Board Characteristics and Financial Reporting Quality

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Abstract
The past corporate accounting scandals have left the accounting profession in doubts of its integrity and relevance. Against this backdrop, we investigated the impact of board characteristics on financial reporting quality of listed manufacturing firms. The study was driven by the positivist research philosophy and a deductive research approach using a multi-method quantitative research design. Descriptive and inferential statistics were employed to summarize the data and to draw inference on the population studied. We employed the Generalized Linear Model Regression in testing the hypotheses stated. Findings revealed that board expertise was statistically significant and positively related to financial reporting quality at 5% level of significance, while board independence and board diversity was found to be insignificantly related to financial reporting quality at 5% level of significance. The study concluded that board characteristics partially affect financial reporting quality. Hence, we recommended that non-executive directors on the board should be reduced to cut excessive management cost.

Keywords: Board independence, Board diversity, Board expertise, Financial reporting quality, Normality, Generalized Linear Model Regression.

1. Introduction
The global debacles surrounding the accounting profession in recent times have impeded the confidence of users of accounting information. The fall of the so-called too big to fail firms, such as Enron, WorldCom, Parmalat, to mention a few, together with their respective external auditors have raised concern over the integrity of the profession. Ever since then, researchers have delved into the reasons behind the failures of these big firm, and have attributed it to low ethical standards (Aifuwa, Embele, & Saidu, 2018; Akeju & Babatunde, 2017; Eginiiwin & Dike, 2014; Enofe, Edemenya & Osunbor, 2015; Ogbonna & Ebimobowei, 2012; Salaudeen, Ibikunle & Chima, 2015) and poor corporate governance mechanisms (Anderson, Mansi, & Reebi, 2004; Ezelibe, Nwosu, & Orazulike, 2017; Ilaboya & Lodikero, 2017; Ilaboya & Ohiokha, 2014).

Corporate Governance Code of Nigeria (2003) was considered a benchmark in corporate entities. Onourah and Imene (2016) are of the view that the code will help companies to reduce mismanagement, remedy any deficiencies in governance mechanisms, prevent the abuse of power and effectively manage risks. They believe that compliance with these recommendations is an essential basis for evaluating the quality of governance system, the reputation of the company and the interest of shareholders. However, on the path of the shareholders, quality and reliable information (especially on the operations of the directors) has become a commodity that must be paid for in order to effectively and efficiently assess an entity’s performance.
1.2 Statement of the Problem

Financial statements are useful tools needed by users for effective economic decision making. It is therefore imperative that information reported are verified by an independent audit and are meaningfully efficient, realistic and reliable. Nonetheless, contemporary financial reporting times have witnessed persistent issues of corporate accounting scandals that have put forward, questions regarding the quality of financial reports. The aftermath of juicy profit publications accompanied with the ultimate collapse of major firms across the globe are seen as inevitable indicators. This has led to the critic of the effectiveness of the board towards its financial reporting responsibilities and overall administration of the entity.

The Code of Corporate Governance recommended a unitary board structure where Non-Executive Directors (NEDs) are expected to bring an independent scrutiny to the board thereby separating decision management from decision control. But a key argument which tends to truncate this fact is that directors are basically selected by the same management – a practice which tends to jeopardise the sacred quality of board independence. The need for independent directors was heightened after the high-profile collapse of some business organisations locally and internationally such as Anderson, Enron, WorldCom, Parmalat, Xerox, Oceanic Bank Nigeria Plc, Intercontinental Bank Nigeria Plc, Savanna Bank Nigeria Plc, and the financial malfeasance of some entities such as Cadbury Nigeria Plc, Unilever Nigeria Plc, Bank of Montreal, and Koss corporation to mention a few. Notwithstanding, very little can be said about the effectiveness of an independent board towards effective financial reporting as the theoretical surmise is far from being displayed practically.

Culminating from the problem of director's independence is the issue of board diversity (gender and nationality). Conventional boards have been criticised severally for promoting homo-social dominance and few foreign board members. Homo-sociality is described as a same-sex relationship that has no romantic or sexual undertone. The corporate board are currently dominated by male directors with little or no opportunity for female representation and foreign directorship thereby forfeiting their impact, as they may introduce heterogeneity of ideas and experiences as well as reducing information asymmetry and the associated agency costs.

Finally, a trivial strand in literature exposes a drawback of a board having too many experts. Expertise (in terms of academic qualifications, professional qualifications, age and experience) in the board can be cajoled to circumvent the normal accounting standards and practices in financial reporting. Since they are experts, they may be influenced to carry out various forms of creative accounting intended to mislead users of financial reports.

This current study was motivated by the choice of our explanatory variables (Board characteristics – independence, diversity and expertise). This mix have not been used in prior studies. Although, most scholars have relied on the Panel Least Square estimation techniques, they tend to shy away from the fulfilment of regression normality assumptions. Therefore, their results and generalizations are in doubt on the subject matter. Against the above backdrops, the following research questions were raised.

i. What is the influence of board independence on financial reporting quality?

ii. What is the impact of board diversity on financial reporting quality?

iii. What is the effect of board expertise on financial reporting quality?

The remainder of the paper is organised as follows: Section two focuses on the literature review and hypotheses development. Section three addresses the methodology with emphasis on theoretical framework and model specification. Section four presents data analysis, interpretation and discussion of findings. Section five concludes.
2. Literature Review and Hypotheses Development

2.1 Concept of Financial Reporting Quality

The financial statement of any firm is expected to have the required qualitative attributes as stated by International Financial Reporting Standards which include relevance, comparability, timeliness, understandability, faithful representation and verifiability. The financial statement should always depict detailed information about the economic performance of a firm (as highlighted in the income statement), the statement of financial position, statement of cash flows and statement of changes in equity (IAS 1). This is to ensure that the information provided is of high quality.

