The Impact of Board Characteristics on Firm Performance in Nigeria

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ABSTRACT

Corporate governance (CG) issues have become a major concern by the authorities in assessing firm performance. Thus, firm performance usually replicates the quality of its boards and their efficiency. The objective of this study is to examine the impact of board characteristic on firm performance of non-financial listed companies in Nigeria. The methodology of the study is quantitative using a secondary data source. A sample of 122 non-financial companies listed on the Nigerian Stock Exchange was analyzed. The period of this study covers 2 years (2014-2015) financial report. Multicollinearity, linearity, homoscedasticity, and normality assumption were conducted on the collected data. The findings of this study show that board independent has a positive but not significant relationship with firm performance at both Return on Equity (ROE) and Return on Assets (ROA). In respect to board size, the findings show a negative relationship with firm performance both at ROE and ROA. Therefore, we recommend that if board independent is completely independent of the firm management, the board will be more effective in managing and monitoring the management reporting process of the firm and assist in minimizing the firm risk and volatility. Thus, help to enhance the firm performance.

Keywords: Board characteristics, firms’ performance, corporate governance, Nigeria

1. INTRODUCTION

Corporate governance (CG) has become a major area of concern by the authorities in both developed and developing nations (Wachira, 2014; Adekoya, 2011). This has resulted from the economic and financial scandals which have affected many companies in 2008 such as Enron and World Com. Besides that, the economic crisis also demands improvement in corporate organization practices (Waweru, 2014). CG failure may take place due to the circumstances related to some certain regulatory and often government policies, objectives and financial strengths in a country (Wachira, 2014). In addition, CG failure may also occur due to the failure of authorities and other stakeholders to implement effective governance which at the end could result to inefficiency in decision making on the code of corporate governance established by the government (Kariyawasam, 2011).

According to the World Bank, absence of transparency, disclosure and corruption between firms in emerging countries are the major problems for corporate governance and firm performance failures (OECD, 2014). Nigeria is among the emerging countries whose CG and firm performance are affected as such. However, firm performance usually replicates the quality of its boards and their efficiency. Nicholson and Kiel (2004) postulated that an active board and its managerial
team would lead to positive firm performance. Consequently, ineffective boards and weak management team will lead to inefficiency and poor performance of a firm (Nicholson & Kiel, 2004). Wachira (2014) explained that firm performance is associated with the efficiency of the firm internal performance in terms of processes and other internal actions that are linked with planning which are normally larger than expected result. He further stated that firms can evaluate and measure its performance in different ways which can either be firm social duty, monetary performance, even worker stewardship and customer service as well.

Lewis (2005) classified the main indicators of firm performance in the financial industries into quantitative, qualitative and financial indicators. Quantitative indicators include the number of branches and outlets while qualitative indicators consist of unquantifiable used in predicting the future outcome of a process. Financial indicators are also called operating index. On the other hand, board size refers to the total number of directors that represents the board members of a company and their impact on its performance either positively or negatively. Therefore, understanding the relationship between the board characteristics and firm performance will assist in mitigating the problems of corporate governance and firm performance in Nigeria. For that reason, this study employed board size and board independence as the board characteristic. This is due to the high volatility of the variables in determining CG and firm performance especially in Nigeria. Therefore, the objective of this study is to examine the impact of board characteristic on the firm performance on non-financial companies in Nigeria.

2. LITERATURE REVIEW

This study reviewed the literature on areas of interest that are relevant and based are on the study objective.

2.1 Concept of Corporate Governance CG

Globally, there is no single, generally accepted definition of the term corporate governance. The meaning may differ as a result of dissimilarities in contextual and cultural circumstances of the nation under concern due to an enormous number of variations in the corporate governance codes among nations and global implementation problems (Armstrong & Sweeney, 2002; Solomon, 2010). The word “corporate governance” was first used in the last three decades around the 1980s to generally define “the universal ethics through which companies and executive of organizations were directed and controlled” (Dar, Naseem, Niazi, Rehman, 2011). According to O’Donovan (2003), corporate governance refers to “internal system that guides the activities of an organization which includes, processes and policies individuals which serves the requirements of providers of capital and some stakeholders by overseeing, controlling, running, and checkmating the activities of the company with confidence, objectivity and honesty”.

