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Board of Directors' Independence and Accrual Quality of Quoted Manufacturing Firms in Nigeria

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Abstract: This study investigated the relationship between board of directors' independence and accrual quality of quoted manufacturing firms in Nigeria. Ten years period (2008 to 2017) was captured. The operational variables included board of directors' independence and accrual quality; internal audit quality and auditor independence were control variables. Ex-post facto methodology covered the research design in which panel secondary data were extracted from the annual fact-book of 56 sampled out of 65 quoted manufacturing firms in Nigeria Stock Exchange. Multivariate regression analysis using E-view 10 statistical version software was carried out on the data collected from 560 firm year observations. The results from the tested hypothesis showed the following: Board of directors' independence and accrual quality had a positive and significant relationship; the internal audit quality and auditor independence which were control variables showed a positive and insignificant relationship. The study concluded as follows: that if board of directors' independence increased by a large proportion, accrual quality also increased by the same large proportion. The study recommended amongst others that shareholders of quoted manufacturing firms should boost the current percentage in the appointment of non-executive directors.

Key words: Board of directors' independence, accrual quality, internal audit quality, auditor independence.

Introduction

The manufacturing sector has generally been described and accepted as an engine of growth and development of any country (Ududechinyere et al., 2018). In Nigeria, the history of the manufacturing sector reflects how a nation could neglect such a vital profitable sector through economic policy inconsistencies (Adeola, 2005). Pursuant to the economic objectives of this important sector, the concept of board of directors' independence and accrual quality have emerged as subjects of interest to analyst and other market participants (Lipe, 1990; Chan, et al., 2006).

Accrual quality is the "substance of accounting valuation" and the power that transforms accounting system in a source of information (Christensen & Demski, 2008). Muresan (2003) posited that accrual quality are products of an accrual accounting system, representing anticipated future benefits for investors and managers, recorded as net operating assets. Accrual quality proposed by Dechow and Dichev (2002) measures the relationship between accruals and cash flows, thereby capturing measurement error in accruals.

Closely related to accrual quality of firms is the concept of board of directors' independence. The concept of independent director is an important subject within the broad concept of corporate governance (Iwu-Egwuonwu, 2010). According to Sheng (2000), an important theme of corporate governance is to ensure the accountability of certain individuals in an organization through mechanisms that try to reduce or eliminate the principal – agent problem. Board independence refers

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to the extent to which a board is comprised of non-executive directors who have no relationship with the firm beyond the role of directors (Davidson, et al.,2005). Non-executive directors are more effective in monitoring managers and protecting the interest of shareholders and thereby reducing agency problem (Hillman & Daziel (2003).

According to Cotter and Silvester (2003), full board independence is captured by the proportion of independent directors to total directors on the board; individual directors are assessed in terms of their independence from management. Board independence denotes a balanced board whose composition is not dominated by board members with executive power and consists of members who are independent from the management and shareholders (Shamsul & Nahar, 2001). Independent board is one of the effective mechanisms in monitoring the accounting process (Klein, 2002). Therefore, board of directors should consist of independent members that are non-executive and/or external directors. External directors can increase board's independence and able to monitor top management effectively (Ching et al., 2002).

A fundamental problem of accrual quality measurement is that the process requires management discretion and estimation. It is subject to both intentional and unintentional measurement error thereby reducing the reliability relative to cash flows (Richardson, et al., 2005). Another problem of accrual quality is that since it is affected by accounting estimates, more able managers may likely introduce intentional errors, either to signal their private information about the firm or to extract perquisites from the firm and the shareholders (Demerjian et al., 2013).

But financial scandals around the world and the collapse of major corporate institutions in Nigeria, China, USA and in Europe have brought to fore the challenges of board of directors' independence as existing practices of corporate governance are faulty in themselves too, the common loopholes include:

a. Conflict of interest and lack of "independent" board members.

b. There are significant implications for issues such as oversight of directors, executive remuneration and related party transactions.

These problems have necessitated the motivation for this research on board of directors' independence and accrual quality of quoted manufacturing firms in Nigeria during the period 2008 to 2017.

Literature Review

Ndibel and An (2016) posited that the concept of board of directors' independence and accrual quality are based on theories. This research was anchored on *agency theory* that has the basic assumption of board of directors' independence as it exposes the contractual relationship between the owner (principal) and agent (manager) of corporate entities.

The agency theory

This theory sees shareholders as the principals and management as their agents. Sanda, et al., (2005) posited that the presence of information asymmetry can make agents to pursue interest that may be detrimental to the interest of the principal. The process of aligning these two interests can ignite conflict between the interest groups. In agency theory, managers only optimize principal's objective.