Verdi (2006) defines financial reporting quality as the exact manner in which it shows information as regards a business activity and its anticipated cash flows, with the aim of informing the shareholders about a company’s operations. Financial reporting quality also refers to the degree in which financial statement provides us with information that is fair and authentic about the financial position and performance of an enterprise (Tang, Chen & Zhijun, 2008). It can be deduced from the above definitions that for a financial statement to be regarded as possessing a high-quality attribute, it must be able to provide authentic/genuine information about the economic performance, financial position and operations of cash flows with the aim of keeping shareholders and other stakeholders informed of the entity’s current situation.

Martínez-Ferrero, Garcia-Sanchez, and Cuadrado-Ballesteros (2013) also defined financial reporting quality as the faithfulness of information conveyed in the financial reporting process. This definition mainly focused on the financial aspect of corporate information, thus, we further expanded and modified the definition. We defined Reporting quality as the faithfulness of information conveyed in both financial and non-financial reporting process. Financial statements of firms at the end of a financial year should have some element of truth in it. This is termed “quality”. It is therefore imperative that the financial reports of firms should have high quality so as to increase the confidence of users.

Financial reporting quality can be assessed directly or indirectly. Directly, it can be measured using accruals model, value relevance models, using specific elements in the annual reports and by operationalizing the qualitative characteristics (Beest, Braam, & Boelens, 2009). It can be measured indirectly using earnings management, financial restatements and timeliness (Barth, Landsman, & Lang, 2008; Cohen, Krishnamoorthy & Wright, 2004; Schipper &Vincent, 2013).

Accruals model focuses on the quality of earnings measured and the major assumption it holds is that managers use discretionary accruals to manage earnings (Dechow, Sloan, & Sweeney, 1995; Healy & Wahlen, 1999). Earnings management is assumed to negatively affect the quality of financial reports by reducing its decision usefulness. The main merit of this model is that it uses accruals to measure earnings management and calculated based on the information present in the financial statement (Beest et al., 2009). However, there exists a problem with distinguishing between discretionary and non-discretionary accruals (Healy & Whalen, 1999 as cited in Beest et al., 2009). It also excludes non-financial components in its computation (Beest et al., 2009). Thus, in an era of human accounting and environmental accounting, this model may not report the true and fair view of financial statements.

Value relevance model measures the quality of financial reports by focusing on the correlations between accounting figures and stock market reactions (Barth et al., 2008; Choi & Pae, 2011; Nichols & Whalen, 2004). The prices of stock are believed to represent the market value of firms, while accounting figures represent the firm’s value based on accounting
procedures (Beest et al., 2009). This model is quite useful but has some drawbacks in ascertaining the accuracy of stock prices and market value of a firm.

The method of operationalizing the qualitative characteristics of financial reports could also be called the International Accounting Standard Board (IASB) qualitative model. This model concentrates on the non-financial components of the financial statement. The model distinguishes between fundamental and enhancing qualitative characteristics. Whereas the fundamental characteristics include Relevance and Faithful Representation, the enhancing characteristics are made up of comparability, timeliness, understandability, and verifiability. According to Beest et al., (2009), the fundamental characteristics of relevance ensure that information in the financial report assists users in evaluating, correcting and confirming past and current events as well as influencing their economic decisions. More so, the information in the financial report must possess the attribute of reliability in order to make it useful for decision making. Faithful Representation means financial report should reflect and represent the real economic position of the financial information reported, that is, the information must show a high level of objectivity and balance. In other words, faithful representation feature asserts that financial statement should represent faithfully what they purport to represent. IASB (2008) further noted the importance for financial reports to be timely, verifiable, comparable and understandable as this will further enhance the quality of financial reports.

In applying the indirect measures, earnings management is known to be widely used. It is frequently employed by the managers in altering figures in the financial statement (Healy & Wahlen, 1999). According to them, earning management arises when managers use subjective judgement in financial reporting and structuring transactions to alter financial reports either to mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting practices. Watts and Zimmerman (1990) observed that earnings management occurs as a result of the loopholes and flexibility of accounting choices that are allowed by the Generally Accepted Accounting Principles (GAAP). These loopholes allow managers to choose reporting procedures that enable them to make estimations and assumptions that suite their business environment or maximise their wealth. In a situation where managers use subjective judgements in financial reporting to alter financial reports, thereby negatively affecting the quality of financial reporting, discretionary accruals model as a measurement tool for financial reporting quality becomes desirable (Healy & Wahlen, 1999).

In corroborotation with the above assertion, major strands in extant literature on financial reporting quality have been proxied by earnings management which examines managers’ use of discretionary accruals to shift reported income among fiscal periods. The discretionary accruals are determined by separating the non-discretionary accruals from the total accruals. To this end, this current study used the modified Jones model as proposed in (Dechow, et al., 1995; Dechow & Dichev, 2002).