On the other hand, CG is designed to guide the management to perform efficiently and effectively to reduce the agency dilemma between the principal and agent in business (Latif, Shahid, Waqas & Arshad 2013; Kamardin & Haron, 2011). CG could also be seen as a mechanism that comprises of all the individuals with steps and actions to guarantee stewardship over the company’s assets (Lin & Hwang, 2010). CG normally deals with the way and manner in which the management of a corporation assured them of being paid on the service they provide in the organization (Voeller et al., 2013). The variations in definition and meanings of CG is due to various viewpoints from diverse perceptions of legislators, academicians, expert, and scholars (Solomon, 2010).

Some scholars view CG as a complete set of procedures taken within an organization to help managers and other stakeholders to take part in the managerial decisions (Kyereboah-Coleman et al., 2008). CG is a set of procedures that is being aspired to direct the administrative/managerial decisions and also to enhance performance (Jarboui et al., 2015). On
the other hand, Vintila and Gherghina (2012) contended that CG mechanisms are the machinery used to ease the agency dilemma among managers and that of directors by aligning the interests of the two parties (the principals and the agents) with those of the shareholders.

CG also stipulates the procedures and set of laws for the directors to consider while taking decisions with regards to the company at both national and international relationships (Masdoor, 2011). Corporate governance similarly integrates the company's interaction with a variety of stakeholders. Although, Clarke & Chablat (2009) defined CG as the mean by which company encourages the executive to manage the processes/operations of the company in accordance with the interests of its stakeholders, and also to generate revenue by increasing their profits, shareholder values and attract new investors as well as corporate growth.

Moreover, CG tools or mechanism as a group also act as an imperative mission in upsetting the healthiness of an organization in some developing financial markets. These mechanisms are important parameter which complements and improve the performance and creating wealth for shareholders in totality and also decreasing agency cost that was created by the principal-agent conflict (Heinrich, 2002). The internal and external instruments of corporate administrative mechanism all combined together ought to decrease the insignificant cost and enhancing the significant benefits of each other, and in due course adding to shareholders' value. Therefore, the aim of CG is to obey the ethical code or regulations in all aspects such as compliance with the Generally Accepted Accounting Principles (GAAP), International Financial Reporting Standards (IFRS) in the financial reporting process and maintaining the credibility of financial statement of the corporation (Lin & Hwang, 2010).

2.2 Firm Performance

According to Dixon et al., (1990), proper performance measures allow corporations to coordinate their activities to accomplish their ultimate goals. Considering the appropriate measurement to be applied which can either be market-based or accounting-based measure for the purpose of evaluating firms' performance is also an essential point in this regard since the executives are directly in charge of the operations of the company and the application and use of the company's assets. The accounting base mode of firm performance measurement is often the most essential and recognized source of information in all kind of organizations as it includes both tangible and intangible part of companies’ activities (Klein, 1998). This is because it provides management, analyst and other stakeholders with information that are in line with their organizational goals, timely and reasonably accurate for decision making.

Moreover, return on Assets (ROA) is a method that enables analyst and all stakeholders to evaluate the performance and corporate governance system of an organisation in securing and motivating efficient governance of the corporation. Therefore, ROA is defined as a net income generated before interest expenses for the fiscal year divided by total assets for that same year (Epps & Cereola, 2008). One of the purposes for establishing a corporation is to generate profit for all stakeholders’ as such the stakeholder may be interested in firms’ that are performing better by looking at operating activities and return on each individual asset (Epps & Cereola, 2008). On the other hand, return on Equity (ROE) is used to measure the financial performance of a firm on how much profit an organisation generated i.e. income generated before interest charges divided by the total shareholders’ equity for the same period (Lo, Wong & Firth, 2010). However, ROE is characterised as the earnings before intrigue cost for the monetary period isolated by aggregate shareholders' value for that same period.

