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## BOARD STRUCTURE AND FIRM PERFORMANCE IN EMERGING ECONOMIES: EVIDENCE FROM NIGERIA

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### Abstract

evaluating performance is one of the main goals of business owners because they need to continually improve efficiency in the use of resources. over the years the board of directors have been criticized for performance of firms and their subsequent failure. The study attempts to explore the impact of board structure as a corporate governance mechanism on the performance of firms in Nigeria. To test the hypothesis of the study, we use a sample of 4 publicly traded cement firms in Nigeria for a period of 3 years, 2020-2022. The methodology of the study is quantitative using secondary data source. Regression coefficient was estimated on the collected data. The selected dependent variables used as proxies for performance are return on assets (ROA) and return on equity (ROE) while the selected independent variable used as proxies for board structure are board size and independence. The result shows that board size has a negative impact on ROA while board independence has a positive impact on ROA. However, Board size has positive impact on ROE and Board independence has positive impact on ROE. The study recommends that the management of publicly traded cement companies should discourage large board size and make board independence a priority in order to enhance the firm performance.

**Keywords:** *Corporate Governance, ROE, ROA, Firms.*

### Introduction

Every firm aspire to grow, survive and gain substantial market share in the now changing business world as the main interest of investors is to maximize their wealth. In modern day business, board of directors are vested with the function of managing wealth on behalf of investors. This separation of ownership and control arouse the need for good corporate governance (Jensen, 1993). As agents, the board of directors are not expected to act in ways geared towards their personal interest at the

expense of the investors (Abubakar and Shehu, 2011). They are accountable to the investors and their performance in the utilization of resources is judged through their periodic financial statements. However, over the years, economic and financial scandals have affected the performance of many firms such as Parmalat in Italy, Cadbury Nigeria Plc in 2006 and many other big firms around the globe. It becomes glaring that the existing corporate governance mechanism is inefficient as it fails to protect the interest of investors. Additionally, the occurrence of the COVID-19 pandemic caused negative impact on firms.

Consequently, financial economist has increasingly been concerned with ways to improving corporate governance practices in both developed and emerging nations. (Usman et al,2020). Corporate governance as opined by Jarboui etal(2015), are the procedures that are aspired to direct the decisions of firms and also improve their performance. They are the mechanisms that act as important tools in upsetting the health in of firms, Usman,etal(2020). Corporate governance mechanism like board structure have been identified in previous studies to influence the performance of firms and its characteristics are board size, composition, independence and CEO duality (HermalinandWeisbach,1991 andBelkhir,2008)

Studies like Akinwole and Ajide (2020), Amran (2011) Brennan (2006), Francis, Hasssan and Wu (2012) and Vo and Phan (2013a) have examined Board structure and firm performance, but the result from these studies are inconsistent and some other studies were done outside Nigeria. The results of studies done outside Nigeria may be quite different given the differences in nature of economies and the level of sophistication in the governance structures. Going by the result of previous studies, it is plausible to assume that board structure could impact firm performancepositively or negatively.

To the best of the knowledge of the researchers, the most recent studies in this area is that of Miko and Danjuma (2020) and Akinwole and Ajide (2020) who sampled nine sectors of the economy and measured performance as earnings per share (EPS). Therefore, this study attempts to contribute to the growing body of knowledge in the study area by examining firms in the same industry covering period not covered by Akinwole and Ajide (2020) and using a different measure for performance.

### **Statement of the Problem**

Board structure and firm performance continues to receive attention from scholars in recent times due to the increasing need to improve in the efficiency of corporate governance. Board of directors have been criticized largely for the poor performance of firms and their subsequent failure. In Nigeria, despite the code of corporate governance, there is the constant fear in industries that board of directors could give misleading performance report due to the problems faced in the economy which could eventually lead to firm failure. Uadiale (2010) stated that some of the reasons for the failure of firms are the lack of vigilant oversight functions by the board

directors, the board giving control powers of managers and inefficient accountability to stakeholders.

As a result, various prior studies have recommended that changes should be made on the board structure of firms. However, very few of these studies were carried out in Nigeria and they have ambiguous results due to the fact that they combined the data of various industries. Therefore, this study concentrates on one industry so as to be specific and unambiguous.

