The Impact of Board Structure on Firm Performance: Evidence from the Nonfinancial Companies Listed on Ghana Stock Exchange

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Abstract
The fundamental aim of this study is to examine the relationship that exit between board structure and firm performance of non-financial Ghanaian listed companies. In order to achieve the objectives of the study, unique data were collected from a sample of 28 non-financial companies covering five financial year periods 2012-2017 was used and thereafter analysis done within panel data framework/multiple linear regression framework. The variables such as CEO duality, CEO tenure, board size, board composition and its independence were considered as predictors of the firm performance that was measured employing accounting based performance measures such as the return on assets (ROA), return on equity (ROE) and EPS. I found board size to have a positively significant relationship with firm performance.

Keywords: Corporate governance, Board composition, Block holder, CEO-duality, Firm performance

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1. Introduction

Corporate governance represents the channel and solution that manage the relationship between shareholders and the board of directors. As there is always an uncertainty factor represented by the shareholders of how the board of directors are directing the corporation they are interested in, and whether they are managing it in their favor or not. Again, because shareholders are always unaware of the management’s procedures or styles that are used by those directors, therefore there must be a solution that reduces the gap which exists between companies represented by the board of directors and interested parties such as shareholders; the solution is therefore corporate governance mechanisms. Generally, it is accepted that corporate boards play a primary and essential role in corporate governance, the structure of the strategic dimensions of a company and originate goals (Agyemang & Castellini, 2015). Businesses all over the world require economic growth and developments to attract financiers. Investors, normally ensure that the businesses in question are financially stable, secured and possess the ability to generate profits in the long run before these investors put in their finances (Bhimani, 2008). Therefore, in situations where companies’ positions are not as promising as they may expect, it will make no economic sense for investors to invest in these businesses. However, the failure to attract enough capital will lead to negatives influences on the business and the economy in general. The economic well-being of every nation is accredited to the replication of the performance of its companies. Thus, low level of developments and economic growth in developing countries are attributed to poor performances of companies as a result of low level of corporate governance practices. In view of this, the World Bank, other international organizations and several writers have identified these countries as not having the capacity to manage their resources but to depend on the developed countries. Therefore, the emphasis placed on good corporate governance practices in the already existing literature as the most important problem facing the development of countries such as Ghana is worth acknowledged. However, The relationship between board structure and firm performance has received much attention, most especially in developed countries like the US and UK and the developing countries, yet this has yielded many varying pragmatic results.(see(Saltaji, 2013),(Al-Matari, Al-Swidi, Fadzil, & Al-Matari, 2012)(Haniffa & Hudaib, 2006), (Adams, Hermalin, & Weisbach, 2010), (Daily & Dalton, 1994), (Kiel & Nicholson, 2003). Meanwhile, there is no consensus drawn as to what exactly the ideal board structure should be (Agyemang & Castellini, 2013). Again there is also an unsolidified controversy surrounding whether the board should be composed of mainly of “insiders or outsiders (Nicholson & Kiel, 2007), (Kaymak & Bektas, 2008). The agency theory argues that, board independence is important if it is effectively monitored by management team, and the insider dominated boards, by their nature, are not independent of management (Aryani, Setiawan, & Rahmawati, 2017). Additionally, the steward theory also argue that, inside directors are more effective...
because they have more knowledge of the company operations than outside directors and are diligent as non-executive directors, because of their legal responsibility and their interest in company (Dalton and Dalton, 2005; Zhang and Wang, 2013). However, following all the above revelations little research has been done on the subject in developing countries, and even less in Ghana, some few people have, namely, (Tsamenyi, Enninful-Adu, & Onumah, 2007),(Bokpin & Arko, 2009) and a few others. Specifically, no study has yet been undertaken to examine the relationship that exit between board structure and the firm performance of non-financial listed companies on the Ghana stock exchange, in spite of the important contributions of the nonfinancial sector to the economy of Ghana. The importance of board of directors was spelt out by a study carried out by (Fama & Jensen, 1983) who considered it as one of the main elements of governance; it was further evidenced by (Limpa phayom & Connelly, 2006) who also stressed on the need and the effective characteristics of the role of the board of directors in overseeing management. Boards become very essential for smooth functioning of organizations. Boards are expected to perform different functions, which includes monitoring of management to mitigate agency costs ((Eisenhardt, 1989); (Shleifer & Vishny, 1997); (Roberts, McNulty, & Stiles, 2005), hiring and firing of management (Herermalin & Weisbach, 1998), provide and give access to resources (Hillman, Cannella, & Paetzold, 2000); (Hendry & Kiel, 2004), grooming CEO (Slocum, 2006) and providing strategic direction for the firm (Stieglitz & Heine, 2007). Boards also have a responsibility to initiate organizational changes and facilitate processes that support the organizational mission (Bart & Bontis, 2003).