Previous studies such as Klein (1998) used ROA while Lo, Wong and Firth (2010) employed ROE as the indicator for measuring the performance of an organization. Brown and Caylor (2009), in the same study, used ROE and ROA as their means to measures the performance of firms/organization (performance indicators). Therefore, the firms’ performance can be
measured, especially in this study, by using the ROA proportion which shows the amounts of income produced from assets or the capital invested.

In addition, Reid and Ashelby (2002) show that firms' performance could be measured by subjective/objective standards or principles measures. The arguments for subjective measures are incorporated with difficulties in gathering qualitative performance information from companies and with the trustworthiness of such information or data evolving from dissimilarities in accounting approaches employed by individual companies. With a specific adjacent objective to continue and succeed in a very competitive market, companies must pay attention to profit maximisation or they will inevitably be driven bankrupt or out of the market (Dutta and Radner, 1999). Furthermore, Francis, Hasan, John, and Song (2011) supported this claim by saying that only companies that have effective measures that remain in the market, while firms with less focus will in the long run exit markets. Therefore, performance measures offer a tool for organisations to accomplish both financial and non-financial performance objectives. This study focuses on financial performance because the information disclosed in the annual report of the companies are based on facts and accountability that was used to improve and heightened projects support for the executive strategy, better services and fulfil customers satisfaction.

2.3 Board Characteristic

In this study, board characteristic includes board size and board independence which are important issues to be discussed due to problems that normally occurred at various levels in firms that could affect its performance. For instance, corruption, lack of accountability, integrity, and legal enforcement are some of the problems of corporate governance and failure of companies in Nigeria (Bakare, 2011). Some information indicates that in Nigeria, it is really difficult to separate these variables from CG and firm's performance (Bakare 2011). Commonly, at the company's stage, the corporate ownership structure in the majority of the developed markets plays a significant function as a governance mechanism rather than developing the countries or markets (Buchuk et al., 2014; De Jong et al., 2010).

Theoretical aspects of CG can be eminent by the level of ownership, control and the behaviour of controlling shareholders (Solomon, 2010), while few frameworks are described by widespread ownership, others have the disposition to be keyed out by strong control (insider frameworks or composition of the board of directors in its size, independence, committees among others). In some cases, these dissimilarities are additionally established due to variation in nations' legitimate, administrative, and institutional situations, and recorded social factors (Buchuk et al., 2014). In this manner, strategies that improve the appropriation of particular cases of governance ought to endeavour provides the detail and variable business sector settings, and other institutional variables, in which they are being considered (OECD 2004).

The shortfall in the implementation of the code of CG by some companies is definitely the major factor that results in the failure of some of the companies in Nigeria which could be due to lack of proper implementation, accountability, conflict of interests among the agents and principals (Bakare 2011). In summation to the above problems, deficiency of confidence that the majority of Nigerians have on the firms performance is due to the absence of transparency and accountability, combined with the inconsequential contribution that the companies contribute to the economic system and uncertainty that if the code of Corporate Governance reform (2011) by the Nigerian Stock Exchange and the companies in Nigeria, and other relevant bodies will address the predicament confronting CG in Nigerian companies.
Based on the above literature, this study hypothesized the following:

**H1:** Board size has a negative and significant impact on firm performance.  
**H2:** There is a positive and significant relationship between board independent and firm performance.

### 3. METHODOLOGY

This study adopts a quantitative research paradigm using a secondary data source from the annual report and accounts of the relevant firms from 2014 to 2015 (2 years). The population of the study is 177 listed companies on the Nigerian Stock Exchange (NSE). A sample of 122 non-financial companies was analyzed while the remaining firms are financial service firms which are out of the scope of the study. The financial service firms are excluded due to their differences in accounting practices, methods, and structure (Bohren & Strøm, 2010; Barontini & Caprio, 2006). The following tests of descriptive analysis, regression, multicollinearity, linearity, homoscedasticity, correlation, and normality assumption were achieved on the collected data. The variables of the study measured are shown in Table 1.