### **Objectives of the Study**

The aim of the study is to evaluate the impact of board structure on the performance of firms in Nigeria. To achieve this aim, the following specific objectives were stated

1. To investigate the impact board size on return on assets.
2. To examine the impact of board independence on return on assets
3. To examine the impact of board size on return on equity
4. To evaluate the impact of board independence on return on equity.

### **Research Questions**

The study attempts to find answers to the following questions

1. does the size of board members have impact on return of assets?
2. to what extent does board independence impact return on assets?
3. what impact does board size have on return on assets?
4. what is the relationship between board independence and return of equity?

### **Research Hypotheses**

The following hypotheses were formulated for the study:

- Ho<sub>1</sub>: There is no significant impact of board size return on assets
- Ho<sub>2</sub>: There is no significant impact of board independence on Return on Assets
- Ho<sub>3</sub>: There is no significant impact of board size on Return on equity
- Ho<sub>4</sub>: There is no significant impact of board independence on return on equity.

### **Literature Review**

In this section, literature on Board structure and firm performance is revied. Specially, the study concentrates on Board structure characteristics of Board size and independence. The theoretical framework that underpins the study is thereafter presented.

Performance is one of the factors been considered by investors to invest or not. It is a

subjective measure of how firms uses available resources to generate revenue in excess of its expenses (Akyenyi, Bala and Naziru, 2021). Performance of firms can be required using different proxies such as return on assets (ROA), return on capital employed (ROCE), return on equity (ROE) and earnings per share (EPS).

Performance is usually measure in terms profitability Owolabi and Obida (2012) opine that profitability is the ability of a company to make profits from all operations.

Maymand (2014) posits that financial performance is a general measure of a company's overall financial health over a given period of time. For the purpose of this study, performance is measured as ROA and ROE.

#### **Board Size and Firm Performance.**

The board of directors is the highest body in a firm that is responsible for managing the firm and its operation (Hassan, 2009). Board size is the number of directors in the board. The 2008 spencer Board index reports that across the globe, board size has been shrinking over the years and there is a continued trend towards limited board size. Limited board size is generally believed to improve the performance of firms because small board size makes communication and decision making faster.

Yermack (1996) revealed that board size had an inverse relationship with board effectiveness. Using data from Finland, the study finds negative relationship between board size and performance.

Mak and Yuanto (2003) examined firms in Malaysia and Singapore. The empirical study revealed that the value of firm is higher when the board of directors is small.

Wijaya and Murhadi (2020). Investigated the effect of ownership structure and corporate governance on firm performance. Using a sample of firm listed in the Indonesia stock exchange, for a period of five (5) years, 2013 – 2017, the study deployed a multiple linear regression to analyze the impact of size of board on firm performance. The findings of the study revealed that board commission size had a significant positive effect on firm performance.

In a similar study cared out in Nigeria, Miko and Danjuma (2020) examined the impact of Board size on corporate performance. Using a sample of thirty-nine listed manufacturing firms in Nigeria for period of 2008 – 2017. The study used regression as a tool of analysis and findings showed that board size has a negative and significant correlation with corporate performance.

#### **Board Independence and Firm Performance**

Board independence refers to non-executive directors who do not represent any particular shareholder interest and hold no special business interest with the firm. The independence of board of directors is strongly believed as a tool for firm performance. Board independence and its relationship with firm performance has been explored by few researchers but evidence in this regard is mixed.

Rosenstein and Wyatt (1990) revealed that the appointment of outside directors' results in significant positive performance reflected on its share price reactions. They concluded that non-executive directors are appointed to protect the interest of the shareholder. Zhang, Zhu and Ding (2013). Reveal that Independent director function better in operation strategies as they have diverse background and do not have personal relationship with the firm

Conversely, Fich and Shivdasani (2004) assess the effectiveness of busy boards in their functions. The study finds a negative and significant relationship between outside directors and performance of the sampled firms reflected in their market -to-book ratio.

Michelon and Parboretti (2012) revealed that there is no significant relationship between independent directors and improved corporate governance.