2.2 Concept of Board Characteristics

The phrase "board characteristics" is a blend of two concepts: board and characteristics. While the former as stated in Section 334 (1) of the Companies and Allied Matters Act 2004 (as amended), the board of directors (usually referred to as the board) is vested with the duty of hiring managers and administering the activities of the organization. The latter means a typical or noticeable quality of someone or something. Therefore, board characteristics can be defined as one internal corporate governance mechanism, which expatiates on the features of the board. The characteristics of the board include size, independence, diligence, diversity (age,
gender, nationality, expertise, educational and functional background), and committee structure (Anderson et al., 2004). The administrative activities of the board involve the duty of overseeing and monitoring the organizations financial reporting process (Anderson et al., 2004). They meet at a scheduled time with the organizations' accountant and external auditors to review financial statements, audit procedures and the internal control system (Klein, 2002) targeted at improving the organisation’s performance. Hermalin and Weisbach (2003) see the board as a market solution that helps mitigate the agency problems that befalls most organizations. According to Jenfa (2000), the board is responsible for a company’s internal control systems and has the ultimate responsibility for the operation of the company. Boards define the rules for the chief executive officer regarding hiring and firing, compensation plan and provide high-level advice. Vafeas (2000) see boards duty as mainly responsible for monitoring the quality of information contained in financial reports because managers often have their own interest and incentives with regard to managing earnings and potentially misleading stockholders.

Akeju and Babatunde (2017) opined that a board characteristic which is an internal corporate governance mechanism improves financial reporting quality in an organisation. D'onza and Lamboglia (2014) asserted that a board characteristic is a unique monitoring mechanism for detecting and correcting financial statement fraud. This unique feature of the board makes it hard for accountants in an organisation to perpetrate and conceal a financial statement fraud. Cohen et al., (2004) argued that one of the most important functions of corporate governance (both internal and external mechanisms) is to ensure the quality of the financial reporting process; this argument was supported by (Myring & Shortridge, 2010). Ilaboya and Lodikero (2017) reiterated that it is imperative that the board should have some level of integrity and objectivity in the process of carrying out their duties diligently and should also be confidential in matters relating to the board. Fathi (2013) asserted that the quality of financial information is positively related to the quality of the board and the quality of the ownership structure. To this end, this study critically looked at three board characteristics – independence, diversity (Gender diversity) and expertise.

2.2.1 Board Independence and Financial Reporting Quality

According to the code of corporate governance for public companies issued by the Nigerian Securities and Exchange Commission (SEC, 2011), an independent director is a non-executive, non-substantial shareholder of the company whose shareholdings directly or indirectly does not exceed 0.1% of the company's paid-up capital. In addition, the director must have not been previously employed or has no business or professional relationship with the company.

Anderson et al. (2004) argued that a board comprising of mostly employees or employee-related directors may be willing to conceal negative information in order to gain direct personal benefits and consequently hiding this dealing from stakeholders of the company. Independent board of directors are willing to serve both the management and stakeholders of the company through proper monitoring and full disclosure of both financial and non-financial information.

Scholars have established a relation between board independence and financial reporting quality, and they have given mixed findings. Klein (2002) and Cornett, Mc Nutt and Tehranian (2009) discovered that there is a negative relation between board independence and financial reporting quality using abnormal accruals as a measure. Other strand in literature such as (Akeju & Babatunde, 2017; Alves, 2014; D’onza & Lamboglia, 2014; Firth, Fung & Rui, 2007; Holtz & Nieto, 2014; Klai & Omori, 2011; Kantudu & Samaila, 2015;Lara, Osma,
Penalva, 2009; Marra, Mazzola, Prencipe 2009; Nesrine & Abdelwahid, 2011) submitted that board independence is significantly and positively related to financial reporting quality.

However, a third strand in literature posited that board independence is not related to financial reporting quality (Ahmed, Hossain & Adams, 2006; Alkdai & Hanefah, 2012; Chalaki, Didar, & Rianezhad, 2012; Gois, 2014). The different strand of empirical literature suggests that the issue of the nexus between board independence and financial reporting quality is far from being settled. This inconsistency formed the basis of our first hypothesis:

**Ho1: Board independence has no significant influence on financial reporting quality**

### 2.2.2 Board Diversity and Financial Reporting Quality

Board diversity is a key to enhancing corporate governance practices in an organization (Wang, 2015), as diversity in the board room fosters better decision making and brings about innovation in an organization. Some of the features of a diversified board include gender, age, educational and functional background, industry experience or exposure and nationality (Wang, 2015). Sirmidi, Gul and Tsai (2011) opined that the best board is a mix of individuals with different skills, knowledge, information power and readily available to contribute his/her time professionally. It is noteworthy, that the cost of a diversified board is quite expensive as its high cost may impede on the organization's performance (Wang, 2015), and this could also affect its financial reporting quality.

Studies have explored the relation between board diversity and financial reporting quality (see, Barua, Davidson, Rama, & Thiruvadi., 2010; D’onza & Lamboglia, 2014; Ho, Li, Tam & Zhang, 2015; Klai&Omori, 2011; Makhlouf, Al-Surf, & Almubaiddeen, 2018; Pen & Vahamaa, 2010; Pulungan & Sadat, 2014; Yunos, 2011), they all found a positive and significant relation between board diversity and financial reporting quality. Other strands in literature (Dobbin & Jung, 2010; Labelle, Gargouri, & Francoeur, 2010) reported a significant and negative relation between board diversity and financial reporting quality. Also, a third strand in literature submitted that board diversity is not related to financial reporting quality (Firoozi, Magnan, & Fortin, 2016; Hoang, 2014; Wang, 2015; Muhammad, Ayoib & Noor, 2016).

Specifically, on gender diversity, the conventional make-up of the board globally does not easily support the linear relationship between gender diversity and financial reporting quality, as the male gender in the board room always supersedes the number of their female counterparts (Ilaboya & Lodikero, 2017). This is evidenced in Europe legislation stipulating 40% of female gender in the board, and also in Nigeria where some government positions are design for female (for example, the ministry of finance).