Table 1 Variables and measurement

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets (ROA)</td>
<td>Measured as net profit divided by total assets (NP/TA)</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>Net profit after tax divided the Net Equity (NPAT/NE)</td>
</tr>
<tr>
<td>Board independence (BODIND)</td>
<td>The percentage of non-executive directors to a total number of directors on the board.</td>
</tr>
<tr>
<td>Board size (BSIZE)</td>
<td>Measured as the total number of directors sitting on the board.</td>
</tr>
</tbody>
</table>

Finally, the study employed a linear multiple regression test to examine the relationship between the dependent variable firm performance (ROA and ROE) and the independent variables (board size, and board independence). The following is the model for this study.

\[
\text{ROA}_{it} = \beta_0 + \beta_1 \text{BODSIZE}_{it} + \beta_2 \text{BODINDP}_{it} + \epsilon_{it}
\]  

\[
\text{ROE}_{it} = \beta_0 + \beta_1 \text{BODSIZE}_{i} + \beta_2 \text{BODINDP}_{it} + \epsilon_{it}
\]

Where:

- \(\text{ROA}\) = Return on Assets  
- \(\text{ROE}\) = Return on Equity  
- \(\text{BODSIZE}\) = Board Size  
- \(\text{BODINDP}\) = Board Independence

\(\beta_0\) is constant for all entities in the time period, \(X_{it}\) assumed to be exogenous \(\epsilon_{it}\) and \(\epsilon_{it}\) error terms.

### 4. RESULT AND DISCUSSION OF THE STUDY

The result of this study was discussed in the following subsections:
4.1 Descriptive Statistics

A descriptive result shows that the mean value of ROA is 4.51% with a maximum of 22.68% and a minimum of -17.20%. The mean value of ROE is 3.37% with a maximum of 79%, and a minimum of -118.73%, respectively. On the other hand, for the independent variables, the mean value of board size is 8.81 with a maximum of 14 and a minimum of 4. The statistical results relating to the board independence range from 54.55% to 90% with a mean score of 72.82% implies that the listed companies in Nigeria have complied with the one-third mandatory requirement which state that public listed companies in Nigeria “must have one-third of their directors to be independent” as stated in the revised code of corporate governance (NCGG, 2012). The summary of the descriptive analysis was provided in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>232</td>
<td>4.51</td>
<td>-17.2</td>
<td>22.68</td>
<td>8.09</td>
</tr>
<tr>
<td>ROE</td>
<td>232</td>
<td>3.37</td>
<td>-118.73</td>
<td>79.04</td>
<td>32.22</td>
</tr>
<tr>
<td>BODSIZE</td>
<td>232</td>
<td>8.81</td>
<td>5</td>
<td>14</td>
<td>2.25</td>
</tr>
<tr>
<td>BODINDP</td>
<td>232</td>
<td>72.82</td>
<td>54.55</td>
<td>90</td>
<td>8.59</td>
</tr>
</tbody>
</table>

4.2 Outliers Results

The sample of this study as stated in the methodology comprise of 122 companies listed on the NSE in 2014 and 2015 with a total observation of 2452. The data were checked for missing values using SPSS software version 23. It was found that the missing values have no specific pattern and are less than five per cent, hence treated using mean replacement as suggested by Kumar et al., (2013). Thereafter, the study found that there are outliers in the observation which is about 96 observations with a total of six (12) companies as shown in Table 3. Outliers are observations that have their own exceptional features that make them unique from other observations (Hair, Black, Babin, Anderson, & Tatham, 2006). Many approaches are used to check outliers that include standardized residuals and Cook’s distance which were all used in this study. It is stated that observation(s) with high standardized residual has the possibility to be an influential outlier. Taking into cognise the role of thumb which states that any observation(s) with standardized residual above +3 or -3 are relevant, however, observation(s) that have the possibility to be influential outliers can easily be identified. The influential outliers are either advantageous or problematic in any of the observation and have to be thoroughly scrutinized to determine whether to use them in the sample or to ignore (Hair et al., 2006). Therefore, this study deletes the outliers to see their effect on general observations. After deleting the outliers, multiple regressions were run to see the differences in the estimated coefficients. Therefore, after the outlier analysis, the remaining observation of the study is 2224.