Agency theory has a basic assumption in understanding corporate governance as it explains the contract between the owner (principal) and managers (agents) of corporate entities (Jensen & Meckling, 1976). The theory suggests that given the chance, agents can behave in a self-interested manner that may conflict with the principals' interest (Cuevas-Rodviguez & Gomez-Meja, 2012). As such, principals would enact structural mechanisms that monitor the agents to curb the opportunistic behaviour and better align the parties' interest (Fama & Jensen, 1983)

Board of Directors' Independence (BDI)

Boards play an essential role in monitoring and directing managers to satisfying the interests of stakeholders (Habbash, 2016). However, the boards' monitoring effectiveness depends on its composition. Independent boards are more likely to inspire managers towards high transparency and disclosure quality levels (Forker, 1992, Abukaya, 2012). Agency and stakeholder theories argue that a high ratio of independent directors on the board could be an important element of the corporate governance structure that would help to resolve agency problems and advance the interest of other stakeholders, such as employees and local communities (Amran et al., 2009).

Directors' independence implies the ability of non-executive directors to see things differently (Roberts et al., 2005). According to Fairchild and Li (2005), non-executive directors who are top executives of another public company are perceived to be more responsible and higher quality than other classes of directors. To be active in board discussions, non-executive directors should analyze information provided by management in detail and take initiatives to find further information on the company and the industry (Chavan, 1998). In sum, both competences and specific information are key ingredients for the effectiveness of non-executive directors (Cater & Lorsch, 2004).

Accrual quality

Accrual quality proposed by Dechow and Dichev (2002) measures the relation between accruals and cash flows, thereby capturing measurement error in accruals. Conceptuality accruals are used to adjust cash flows that reflect the performance of the firm (Johnson, 2009). Similarly, the role of accruals is to "shift or adjust the recognition of cash flows over time so that the adjusted numbers (earnings) better measure firm performance (Dechow & Dichev, 2002). However, there is uncertainty inherent when cash is collected in the future because the exact amount of cash that would be collected is unknown (Johnson, 2009). The latest in the accrual's formula is the Francis et al. (2005), an extension of Dechow and Dichev (2002), also called discretionary estimation errors. It operates by adding growth in revenue and gross property – plant and equipment.

Past empirical studies have variously examined the influence of board of directors' independence also called none-executive directors. The studies among others include; Berghe and Baelden (2005) examined the issue of independence as an important factor in ensuring board effectiveness through the directors, the ultimate factor for the board independence is by acquiring enough number of the independent directors on board, The study stated that the directors' ability, willingness, and board environment might lead to the independent attitude of each director.

Kakabadse, et al., (2010) examined executive directors in China to determine their financial independence, information accessibility, incentives provided and competency. However, they found that the non-executive director system in China was weak because there was too much intervention of controlling shareholders and there was a lack of understanding of the functions of non-executive directors.

Johari et al. (2008) indicated that the minimum composition of the independent director by the Malaysia Code of Corporate Governance is still not adequate to monitor the management. They concluded that the composition of the independent directors on the board was not associated with earnings management. They found that most of the firms in Malaysia have 1/3 or 33% of the independent directors on the board, but it did not have any effect on the earnings management.

Conversely, Byrd et al. (2010) found a relationship between the attendance of outside directors and the payment of CEO remunerations for United States banking sectors. When the outside durations attend at least 75 percent of the board meetings, the CEO remuneration would be low. The independent directors who were regularly attending meetings would be better in monitoring of excessive payment to the CEO.

Chen et al. (2007) examined whether accruals quality as an information risk factor is a priced risk factor in a setting with changing dividend policy. They used the Dechow and Dichev (2002) measure of accruals quality and the findings showed consistency with investors treating information risk associated with financials statement precision as a priced risk factor.

Mashruwala and Mashruwala (2011) scrutinized the effect of seasonality on the pricing of the modified Dechow and Dechev (2002) accruals quality measure. The findings indicate that it is only in January that high accruals quality stocks outperform low accruals quality stocks with about 50% of the accrual quality premium happening in the first 5 trading days in January.

Xie (2001) examined the mispricing of discretionary accruals to test if stock prices rationally reflect the persistence of these accruals over a 22-year period of 1971 to 1992. Accordingly, the findings showed that total accruals mispricing revealed by Sloan (1996) is driven by discretionary accruals and that the market failed to correctly assess persistence of accruals.

Methods

The research design that was used in this study is the Ex-post facto design, also known as "After-the-facto-design". It is the research design that is undertaken after the events have taken place and the data are already in existence (Asika, 2010). The elements that make up the population for this study comprised of all quoted manufacturing firms in Nigerian Stock Exchange (NSE). Available data from the Nigerian Stock Exchange office showed that sixty-five (65) manufacturing firms are quoted.

The purposive sampling method under the non-probability sampling was applied on the sixty-five (65) quoted manufacturing firms in Nigeria for companies with 2 years pre-tax profit. Applying this method, a total of 56 firms were determined as the sample size, hence the use of Taro Yamane formula was not necessary.

The secondary source of data collection method was used for this research. The source of this type of data was the published annual financial statements of the 56 quoted manufacturing firms in Nigeria between 2008 to 2017. The 56 quoted firms investigated under a period of 10 years formed a panel research study for 560 observations. Board of directors' independence (BDI) was used as the predictor variable and Accrual quality (ACQ) the criterion variable. Two control variables were applied as follows: Internal Audit Quality (IAQ) and Auditor Independence (AUI).

