables on the dependent variable. The choice of this is based on the fact that both the technique and tool are more informative (i.e. more variability, less collinearity, more degree of freedom), as estimates are more efficient under it. Also, they allow the study of individual dynamics (e.g. separating cohort effects). While this technique and tool also gives information on the time-ordering of events, it allows for control for individuals unobserved heterogeneity.

3.3.1 Model Specification

Model specification refers to a harmonized arrangement of specific individual variables represented in a study in the form of equations as they intend to run in relation to the dependent variable. For this study, a multiple regression equation is set up to investigate the hypothesized relationships between the dependent variable and independent variables in the study. The econometric form of the equation is as follows:

$ROA_i = \beta_0 + \beta_1 BS_i + \beta_2 BD_i + \beta_3 BI_i + \beta_4 BM_i + \beta_5 FS_i + \mu_i$

Where:

ROA = Return on assets (Dependent Variable)

BS = Board Size (Independent Variable)

BD= Board Diversity (Independent Variable)

BI= Board independence (Independent Variable)

BM = Board Meeting (Independent Variable)

FS= firm size (Control variable)

β_0 = Constant

$\beta_1 - \beta_7$ = Coefficient of the slope parameters

μ = Error term

4.0 Results and Discussions

This section deals with the analysis of data using descriptive statistics and inferential analysis. This includes the presentation and discussion of the descriptive statistics of all the variables considered for the study as well as the regression analysis for the purpose of estimating the model used in this study.

4.1 Descriptive Analysis

The result from Table 4.1 reveals the summary statistics of all the variables which include the minimum, maximum, mean and standard deviation. Return on asset (ROA) is the dependent variable in which the minimum value is 0.0110, the maximum is 0.4251, the mean is 0.91822 and the standard deviation is 0.0990. The mean of the board size was 9.59 and the maximum, and minimum was 4 and 17 respectively, while the standard deviation was 3.425. Board independence has an average mean of 3.13 while the minimum and the maximum is 1 and 3 respectively. It was also observed that board diversity as denoted by BD had a mean score of 1.81, a minimum value of 1 and a maximum of 3 while its standard deviation is 0.8210. Also, board meetings which is depicted in the table as BM had 4 as its minimum value and 8 as its maximum, its mean score is 4.62 and a standard deviation of 0.907.

Table 4.1

Descriptive Statistics for the Dependent and Independent Variables

Variable	Mean	Std. Dev.	Min	Max
Financial Performance (ROA)	0.9182	0.0990	0.0110	0.4251
Board Size (BS)	9.5900	3.4250	4.0000	17.000
Board Independence (BI)	3.1300	1.6610	1.0000	3.0000
Board Diversity (BD)	1.8100	0.8210	1.0000	3.0000
Board Meeting (BM)	4.6200	0.9070	4.0000	8.0000
Firm Size (FS)	16.598	3.0073	9.1768	20.913

4.3 Correlation Analysis

Correlation analysis is a method of statistical evaluation used to study the strength of a relationship between two numerically measured continuous variable. Correlation analysis is performed basically to determine the strength and direction of relationship between observed variables (Pallant, 2011). In this study, correlation was conducted for two reasons. First, to assess the interrelationship between the study's variables and secondly, to detect the presence of multicollinearity among variables as suggested by Hair, Black and Babin (2010). The strength of the relationship between variables is interpreted based on criteria popularized by Cohen (1988). According to Cohen (1988), correlation value between 0.1 to 0.29 is small, 0.3 to 0.49 medium and 0.5 to 1.0 is large. Following Pallant (2007), Tabachnick and Fidell (2007), a correlation value higher than 0.90 is considered harmful and a sign of multicollinearity in the model.

Notes: ROA = financial performance, BS = board size, BI = board independence, BD = board diversity, BM = board meetings. ***, **, * denote significant at 1%, 5%, and 10% levels respectively.

Table 4.2 summarized the correlation values between the dependent and independent variables and the relationship between the independent variables themselves. As shown in Table 4.2, the correlation between all the explanatory variables was fair with no single correlation value exceeding the acceptable threshold of not more than 0.90. Accordingly, the highest correlation value between independent variables was BM and ROA (0.4296). Based on this insight, there is no evidence of multicollinearity between predictor variables in this study. On this account, multicollinearity among variables does not pose a problem in this study. To this end, the results of the correlation analysis support the need to undertake a more powerful statistical analysis that will reveal predictors of corporate sustainability disclosure. Thus, the results of the multiple regression analysis is presented in the next section.

Table 4.2
Correlation Matrix

Variables	ROA	BS	BI	BD	BM	FS
ROA	1					
BS	0.0254	1				
BI	-0.0582	-0.1103**	1			
BD	0.1963***	0.0304	-0.0999**	1		
BM	0.4296***	-0.1772***	0.2939***	-0.1100**	1	
FS	0.0473	-0.1790***	0.1538***	0.2132***	0.0067	1

4.4 Regression and Multivariate Analysis

Table 4.3 depicts the goodness of fit of the model, R-square, Adjusted R-square and the standard error. Accordingly, the R-square and the Adjusted R-square of the model as shown in Table 4.3 revealed that 20% of the proportion of the dependent variable has been explained by the explanatory variables. This

shows that the model has a good fit. Nevertheless, the regression analysis from the estimated variables is shown in Table 4.3. The result from Table 4.3 reveals that Board Size (BS) has an insignificant relationship with financial performance ($t = 1.472$ $p = 0.142$). The insignificant relationship is evidencing that, increase in board size may not necessarily lead to increase in companies' financial performance. This therefore implies that, larger board size may likely not improve the companies' board effectiveness and support the management in reducing agency cost that resulted from poor management and consequently leads to better financial results. This result has not supported the positive association hypothesis earthier in the study. Accordingly, H_1 is not supported. This result is in contrary with the findings of Kajola (2008), Al-Haddad et al. (2011) and Najjar (2012).