Notwithstanding this backdrop of gender inequality in the board, Makhlouf et al., (2018) stills hold the stance that gender diversity is positively and significantly related to financial reporting quality using accounting conservatism as a measure. This inconsistency highlighted in this study formed the basis of our second hypothesis.

**Ho2: Board diversity has no significant impact on financial reporting quality**

### 2.2.3 Board Expertise and Financial Reporting Quality

When the board is comprised of experts, there is always a level of confidence in the financial statement reported (Onourah & Imene, 2016). To become an expert in a board, a director must possess adequate educational and professional experience in areas of finance, accounting and auditing. However, Kang, Chenge, and Gray (2007) asserted that experience comes with age. The older the director the better, that is to say, that the presence of older directors on the board will lead to better financial reporting quality. Scholars have given mixed findings on the relation between board expertise and financial reporting quality. A predominant strand in literature submitted that board expertise significantly and positively affects financial
reporting quality (Alzoubi, 2014; D’onza & Lamboglia, 2014; Klai & Omori, 2011; Kantudu & Samaila. 2015; Onourah & Imene, 2016), while Kankanamage (2015) made a submission that board expertise significantly and negatively affect financial reporting quality using earnings management as a measure. This inconsistency formed the basis of our third hypothesis:

**H₃: Board expertise has no significant impact on financial reporting quality**

3 Methodology

3.1 Theoretical framework and Model Specification

3.1.1 Theoretical Framework

Corporate governance characteristics have been subjected to different theoretic ranging from, Agency theory (Jensen & Mackling, 1976), Stakeholder’s theory (Freeman, 1984), Resource dependency theory (Pfeffer and Salancik, 1978). This current study was anchored our study on the Resource Dependency Theory to explain the relationship between board characteristics and financial reporting quality in listed manufacturing firms in Nigeria Stock Exchange. The theory is centred on the roles of the board in providing access to resources for the organization. As resource providers, their characteristics tend to be of paramount importance (Abdullah & Valentine, 2009; Ezelihe et al., 2017). Some of their features are size, independence, diversity, diligence and so on. These features of the board are assumed to improve the quality of financial reports in an organization, which will, in turn, improve the confidence of the stakeholders of the organization.

Flowing from extant literature, it is believed that an independent board will impact positively on the performance of the business as well as help to reduce earnings management (Ilaboya & Lodikero, 2017) and consequently increase the quality of financial reports (Akeju & Babatunde, 2017). However, Klein (2002) does not support this view, and still hold a stance of a negative relation between board independence and financial reporting quality. Therefore, we expect a functional relationship to be:

\[ \text{FRQ} = f(\text{BIND}) \]  

The best board is a mix of individuals with different skills, knowledge, information, power and readily available to contribute his/her time professionally (Sirnidhi et al., 2011). Even in conventional make-up, the board is always characterized by the male gender, leaving the female counterparts asking for equality. The presence of feminine gender in the board will improve the quality of financial reports significantly, because of their gentle and straightforward nature. Nevertheless, the unequal number of gender in the board still impact positively on financial reporting (Makhlouf et al., 2018). This expression can be given as:

\[ \text{FRQ} = f(\text{BDIV}) \]

The qualifications of the board such as education, foundation background and experience, all summed up are referred to as expertise. Onourah and Imene (2016) asserted that board expertise or versatility will increase the confidence in financial reports, as their qualification and experience in the board will enhance financial reporting quality. It is therefore assumed that the presence of experts on the board will influence financial reporting quality (Anderson et al, 2004; Kang et al., 2007; Onurah & Imene, 2016).

\[ \text{FRQ} = f(\text{BEXP}) \]

We want to also know the effect of auditor’s independence and firm size on financial reporting quality. However, this will be controlled against our explanatory variables. The relationships could be expressed as:

\[ \text{FRQ} = f(\text{AIND}) \]

\[ \text{FRQ} = f(\text{FSZE}) \]
3.1.2 Model Specification

Flowing from the theoretical framework and extant literature, we specified the model as:

\[ FRQ = f(BIND; BDIV; BEXP) \]  

In econometric form:

\[ FRQ_{it} = \beta_0 + \beta_1 \text{BIND}_{it} + \beta_2 \text{BDIV}_{it} + \beta_3 \text{BEXP}_{it} + \varepsilon_{it} \]  

Adding control variables to the study we have our model to be represented as:

\[ FRQ_{it} = \beta_0 + \beta_1 \text{BIND}_{it} + \beta_2 \text{BDIV}_{it} + \beta_3 \text{BEXP}_{it} + \beta_4 \text{AIND}_{it} + \beta_5 \text{FSZE}_{it} + \varepsilon_{it} \]  

Where:

\( FRQ_{it} \) = Financial Reporting Quality as measured using Earnings Management (Discretionary Accruals);
\( \beta_0 \) = Constant;
\( \text{BIND} \) = Board Independence;
\( \text{BDIV} \) = Board Diversity;
\( \text{BEXP} \) = Board Expertise;
\( \text{AIND} \) = Auditors Independence;
\( \text{FSZE} \) = Firm Size;
\( \beta_1, \beta_2, \beta_3, \beta_4, \beta_5 \) = Coefficient of explanatory variables
\( \varepsilon \) = Standard error
\( i \) = Cross sectional (Companies)
\( t \) = Time Series

A priori expectations in line with extant literature to be \( \beta_1, \beta_2, \beta_3, > 0 \)
Table 1. Measures of variables