### **Theoretical Framework**

Agency theory is used to underpin the study. The theory was developed by Jensen and Meckling (1976). They posit that agency relationship is a form of contract between investors and managers of firms, where the managers are appointed by the investors to manage the firm on their behalf. This theory refers to investors as principals and managers, agents, where the managers are expected to act in the best interest of the investors.

The relevance of firm performance can be within the framework of agency relationship because results in information asymmetry since the managers have more access to information about the firm than the investors (Jensen & Meckling, 1976). The manager could conduct business to promote his personal interest and benefit financially through receiving remuneration by raising agency cost. Hence, regulations are one of the means of mitigating agency problem as the managers are compelled to comply fully.

### **Methodology and Variable Measurement**

The study examines the impact of board structure on the performance of publicly traded cement firms in Nigeria over a period of three (3) years from 2020 to 2022. The basis for selecting this period is due to the negative impact of covid-19 had on economies across the globe as well as the downturn of the Nigeria economy due to the sharp fall in price of oil in the year 2019.

By the year 2020, firms in Nigeria were reportedly bouncing back. Hence, the study regards the selected period as suitable for analyzing the efficiency of board structure as corporate governance mechanism. The study adopts a quantitative research design using secondary data source from the published financial statement of firms. The population of the study is the five (5) quoted cement firm in Nigeria . four (4) of the firms were selected as the sample of the study due to unavailability of data. the study adopted a model

The population of the study is the five (5) publicly traded cement firms listed on the Nigerian stock exchange. Four (4) out of the five (5) publicly traded cement firms were a result of unavailability of data. A linear multiple regression equation is used to examine the hypothesized impact of the independent variables on the dependent variables. The study adopts a similar to that of Subedi (2018). Thus, the following is the model for the study:

$$ROA_{it} = \beta_0 + \beta_1 BSIZE + \beta_2 BIND_{it} + \beta_3 FIS_{it} + \beta_4 FIG_{it} + E_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 BSIZE + \beta_2 BIND_{it} + \beta_3 FIS_{it} + \beta_4 FIG_{it} + E_{it}$$

Where;

ROA = Return on assets

ROE = Return on equity

BSIZE = Board size

BIND = Board independence

FIS = Firm size

FIG = Firm growth

$\beta$  = a constant

$E_{it}$  = Error terms

The dependent variable ROA (Return on assets) and ROE (Return on equity) are performance variables and the independent variable BSIZE (Board size) and BIND (Board independence) are Board structure variables. FIS (Firm size) and FIG (Firm growth) are control variable which are considered as factors that have effect on firms' performance. The variables used in the study are measured thus;

1. Performance (dependent variable) is broken as
  - (a) Return on Assets (ROA), which is measured by profit before tax divided by total asset
  - (a) Return on Equity (ROE), measured by profit before tax divided by equity.
2. Board structure (independent variable) is broken as
  - (a) Board size (BSIZE) which is measured by number of board members
  - (b) Board independence (BIND) which is measure by the percentage of non-executive directors to a total number of directors on the board.
2. Control variables
  - (a) Firm size (FIS) which is measured by log of total assets.

(b) Firm growth (FIG) which is measured by growth in net assets.

### 3. Data analysis and presentation of result

This section presents the result of the study. Table 1 below presents the descriptive statistics of all variables.

**Table 1: Descriptive statistics of the variables.**

Variable	Min	Max	Mean	Std
ROA	-0.2010	0.3560	0.2441	0.1633
ROE	1.7250	2.1321	1.4542	0.1011
BSIZE	8	15	10.5210	1.7327
BIND	16.7561	28.3004	17.4230	2.7242
FIS	-9.0121	10.3412	10.0121	0.3422
FIG	3.5231	5.4560	5.4641	0.5112

**Source: Descriptive statistics result using SPSS**

From the table above, ROA shows a minimum value of -0.2010 percent, maximum value 0.3560 percent, mean value of 0.2441 percent and a standard deviation of 0.1633. ROE ranges from a minimum of 1.7250 percent to a maximum of 2.1321 percent, leading to a mean of 1.4542 percent and a standard deviation of 0.1011. BSIZE reveals a minimum of 8, then 15, 10.5210 and 1.7327 as its maximum mean and standard deviation values. BIND ranges from 16.7561 to 2.3004. it reveals a mean and standard deviation values of 17.4250 and 2.7242. FIS ranges from -90.0121 to 10.3142, then as minimum value, maximum value 0.3422 and standard deviation. FIG ranges from 5.5231 to 3.4560 then a standard deviation of 0.5112.