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of listed companies</td>
<td>177</td>
</tr>
<tr>
<td>Sampled companies</td>
<td>122</td>
</tr>
<tr>
<td>Total observations</td>
<td>2320</td>
</tr>
<tr>
<td>Companies discarded (outliers)</td>
<td>6</td>
</tr>
<tr>
<td>Final observation after removing outliers</td>
<td>2224</td>
</tr>
</tbody>
</table>
4.3 Normality and Linearity Test

According to Hair et al. (2006), normality is assumed when the skewness and kurtosis for each variable fall between ±1.96 at an alpha of 0.05 and ±2.58 at an alpha of 0.10. The diagnostic results of this study show that all the independent variables are normal. Therefore, board independence and board size show a range of -1.854 and 1.899, which satisfied the rule of thumb. The normality distribution among individual variables now is standardized. The skewness statistical value of board size and independent of the board of directors are normally distributed. Table 4 shows the normality test for normal data.

On the other hand, linearity is used to know the association between the dependent variable and the independent variables. The linearity among the variables in this study is checked by comparing the standard deviation of the dependent variable with the standard deviation of the residuals. In regression, non-linearity is not a problem if the standard deviation of the dependent variable is not more the standard deviation of the residuals.

4.4 Multicollinearity

An imperative and basic assumption of multiple regression analysis is that collinearity should not exist between two independent variables i.e. multicollinearity (Cheng, Hossain & Law, 2001). If the multicollinearity is high, it causes the coefficient of estimated regression to become unreliable and unstable, which might force and change sample or model drastically if little changes occur (Hamilton, 2008). The problem may affect the entire result of the model tested because it will be difficult to accurately estimate the coefficient of the model. In this study, the variance inflation factors (VIF) was used to examine the correlation among the variables. Table 5 shows the result of the VIF for all variables of the study (i.e. 2014 and 2015) which ranges from 1.38 to 1.48. Thus, the VIF values for the two models are found to be around 1.38 to 1.48, which are below the threshold value of 10 as suggested by Gujarati and Porter (2003), Hair et al. (2006) and Ho (2006). Thus, the multicollinearity in this study was not affected by the regression analysis.

4.5 Homoscedasticity

Heteroscedasticity tends to make the coefficient estimate to be underestimated and sometimes making insignificant variables appear to be statistically significant (Hair et al., 2006). In this study, White General Heteroscedasticity Test and Cameron and Trivedi’s tests were used to check the heteroscedasticity problem. Thus, a p-value of less than or equal to (≤) 0.05 means the hypothesis is accepted. Since the p-value for the heteroscedasticity is 0.2088 as in Table 6, hence the hypothesis is rejected.
Table 6 Heteroscedasticity test (IM Test)

<table>
<thead>
<tr>
<th>Source</th>
<th>chi2</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heteroscedasticity</td>
<td>61.06</td>
<td>53</td>
<td>0.2088</td>
</tr>
<tr>
<td>Skewness</td>
<td>11.22</td>
<td>9</td>
<td>0.2610</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>8.73</td>
<td>1</td>
<td>0.0031</td>
</tr>
<tr>
<td>Total</td>
<td>81.01</td>
<td>63</td>
<td>0.0629</td>
</tr>
</tbody>
</table>

4.6 Correlation Analysis

Correlations analysis is used in this study to examine the level by which one variable is related to another. If the result of the correlation among the variables is ± 1.0 it means a perfectly and negatively or positively correlated. If it is zero (0) this means, there is no relationship and one means a perfect correlation does exist among the variables. In addition, the relationship is seen as small where r = ± 0.30 to ± 0.49 and where r ≥ 0.50 the relationship strength is thought to be substantial.