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variables</th>
<th>Definition</th>
<th>Type</th>
<th>Measurement</th>
<th>Supporting Scholars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>FRQ</td>
<td>Financial reporting quality</td>
<td>Dependent</td>
<td>Measured by use of accruals quality as a proxy for financial reporting which equals a change in current assets - change in cash - change in current liabilities + change in short term debt-depreciation) /scaled by average total assets (A higher FRQ value indicates higher accruals quality and higher financial reporting quality)</td>
<td>Jerubet, Chepng’eno, &amp; Tenai (2017)</td>
</tr>
<tr>
<td>2.</td>
<td>BIND</td>
<td>Board of Director's independence</td>
<td>Independent</td>
<td>The ratio of non-executive directors to the company's board size</td>
<td>Ilaboya &amp; Lodikero (2017)</td>
</tr>
<tr>
<td>3.</td>
<td>BDIV</td>
<td>Board diversity</td>
<td>Independent</td>
<td>Percentage of female in the board</td>
<td>Ilaboya &amp; Lodikero (2017)</td>
</tr>
<tr>
<td>4.</td>
<td>BEXP</td>
<td>Board Expertise</td>
<td>Independent</td>
<td>Use of dummy variable 1 for expert, otherwise 0 An expert in the board must have both educational and professional qualifications with 5 years’ experience in financial matters</td>
<td>Kankanamage (2015)</td>
</tr>
<tr>
<td>5.</td>
<td>AIND</td>
<td>A measure of auditor's independence</td>
<td>Control</td>
<td>The ratio of audit fee to the company's revenue</td>
<td>Ilaboya &amp; Ohiokha (2014)</td>
</tr>
<tr>
<td>6.</td>
<td>FSZE</td>
<td>Firm’s size</td>
<td>Control</td>
<td>Natural log of company's total non-current assets</td>
<td>Ilaboya &amp; Ohiokha (2014)</td>
</tr>
</tbody>
</table>

Source: Authors’ Compilation, 2019

3.2 Research Design
Orientated by the positivist research philosophy and the deductive research approach, the research design adopted for the current study was the multi-method quantitative research design. The multi-method quantitative design was adopted for the study because it is inclined on the positivist research philosophy and deductive approach, that is to say, we are testing a theory’s validity in order to improve upon it. Secondly, it examines relationships between variables, which are measured numerically and analysed using a range of statistical and graphical techniques (Sanders, Lewis & Thornhill, 2016).

3.3 Population of the Study
The population consisted of all listed firms in Nigeria Stock Exchange (169 listed companies as at 31st May, 2018) while the target population was forty-three (43) manufacturing firms listed on the Nigerian stock exchange.
3.4 Sample Size and Sampling Techniques

The sample size was scientifically derived using the Yamane’s (1967) sample size formula, which yielded 37 from the target populations. We randomly selected these listed manufacturing firms using the random number table, so as to ensure that all sampled listed manufacturing firms have equal chances of being selected.

3.5 Data Collection Instruments

Secondary data was hand-picked from the annual reports (2013-2017) of the sampled listed manufacturing firms.

3.6 Method of Data Analysis

The study employed both descriptive and inferential statistics. The descriptive statistics which include Minimum, Maximum, Standard deviation, Skewness, Kurtosis and Jarque-Bera statistics was well presented in tables. The Generalized Linear Model Regression was used to test our hypotheses because it permits non-normal stochastic and non-linear systematic components (MacCullagh & Nelder, 1989; Hardin & Hilbe, 2007). The analysis was done using e-views 8.

4. Data Analysis, Interpretation and Discussion of findings

As earlier stated, the study employed descriptive Statistics, diagnostics test (Serial Correlation, Normality, Linearity, Heteroskedasticity and Multicollinearity) and inferential statistic (Generalized Linear Model Regression) to explain variables used in the study.

Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>FRQ(DA)</th>
<th>BIND</th>
<th>BDIV</th>
<th>BEXP</th>
<th>AIND</th>
<th>FSZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>-0.058600</td>
<td>0.652796</td>
<td>0.105193</td>
<td>0.578378</td>
<td>0.009129</td>
<td>7.011388</td>
</tr>
<tr>
<td>Median</td>
<td>-0.022100</td>
<td>0.666700</td>
<td>0.100000</td>
<td>1.000000</td>
<td>0.001400</td>
<td>6.986000</td>
</tr>
<tr>
<td>Maximum</td>
<td>2.254300</td>
<td>0.888900</td>
<td>0.454500</td>
<td>1.000000</td>
<td>0.117500</td>
<td>10.00530</td>
</tr>
<tr>
<td>Minimum</td>
<td>-2.792200</td>
<td>0.272700</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>5.171500</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.579495</td>
<td>0.157761</td>
<td>0.120871</td>
<td>0.495159</td>
<td>0.022430</td>
<td>1.001561</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.738422</td>
<td>-0.874626</td>
<td>1.069313</td>
<td>-0.317438</td>
<td>3.352235</td>
<td>0.274695</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>13.59693</td>
<td>3.169975</td>
<td>3.624828</td>
<td>1.100767</td>
<td>13.48397</td>
<td>2.642701</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>882.4184</td>
<td>23.80932</td>
<td>38.26519</td>
<td>30.91160</td>
<td>1193.740</td>
<td>3.310673</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000</td>
<td>0.000007</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.191028</td>
</tr>
<tr>
<td>Observation</td>
<td>185</td>
<td>185</td>
<td>185</td>
<td>185</td>
<td>185</td>
<td>185</td>
</tr>
</tbody>
</table>

Source: Authors’ computation, 2019

Table 2 above shows a descriptive statistic of variables used in the study. From the listed manufacturing firms investigated the discretionary accruals (DA), a proxy for financial reporting quality had a mean value of -0.0586 with minimum and maximum values of -2.7922 and 2.2543 respectively, and the standard deviation of 0.57945 which is high and above the mean, suggesting that there is frail quality in the financial reports of manufacturing firms. The mean of board independence (BIND) stood at 0.652796, this implies that an average of about 65% of the directors in the boardroom investigated were independent (nonexecutive directors), also with a minimum and maximum values of 0.272700 and 0.888900 respectively, and a standard deviation of 0.105193 which is low and below the mean suggests that there is high board independence in the boardroom of manufacturing firms investigated.