Board of directors' independence (BDI)

The natural logarithm for board of directors' independence was measured as the percentage of independent non-executive directors on the board to the board size or to the total number of directors in each quoted manufacturing firm in Nigeria from 2008 to 2017.

Accrual quality (ACQ)

This is operationalized as the natural logarithm of accruals pursuant to McNichols (2002) model, an extension of Dechow and Dichev (2002) model of accruals quality. The model is however expressed as follows:

$$\frac{TCA_{j,t}}{Assets_{j,t}} = \alpha_{oj} + \alpha_{1,j}\frac{CFO_{j,t-1}}{Assets_{j,t}} + \alpha_{2,j}\frac{CFO_{j,t}}{Assets_{i,t}} + \alpha_{3,j}\frac{CFO}{Assets_{1,j}} + \alpha_{4,j}\frac{\Delta REV_{j,t}}{Assets_{j,t}} + \alpha_{5,j}\frac{PPE_{j,t}}{Assets_{j,t}} + U_{j,t}$$

The modified Dechow and Dichev (2002) is the same as Dechow and Dichev (2002) model, but controls for PPE and revenue influencing accrual

Model Specification

The model specification for this research was drawn in accordance with the multiple regression analysis.

Functional form

ACQ = f(BDI, IAQ, AUI) …………………………….. (1)

From equation 1, gives.

Mathematical form

ACQ = $f(\hat{BDI}, \hat{IAQ}, \hat{AUI})$ …………………………… ………………..……. (2)

Using equation 2; gives

Econometric Form

$ACQ=\beta_0 + \beta_1 BDI + \beta_2\, IAQ + \beta_3 AUI + \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots + U_{1,t}$ (3)

From equations 3 the theoretical expectation for this study is that

$\beta_1, \beta_2, \beta_3 > 0$

Where

BDI	=	Board of directors' independence
IAQ	=	Internal audit quality
AUI	=	Auditor independence
ACQ	=	Accrual quality
$U_{1,t}$	=	Stochastic error term
β_o	=	Regression constant
$\beta_1, \beta_2, \beta_3$	=	Regression coefficient
^	=	Statistical estimator

Results And Discussion

The multiple regression tests were carried out on the null hypotheses at 0.05 alpha levels for a two tailed test to ascertain the relationship between board of directors' independence accrual quality as well as the influence of the control variables.

Hypothesis Test

Ho_1: There is no significant relationship between board of directors' independence and accrual quality of quoted manufacturing firms in Nigeria.

Table1.1: Panel OLS Regression Result for BDI and ACQ

Dependent Variable: ACQ

Method: Least Squares

Date: 09/15/19 Time: 10:25

Sample: 1 560

Included observations: 558

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.215525	1.251412	0.172225	0.8633
BDI	-0.144687	0.093520	-1.547136	0.1224
IAQ	0.188650	0.232362	0.811880	0.4172
AUI	0.490758	0.440414	1.114312	0.2656

Source: E-view 10 Output (Authors Computation).

Equation summary: $R^2 = 0.70$, F = 1.16, Prob (F-statistics) = 0.32, DW = 2.01.

The E-view output shown above revealed a positive estimated coefficient of 0.215525. This estimate implied the existence of a positive relationship between board of directors' independence and accrual quality. The estimated coefficient further signified a decrease in board of directors' independence (-0.144687) as accrual quality increased by a constant term of 0.215525. R-square, $R^2 = 0.70$ indicated an overall model fitness as 70% change in accrual quality was accounted for by board of directors' independence.

The remaining 30% could be attributed to other factors not captured in the model but covered by the error term. A Durbin Wattson (DW) of 2.012192 implied the absence of serial autocorrelation in the model. While a standard deviation dependent variance of 4.523007 showed the risk burden in the dependent variable (accrual quality) that is predicted by the independent variable (board of directors' independence). The F-statistic value of 1.167888 greater than prob (F-statistic) value of 0.323958 confirmed that the null hypothesis was significant in relation to the model. The values of control variables showed insignificant influence on the variable of study.

Using the critical value approach of +1.96 and -1.96 and applying the decision rule with t-statistic -1.547136 greater than -1.96 at 0.05 alpha for a 2-tailed test showed that the null hypothesis Ho_1 was significant.

The findings of this research are discussed as follows:

Positive and significant relationship between board of directors' independence and accrual quality. This result implied that board of director independence which represents the proportion of non-executive directors in the board of quoted manufacturing firms in Nigeria exhibited the capacity to change accrual quality in the positive direction. This result further implied that board of directors' independence and accrual quality moved in the same direction. This finding corroborated the empirical result by Lee (2013); Rutledge, et al., (2016), Slam, et al., (2014); Hashum and Rahman (2003).

Conclusion

Based on the findings, this research concluded as follows:

The research concluded that if board of directors' independence increased by a large proportion, say one percent, accrual quality also increased by the same large proportion.

Recommendations

Given the findings and conclusions, this research recommended as follows:

The shareholders of quoted manufacturing firms should boost the current percentage in the appointment of non-executive directors. This was appropriate as board of directors' independence exhibited a positive and significant relationship with accrual quality.

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