Table 4.3
Relationship Between Corporate Governance Mechanisms and financial performance

Variables	**Expected Outcome**	**Coefficient**	**T-Value**	**P-Value**
CONS	+/-	-0.021	-1.367	0.002
BS	+	0.001	1.472	0.142
BI	+	0.063	3.674	0.000***
BD	+	0.077	3.750	0.000***
BM	+	-0.001	-0.950	0.343
FS	+	0.590	5.536	0.000***
R-Square				0.201
Adjusted R-Square				0.209
Observations				480

Notes: CONS = constant, BS = board size, BI = board independence, BD = board diversity, BM = board meetings, FS= Firm size***, **, * denote significant at 1%, 5%, and 10% levels respectively.

However, Board Independence (BI) has a positive and significant impact on financial performance. The coefficient of BI is 0.063, and this means that a unit change in BI will result to an increase of 0.063, of ROA. This relationship is statically significance at 1% level of significance. The result of this study supported the initially projected hypothesis. Hence H_2 is supported, suggesting that increase in board independence will lead to higher financial performance of listed manufacturing companies in Nigeria.

This result is similar to Jackling and Johl (2009), Mishra and Kapil (2018), Duppati et al. (2019), Usman and Yakubu (2019). Similarly, Board Diversity (BD) reveals a positive and statistically significant impact on financial performance. The coefficient of BD is 0.077. This means that a unit change in BD will result in a unit increase in the ROA. This relationship is statically significant at 1% level of significance. This suggest that, BD is a good determinant of ROA during this study's period. The findings implies that, the proportion of women on corporate board increases the financial performance of an organization. This result is in agreement with the develop hypothesis present in section two (2) of this study. Accordingly, H_3 is supported. This finding is in line with the finding of most of prior studies such as Galbreath (2016), Perryman et al. (2016), Mintah and Schadewitz (2019).

On the other hand, Board Meeting (BM) reveals a negative and statistically insignificant relationship with the dependent variable (ROA). This shows that, change in BM will not lead increase in ROA. Hence the relationship is statically insignificant. This suggest that, over this study's period, BM is not a significant determinant of ROA. The finding of this study contradicts the significant positive relationship hypothesized either in the study. To this effect, hypothesis H_4 is not supported. The finding is in line with El-Mehdi (2007). Besides, the result of this study also shows that Firm Size (FS) has a positive and significant relationship with the dependent variable (ROA). The coefficient of FS is 0.590. This means that 1% increase in FS will cause the ROA to increase by 0.590. This relationship is statically significant at 1% level of significance. The result is consistent with Adegbite (2012) and Oyelade (2019).

Conclusion and Recommendation

This paper basically examines the influence of corporate governance mechanisms on financial performance of listed manufacturing companies in Nigeria. The result of the study reveals that two of the corporate governance mechanisms indicate a statistically significant relationship with financial performance. Specifically, the result provides that board independence and board diversity are significant and positively related to financial performance. On the other hand, board size and board meeting are not significantly associated with financial performance. Accordingly, the study concludes that corporate governance has significant effect on financial performance of quoted manufacturing companies. The findings will be of interest to both researchers and practitioners. The findings is of immense important to researchers as they study has contributed to the body of literature by extending the scope of extant research on the relationship between corporate governance and financial performance specifically among manufacturing companies. Also, managers and company owners might use the findings of this research work in implementing the necessary policy for the improvement of their various organizations/companies.

Accordingly, the study made the following recommendations. The study recommends that board members of listed manufacturing companies in Nigeria should be reduced to an average of thirteen members at most in order to avoid possibility of members taking longer time to make decision. Also, there is need to reduce the number of board members on corporate boards of manufacturing companies to avoid too much cost of coordination which may reduce the performance of the manufacturing company. In addition, companies should works toward reinforcing their corporate boards by ensuring heterogeneity in terms of diversity, experience, knowledge and proficiency in conduct of board functions. Similarly, companies should appoint more independent directors to corporate boards as independent directors can contribute towards guaranteeing the interests of shareholders. At least one-third of directors be independent. Also, more competent and qualified women be co-opted into corporate boards, this will help companies realise the benefits related to such diversity. These steps are likely to enhance the financial performance of listed manufacturing companies in Nigeria.

While this study's evidence is robust and important, some caveats should be considered for a more appropriate and better interpretation. The study made use of Return on Assets as a proxy for financial performance. The study therefore suggests future studies in this area to make use of other performance proxies such as Return of Equity and Tobin's Q. Also, the study only made use of four board characteristics variables (board size, board diversity, board independence, board meeting). Therefore, it is suggested that future researchers may include other governance variables such as board tenure, board religion, board nationality in their board characteristics variables. These variables are also considered vital in determining the factors that affect the financial performance of listed manufacturing companies. Finally, this research is only limited to manufacturing companies, it is recommended that further studies in this area should add more companies from manufacturing sector or concentrate on the entire manufacturing sector to make the findings and recommendations more amenable to generalizations. This will also provide a fruitful avenue for future research.

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