The mean of board diversity (BDIV) stood at 0.105193, this implies that an average of about 11% of directors’ present in the boardroom are female, having a minimum and maximum...
of 0% and 45% of female directors in the boardroom respectively, with a standard deviation of 0.120871, which is high suggests that board diversity (BDIV) does not exhibit a considerable clustering around the mean, and further exposes the unequal distribution of the female directors in the boardroom. Invariably, the mean of board expertise (BEXP) stood at 0.578378 for periods investigated, with a standard deviation of 0.495159, suggests more than 50% of the directors in the board were both educationally and professionally certified with 5 years’ experience in financial matters.

The control variables introduced were - auditor’s independence (AIND) and firm size (FSZE). From the firms investigated, auditor’s independence (AIND) had a mean of 0.009129 with a minimum and maximum value of 0.000000 and 0.117500 respectively. The standard deviation stood at 0.022430, which was above the mean suggesting that an insignificant number of 0.9% auditors investigated were independent. The mean of the firm size (FSZE) investigated stood at 7.011388 (that is about ₦7Billion), having minimum and maximum values of 5.171500 and 10.00530 respectively with a standard deviation of 1.001561 which is low, suggesting that investigated manufacturing firms in NSE were performing well in terms of non-current assets.

Furthermore, the Skewness and Kurtosis confirm whether there is any departure from normality in the series. The recommended skewness and kurtosis value for a normal distribution in a series is 0 and 3 respectively (Wooldridge, 2000). This can be visibly detected using the normality curve (bell-shaped curve). Our skewness and kurtosis statistics of the variables of the study sharply deviated from the recommended value. However, to further detect the normality of the series, we employed the Histogram Normality Graph (see Figure 2 below).

Figure 2: Histogram Normality Graph

Figure 2 above visibly shows the normality distribution of the series. The series skewness and kurtosis sharply deviated from the recommended range. Our series was negatively skewed (skewed to the right), and the kurtosis was leptokurtic in nature (above 3). Engle and Patton (2001) asserted that kurtosis values ranging from 4 to 50 are considered to be very high and implied very extreme deviation from normality. This indicates that our data did not fit into a normal bell-curve. The Jarque-Bera test value of 511.096 indicated a significant departure from normality in the series at 5% level of significance.
Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>DA</th>
<th>BIND</th>
<th>BDIV</th>
<th>BEXP</th>
<th>AIND</th>
<th>FSZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIND</td>
<td>-0.107538</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDIV</td>
<td>0.118547</td>
<td>-0.091647</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEXP</td>
<td>0.264422</td>
<td>0.044212</td>
<td>0.208141</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIND</td>
<td>0.272184</td>
<td>-0.002735</td>
<td>0.003971</td>
<td>0.238597</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>FSZE</td>
<td>0.053846</td>
<td>-0.238100</td>
<td>0.178591</td>
<td>-0.023684</td>
<td>0.040447</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: Authors’ computation, 2019

The results of the correlation analysis are presented in Table 3. The correlation coefficients are mixed with some variables reporting positive coefficients (Board diversity and financial reporting quality (0.118547); Board expertise and financial reporting quality (0.264422); Auditors independence and financial reporting quality (0.272184) and Firm size and financial reporting quality (0.053846); Board expertise and board independence (0.044212); Board expertise and board diversity (0.208141); Auditors independence and board diversity (0.003971); Firm Size and board diversity (0.178591); Auditors independence and Board expertise (0.238597) and Firm Size and Auditors independence (0.040447) and others reporting negative coefficients (Board independence and financial reporting quality (-0.107538); Board Diversity and Board independence (-0.091647); Auditors independence and Board independence (-0.002735); Firm size and Board independence (-0.238100); Firm size and Board expertise (-0.023684). The strength of the relationship between variables measured by the Pearson product moment correlation showed that the association between the variables is relatively small and were below the threshold of 0.80, suggesting the absence of the problem of multicollinearity in the predictor variables (Studenmund, 2000).

Diagnostics test

We carried out various diagnostics test in order to fulfil the assumptions of regression. Some of the diagnostics tests we did were serial correlations test, constant residual error (Heteroskedasticity), normality and model misspecification test.