**Table 2: Regression result for ROA**

Value	Coefficient	Std. Err.	t.stat	Prob
Constant	1.3282	1.1421	31.0801	0.0000
BSIZE	-7.3261	0.6217	-2.1532	0.0331
BIND	32.7371	0.6776	2.5514	0.0132
FIS	-0.3421	0.5242	-0.9252	0.8312
FIG	-0.1552	0.2613	-1.3123	0.3261
R <sup>2</sup>				32.00
F.Stat				16.781
F.sig				0.0000

Source: Extracted from SPSS output, 2023

Board size as depicted in table 2 above has a coefficient value of -7.3261 with a p-value of 0.0331 which is significant at 0.05 level of significance. this indicates that Board size has negatively and significantly impacted the return on assets of the publicly traded cement firms. This implies that an increase in in board size results to slow in decision making and therefore causes a decrease in return on assets. This finding is similar to the findings of Abdurrahman (2014) Cheng and Courtney (2006) and Subedi (2018). However, the finding is in contrast with the

findings of Usman et al (2020). All the control variables as depicted in table 2 have negative impact on return on assets. This provides evidence to reject the null hypothesis one.

Board Independence has a coefficient value of 48.7371 with a p-value of 0.0132 which is significant at 5% level of significance. this indicates that Board independence has positively and significantly impacted the Return on assets of the publicly traded cement firms in Nigeria. This implies that for increase in the independence of board of directors, return on Assets will increase by 1.73 naira. This finding is similar to the findings of Usman et al (2020). This provides evidence to reject the null hypothesis two.

**Table 3: Regression Result for ROE**

Value	Coefficient	Std. Err.	t.stat	Prob
Constant	1.4032	1.3121	42.5621	0.0000
BSIZE	9.3311	9.4231	0.2220	0.8222
BIND	4.2451	0.0861	0.2300	0.1112
FIS	-0.2750	0.4216	-1.4200	0.156
FIG	-0.2451	0.1296	-0.991	0.318
R <sup>2</sup>				44.00
F.Stat				20.220
F.sig				0.0000

Source: Extracted from SPSS output, 2023

From table three (3) above, Board size reveals a coefficient value of 9.3311 with a coefficient value of 9.3311 with a p-value of 0.8222 which is insignificant. This indicates that Board size though positive, but insignificantly impacted the Return on equity of the publicly traded cement firms in Nigeria. This implies that every increase in board size makes the decision making in the firm faster but does not cause a significant increase in return on equity. The study thus fails to reject the null hypothesis three.

Board independence as depicted on table 3 above has a coefficient value of 4.2451 with a p-value of 0.1112 which is insignificant. This indicates that ownership has positively but insignificantly impacted return on equity of the publicly traded cement firms in Nigeria. This implies that the more independent the board of directors are, the more the return on equity though, the proportion is not significant. Hence the study fails to reject the null hypothesis four.

All the control variables as depicted in table 3 have negative impact on return on equity.

#### **Conclusion and Recommendations.**

The study from the empirical analysis, conclude that large board size has negative impact on the selected publicly traded cement firms in Nigeria. This implies that the



higher the board size the lower the return on assets. On the other hand, the board independence shows that the higher independence of board of directors, the higher the return on assets. Therefore, board independence may be seen as a corporate governance mechanism that is efficient in enhancing firm performance.

Furthermore, the empirical analysis reveals that both board size and board independence have positive but insignificant impact on return on equity. This implies that board size did not significantly enhance return on equity of the selected firms during the period under review and board independence neither did. Based on the results and conclusion, the study recommends that;

The board of directors of publicly traded cement firms in Nigeria should not concentrate on optimal board size because large board size has negative impact on the firm performance. Furthermore, board independence should be completely independence because the board will be more effectively in managing the affairs of the firm, thus helping in enhancing the firm performance. There is no research that does not have limitations. Thus, this study is not without limitations. The limitations is the period covered, which is too short. We therefore suggest that further studies should cover longer period.

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