4.7 Regression Analysis

Table 7 shows a summary of the three-regression technique based on the outcome of the tested results.

Table 7 Regression result (ROA)

<table>
<thead>
<tr>
<th></th>
<th>Coef.</th>
<th>t-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BODSIZE</td>
<td>-0.20</td>
<td>-0.72</td>
<td>0.471</td>
</tr>
<tr>
<td>BODINDP</td>
<td>0.06</td>
<td>0.95</td>
<td>0.345</td>
</tr>
<tr>
<td>R²</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.885</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *, **, *** indicates significance levels at 10%, 5%, and 1% respectively.

The result as measured by R² indicates the impact of independent variables on the dependent variable. The independent variable explains 12% of the variance in the ROA as shown in Table 7. However, the adjusted R² of 8.85% explains the variability between independent variables and dependent variable. Conversely, 8.85% of ROA is influenced by the independent variable in this study while 91.15% is influenced by other variables. The result indicates that board size and ROA are negative and insignificant with a coefficient value of -0.20. This shows that the variable has no any influence on ROA, thus Al-Matari et al. (2012) concludes that the large board size has a negative relationship with firm performance in which they applied ROA as a measurement. Therefore, the result of this study is consistent with prior studies of Pathan and Skully (2010), Dar et al. (2011) and Ghabayen (2012), thus, there is insignificant relationship between board size and firm performance. On this account, it was suggested that as the size of the board grows, the decision-making processes slow down and this causes communication problems and affects the firm's performance negatively (Lipton & Lorsch, 1992; Jensen, 1993). On the other hand, board independence is found positive but not significant with a coefficient of 0.06. On this note, the result of this study is consistent with the findings by Davies (2013). Table 8 shows the result of the regression with respect to ROE.
The findings of this study as measured by R\textsuperscript{2} in respect of ROE indicates the impact of independent variables on the dependent variable in which, the independent variable explains 11\% of the variance in view of ROE as shown in Table 8. The adjusted R\textsuperscript{2} of 7.31\% explains the variability between independent variables and dependent variable. Approximately 7.31\% of ROE is influenced by the independent variable while 92.69\% are influenced by other variables. Board size shows a negative significant relationship with a coefficient value of (-3.24). However, this indicates that an increase in the number of board of directors in a company will have negative effects on the firm’s performance (ROE). The result of this study is consistent with a previous study by Pathan and Skully (2010). On the other hand, board independence is positive but insignificant with a coefficient of 0.33. This shows that an increase in this variable may have a positive impact on ROE. The findings of this study are consistent with studies by Fama (1980), Fama and Jensen (1983), Hutchinson and Zains (2009), Pathan and Skully (2010) and Davies (2013).

4.8 Summary of the Findings and Hypothesis Testing

Based on the hypothesis developed in this study, the first hypothesis stated that board size has a negative and significant impact on firm performance. The significant value of board size for the dependent variable proxies are 0.471 and 0.004, respectively. The p-value for ROA is greater than 0.10, thus the hypothesis is not supported while for ROE is less than 0.05 which is supportive. The second hypothesis stated that there is a positive and significant relationship between board independent and firm performance. The result shows the significant value for ROA is 0.345 and 0.191 for ROE. The results of the study show that p-values are greater than 0.10 suggesting that the hypothesis is not supported. Table 9 provides a summary of the findings and the hypothesis of acceptance or rejection.

5. CONCLUSION

This study is essential for all companies and shareholders in Nigeria in numeral ways. The study raises awareness on the need to improve the quality of board characteristics in order to enhance firm performance. Indeed, the results of this study would be beneficial to corporate management.
who are concerned with improving financial reporting transparency and corporate governance practices in their firms. Despite the importance of the findings of this study, the study has some limiting factors. Firstly, the sampled firms used in this study were based on non-financial listed companies in Nigeria. Therefore, the future study needs to consider the financial companies listed in the Nigerian Stock Exchange. Finally, the sample of the firm used in this study only covers 2 years (2014 to 2015), therefore, future studies should consider increasing the number of years.

REFERENCES