Table 4: Multicollinearity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Variance</th>
<th>Uncentered VIF</th>
<th>Centered VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.141463</td>
<td>87.54785</td>
<td>NA</td>
</tr>
<tr>
<td>BIND</td>
<td>0.069573</td>
<td>19.41435</td>
<td>1.065843</td>
</tr>
<tr>
<td>BDIV</td>
<td>0.121350</td>
<td>1.922306</td>
<td>1.091278</td>
</tr>
<tr>
<td>BEXP</td>
<td>0.007423</td>
<td>2.657157</td>
<td>1.120315</td>
</tr>
<tr>
<td>AIND</td>
<td>3.443682</td>
<td>1.244026</td>
<td>1.066402</td>
</tr>
<tr>
<td>FSZE</td>
<td>0.001773</td>
<td>55.03424</td>
<td>1.094712</td>
</tr>
</tbody>
</table>

Source: Authors’ computation, 2019

To further strengthen the results from the correlation matrix on multicollinearity, the variance inflation factor test was done. From the result, as presented in the table above, it was observed that none of the variables tested indicates the existence of multicollinearity as the centred VIF of the variables were all less than 10 as suggested by (Studenmund, 2000).
Table 5: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>Obs*R-squared</th>
<th>Source: Authors’ computation, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.702118</td>
<td>3.490959</td>
<td></td>
</tr>
<tr>
<td>Prob. F(2,177)</td>
<td>Prob. Chi-Square(2)</td>
<td></td>
</tr>
<tr>
<td>0.1853</td>
<td>0.1746</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 reveals the serial correlation result, using the Breusch-Godfrey serial correlation (LM) test. The null hypothesis of no serial correlation was accepted at $F(2,177) = 0.1853, p > .05$.

Table 6: Constant Residual Error Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>Obs*R-squared</th>
<th>Scaled explained SS</th>
<th>Source: Authors’ computation, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.045699</td>
<td>9.999930</td>
<td>46.31263</td>
<td></td>
</tr>
<tr>
<td>0.0744</td>
<td>0.0752</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Breusch-Pagan-Godfrey test of heteroskedasticity was conducted to test the serial correlation of the error term. The result of the analysis revealed the absence of heteroskedasticity, $F(5,179) = 0.0744, p > .05$. This suggests that the residual error is constant in the series (Studenmund, 2000).

Table 7: Model Misspecification

Ramsey RESET Test

 Specification: DA C BIND BDIV BEXP AIND FSZE

<table>
<thead>
<tr>
<th>Value</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-statistic</td>
<td>1.628380</td>
<td>178</td>
</tr>
<tr>
<td>F-statistic</td>
<td>2.651622</td>
<td>(1, 178)</td>
</tr>
<tr>
<td>Likelihood ratio</td>
<td>2.735574</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Authors’ computation, 2019

The Ramsey RESET Test was conducted to test for model Specification. The result of the analysis revealed the absence of model Misspecification, $F(1, 178) = 0.1052, p > .05$. This implies that our model was correctly specified (Studenmund, 2000).

Multivariate Analyses

Perusing through the descriptive statistics and diagnostics test of the variables of the study, all regression assumptions were fulfilled except the normality assumption. This was revealed in the Histogram Normality graph for the series of the study which sharply deviated away from normality. Nevertheless, this revelation necessitated the use of the Generalized Linear Model Regression, as it is a more suitable inferential statistic for the models of the study (MacCullagh, & Nelder, 1989; Hardin & Hilbe, 2007).
Table 8: Generalized Linear Model Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>z-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.076042</td>
<td>0.376115</td>
<td>-0.202177</td>
<td>0.8398</td>
</tr>
<tr>
<td>BIND</td>
<td>-0.393220</td>
<td>0.263768</td>
<td>-1.490781</td>
<td>0.1360</td>
</tr>
<tr>
<td>BDIV</td>
<td>0.303319</td>
<td>0.348353</td>
<td>0.870724</td>
<td>0.3839</td>
</tr>
<tr>
<td>BEXP</td>
<td>0.237773</td>
<td>0.086159</td>
<td>2.759700</td>
<td>0.0058</td>
</tr>
<tr>
<td>AIND</td>
<td>5.752242</td>
<td>1.855716</td>
<td>3.099743</td>
<td>0.0019</td>
</tr>
<tr>
<td>FSZE</td>
<td>0.007444</td>
<td>0.042106</td>
<td>0.176781</td>
<td>0.8597</td>
</tr>
</tbody>
</table>

Mean dependent var -0.058600  S.D. dependent var 0.579495
Sum squared resid 53.50834  Log likelihood -147.8054
Akaike info criterion 1.662761  Schwarz criterion 1.767205
Hannan-Quinn criter. 1.705090  Deviance 53.50834
Deviance statistic 0.298929  Restr. deviance 61.78987
LR statistic 27.70399  Prob(LR statistic) 0.000042
Pearson SSR 53.50834  Pearson statistic 0.298929
Dispersion 0.298929

Source: Authors’ computation, 2019

The result of the Generalized Linear Model Regression as presented in Table 8 shows that there exist a statistically insignificant negative relationship between Board independence (BIND) and Financial Reporting Quality $Z(1, 184) = -1.49, \beta_1 = -0.39, p = 0.1360$. This implies that a unit increase in board independence will not reduce the log likelihood of financial reporting quality by -0.39. The result, therefore, accepts the null hypothesis of no significant influence of board independence on financial reporting quality.

Slightly similar to the first result, there exist a statistical insignificant but positive relationship between Board diversity (BDIV) and Financial Reporting Quality $Z(1, 184) = 0.87, \beta_2 = 0.30, p = 0.3839$. This implies that a unit increase in board diversity will not increase the log odds of financial reporting quality by 0.30. The study, therefore, accepts the null hypothesis of no significant effect of board diversity on financial reporting quality.

Contrary to the first two results, there exist a statistical significant and positive relationship between Board expertise (BEXP) and Financial Reporting Quality $Z(1, 184) = 2.76, \beta_3 = 0.24, p = 0.0058$. This implies that a unit increase in board expertise will increase the log odds of financial reporting quality by 0.24. The result, therefore, rejected the null hypothesis of no significant impact of board expertise on financial reporting quality.

In addition to our explanatory variables, the two control variable introduced; Auditors independence (AIND) was statistically significant and positively related to financial reporting quality, $Z(1, 184) = 3.10, \beta_4 = 5.75, p = 0.0019$, while and Firm size (FSZE) was statistically insignificant but positively related to financial reporting quality and $Z(1, 184) = 0.18, \beta_5 = 0.01$. 
The LR statistics value of 27.70 was statistically significant at 5% - all slope coefficients except the constant are zero, this simply implies the joint significance of our model in the study.

4.2 Discussion of Findings

The objective of this study was to investigate the impact of board characteristics on financial reporting quality of firms in Nigeria. Resource dependency theory was adopted in the study, culminating to model specification, where proxies were used to measure the explanatory variables (board characteristics- independence, diversity and expertise) and the dependent variable (financial reporting quality - discretionary accruals). A preliminary analysis which included descriptive statistics and diagnostics test was reported. The study employed the Generalized Linear Model Regression to test the hypotheses stated in the study. The result of our analysis gave mixed evidence on the subject matter and deviates a little from our model expectations (a priori expectations) and partially supported Pfeiffer’s and Salancik’s Resource dependency theory.

From our analysis, two of the three variables investigated showed no significant impact on financial reporting quality. Specifically, we found out that board independence was not statistically and significantly related to financial reporting quality. This implies that non-executive directors’ activities do not affect financial reporting quality. This finding is consistent with the works of Ahmed et al., (2006), Alkdai and Hanefah (2012), Chalaki et al., (2012) and Gois (2014), however sharply deviates from the findings of (Akeju & Babatunde, 2017; Alves, 2014; D’onza & Lamboglia, 2014; Firth, et al., 2007; Holtz & Nieto, 2014; Klai & Omori, 2011; Kantudu & Somalia, 2015; Lara, et al., 2009; Marra et al., 2009; Nesrine & Abdelwahid, 2011), they submitted that board independence is significantly and positively related to financial reporting quality, while (Klein, 2002; Cornett et al., 2009) reported a significant and negative relation between board independence and financial reporting quality.

Board diversity was found to have a statistical insignificant relationship with financial reporting quality. This implies that the inclusion of more female in the board will not improve the financial reporting quality of firms investigated. This finding is in tandem with the works of Firoozi et al., (2016), Hoange (2014), Muhammad et al., (2016) and Wang (2015), but in dissonance with the works of (Barua et al., 2010; D’onza & Lamboglia, 2014; Ho et al., 2015; Klai & Omori, 2011; Makhlouf et al, 2018; Pen & Vahamaa, 2010; Pulungan & Sadat, 2014;Yunos, 2011) who found that board diversity is positively and significantly related to financial reporting quality, while (Dobbin & Jung, 2010; Labelle et al., 2010) reported a significant and negative relation to financial reporting quality.

Lastly, we discovered that board expertise significantly and positively affects financial reporting quality. This is quite true and realistic. When directors have adequate professional and educational qualification coupled with reasonably years of experience, they can use their expertise to improve the quality of financial reports in their firms. This result is consistent with the predominant positive relationship reported in the extant literature between board expertise and the likelihood of financial reporting quality (Alzoubi, 2014; D’onza & Lamboglia, 2014; Klai & Omori, 2011; Kantudu & Samaila, 2015; Onourah & Imene, 2016). However, sharply deviated from the findings of (Kankanamage, 2015) which reported that board expertise is significant but negatively affect financial reporting quality.

5. Conclusion, Recommendations and Suggestions for Future Research

Based on the findings of the study, we concluded that board characteristics partially affect financial reporting quality as two variables out of the three variables used to proxy board
characteristics was not statistically significant. This conclusion also exposes the drawbacks of the resources dependency theory used in the study. The theory does not explain organizational performance and holds no account for the supply of resources when it is unstable.

Researchers in the accounting profession have looked for means of improving and restoring lost confidence in the profession due to incessant corporate scandals. Various recommendations have been made on how to improve the quality of financial reports including the application of corporate governance mechanisms, ethical compliance, government regulations and even religion. Based on the finding of this study we recommended the following:

1. Non-executive director in the board of an organization should be reduced so as to reduce management cost;
2. Regulatory authorities should look into the ratio of male to female in the boardroom. The inequality of the boardroom could affect financial reporting quality in the long run; and
3. Accountants with professional and educational qualification should still go for further rigorous accounting training in other emerging areas in accounting, such as forensic accounting, human resource accounting, sustainability accounting and reporting and integrated reporting.

The current study is subject to some limitations. First our study is limited first by the micro-numericity of our research data, that is the sample of this study may not be fully representative of the population of listed manufacturing firms, secondly and the study ignored unlisted manufacturing firms. Thus, any generalization of the results of this study cannot be made without caution.

These limitations identified did not, however, vitiate the generalisation of our research findings. Therefore, in order to improve on this study, we suggest the following to be done.

i. The sample size could be increased and non-listed manufacturing firms can be studied together with listed ones.

ii. The study used secondary data for five years (2013-2017), further research could take the years backwards to the current year, say ten years study (2009-2018), so as to ascertain the long run effect of board characteristics on financial reporting quality.

iii. Finally, this study focuses mainly on the manufacturing sector; the future research needs to be conducted to cut across the other sectors of the economy for effective generalization.

Acknowledgement
We would love to thank in particular, a man who demystified the word “Research” and opened our eyes to a whole new possibility of bringing ideas into reality. He is no other person than, Professor, Ofuan James ILABOYA, FCA, ACTI (Professor of Accounting and Taxation, & Dean, Faculty of Management Sciences, University of Benin, Benin City, Edo, Nigeria). Thank you, Sir.

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