The agency theory establishes that, the agency relationship is a contract whereby the one or more person(principal) and engages another person (agent) to perform some service or a duty on their behalf, which involves delegating some decision –making authority to the agent (Jensen & Meckling, 1976). The theory postulate further, that, the inappropriateness of management or the agent in taking the best possible action for the public and the shareholder’s sake as the agents generally act in their own interest. The boards seek to protect shareholder’s interest in an increasingly competitive environment while maintaining managerial professionalism and accountability in pursuit of good firm performance (McIntyre, Murphy, & Mitchell, 2007). Therefore, Board structure as an element of corporate governance is defined by three variables: the number of directors, the relative proportion of outside and inside directors, and the separation of the functions of chief executive officer (CEO) and chairman of the board has an influence on the firm and its financial performance (Fama & Jensen, 1983); (Coles, McWilliams, & Sen, 2001); (Weir, Laing, & McKnight, 2002).

The nonfinancial sector is an important component of the Ghanaian economy because of its numerous industrial compositions namely; Oil & Gas, Consumer Goods, Basic materials, Health care, Industries and Technology which serve several needs of the people in Ghana. Due to the peculiar characteristics and contributions of the nonfinancial sector to the development of the Ghanaian economy coupled with the non-existing study on this subject, there is a cogent ground to conduct this research. This article is organized into five parts: the introduction, review of relevant literature, followed by the methodology, data analysis and model specification, results discussion and the conclusion.

2. Literature

It is generally argued that when firms have good governance systems, they exhibit better performance as compared to other firms. This study has enlarged the literature of prior studies that examined the relationship between corporate governance (board structure) and firm performance. There are several studies done in developed and developing countries (Al-Matari et al., 2012);(Hassan & Farouk, 2014) which examined the relationship between corporate governance and firm performance. However, Corporate governance is underlined by several theories, these theories range from the agency theory and stretch to stewardship theory, stakeholder theory, resource dependency theory, transaction cost theory, political theory and ethics related theories like business ethics theory, virtue ethics theory, feminist’s ethics theory, disclosure theory and postmodernism ethics theory (Abdullah & Valentine, 2009).

Agency theory is one of the most famous corporate governance theories that show the corporate relationship with ownership. Agency theory its bases come from an economic theory expositied by (Alchian & Demsetz, 1972) and further developed by (Jensen & Meckling, 1976). Agency theory is defined as “the relationship between the principals, such as shareholders and agents such as the company executives and managers”.

In this theory, the owners whom are represented by the shareholders or the principals, employs the agents to work on their behalf. Principals delegate the management and running of business to the directors or managers, who are shareholder’s agents (Abdullah & Valentine, 2009).

The other significant theory for this research is Resource Dependency Theory.

Resource dependency theory focuses on the role of board of directors in giving an access to the needed resources by the firm. (Hillman et al., 2000) explain that resource dependency theory concentrates on the function of directors that play in providing and securing the needed resources to the organization through their communications with the external environment.

All said and done, This chapter examines corporate governance practices in Ghana and a survey of the
literature pertaining to the topic; the Impact of board structure on Firm Performance as well as some theories and views of others who have previously studied into the subject will be examined. Most studies have examined the impact of the board characteristics (CEO duality, CEO tenure, audit committee, board size and composition of the Board) on firm performance. Hence this study will investigate the relationship between corporate governance mechanisms namely, board size, board composition, CEO duality and CEO tenure with the firm’s performance.

2.1 Independent Variables and Definitions

2.1.1 Board Size and Corporate Performance:

Theoretically, the relationship between board size and firm performance in general remains inconclusive (Weerakkodi, 2015). The finance literature has generally found evidence consistent with the agency theory perspective that a smaller board is related to better firm performance (Gertner & Kaplan, 1996); (Yermack, 1996); (Eisenberg, Sundgren, & Wells, 1998);(Sanda, Mikailu, & Garba, 2005);(Denis & Sarin, 1999). Due to management costs and free rider problems inherent in large boards, shareholder groups generally favor smaller boards and have pressured companies to reduce board size (Gertner & Kaplan, 1996). For many years, empirical studies have tried to find the optimal size of a board of directors of a company. (Lipton & Lorsch, 1992) argue that, the optimal size of the board of directors should be between seven and nine to ensure accountability, coordination, reduce free riding problem and faster decision making which enhances performance. A level below ten is optimal; a smaller board works better and could be less manipulated by the delegated director. The relevant literature examined the relationship between board size and firm performance, the findings turned up to be inconclusive. In examining this relationship,(Shakir, 2008) found a negative relationship between board size and firm performance which supported the conclusion of (Conyon & Peck, 1998) that for a firm to be effective in its monitoring, it should have a relatively small board of directors. In relation to that, (Haniffa & Hudaib, 2006) argued that a large boards are seen as ineffective in monitoring performance and could also cost more for companies in terms of compensation and increased incentives for them to avoid. The same conclusion was drawn by (Al-Matari et al., 2012) based on his study carried out on the Canadian public companies. His conclusion implies that the board size was also shown to have a negative relationship with performance measured by return on sales, sales efficiency and ROA. However, prior studies pertaining to the size of the board also supported the positive relationship between the size of the board of directors and corporate performance and these studies seem consistent with resource dependency theory, which supports a positive relationship between board size and firm performance (Riaz, Khan, & Shaheen, 2017); (De Andres & Vallelado, 2008). However, both theories support the notion that board size has a significant economic impact on firm value. Large boards are viewed to lead to a better business performance owing to the wide variety of skills present for better decision making and monitor the performance of the CEO. Moreover, (Rechner & Dalton, 1991) have also reported that large boards are associated with stronger performance. These results supported the conclusion made by (Pfeffer, 1972) and (Zahra & Pearce, 1989)regarding the relationship between the board size and firm performance. Therefore, based on the theoretical perspective and discussions above, the first hypothesis is formulated:

**H1: There is a significant positive relationship between board size and firm performance.**

2.1.2 Board Composition and Firm Performance

Board composition has been highly debated in the fields of economics, organizational science literatures, and finance on the empirical and the theoretical frameworks .One of the key characteristics of a firm’s board is the blend of executive and non-executive directors which is very important for its performance. Non-executive directors are the ones(professional referees) who are not involved in the day to day management of the firm, but are involved in the decision making and the planning policies. The proportion of directors would obviously to a large extend determine the quality of decision making since objectivity would play an important role, moreover, whether the board can objectively monitor and control the management. Previous studies by (Kaplan & Reishus, 1990), (Byrd & Hickman, 1992),Therefore, a board is seen to be more independent if it has more non-executive directors (John & Senbet, 1998)(Brickley, Coles, & Jarrell, 1997), (Abor & Adjasi, 2007),(Khan & Awan, 2012) argued that there is a positive relationship between independent directors and firm performance. Also (Rashid, De Zoyas, Lodh, & Rudkin, 2010) documented that firms with independent directors have less agency problems and have more alignments to shareholders. It has also been debated that, the effective ways of monitoring boards is by making executives function effectively to take care of the shareholder’s interests rather than their own (Al-Matari et al., 2012). According to agency theory, a larger proportion of independent directors generally provide better firm performance. It has been concluded by (Al-Matari et al., 2012) that the proportion of independent directors has an effect on firm performance. Previous studies examining the relationship between board composition and firm performance have been inconsistent. Whilst some studies found that firms with board of directors dominated by outsiders are able to perform better (Adams & Mehran, 2005),(John & Senbet, 1998; Kyeoreboah-Coleman & Biekpe, 2006)and supported by (Wang & Coffey, 1992)who also found out that, there is a positive association between the proportion of outside board members and performance. Others studies such as (Bhagat & Black, 1999);(Kajola, 2008); (Hermalin & Weisbach, 1991); (Zahra & Pearce, 1989); (Daily
between agents and principals (Tian & Lau, 2001); (Krause & Bruton, 2014). Agency theory suggests that CEO’s performance is poorer if his performance and vice versa. Contrary, in an earlier study carried out by (Hill & Phan, 1991), it was observed in cases where the CEO left before retirement. Simply put, the shorter the CEO’s tenure in office, the poorer is his performance and vice versa. Theoretical perspective and discussion above, the following hypothesis was to be tested:

**H2:** There is a significant positive relationship between board composition and firm performance.

**2.1.3 CEO Duality and Firm Performance**

One aspect of corporate governance, which has given rise to concern, is the personality phenomenon which involves role duality. One important function of the board of directors is to monitor the top management’s actions, but a problem may arise when the Chief Executive Officer and chairperson positions are held by the same person. CEO duality is an important governance mechanism due to its sensitive nature of the relationship between agents and principals (Tian & Lau, 2001); (Krause & Bruton, 2014). Agency theory suggests that CEO’s should run the firm in the best interest of shareholders (Brickley et al., 1997); (Mishra & Mohanty, 2014). Agency Theory shows that great conflicts may arise from the action of duality. (Blackburn, 1994; Dahya, Lonie, & Power, 1996), Argue that combining the two roles may undermine the board’s monitoring power, but Stewardship Theory supports the idea. Stewardship is one of the most important theories of Corporate Governance which states that managers don’t work for their self-interest but they are working for the corporation favor, as they are steward for corporation assets. Managers are working for making high reputation for them and so it benefits the corporation.

CEO non-duality leads to better performance than CEO duality (Brickley et al., 1997); (Ramdani & van Witteloostuijn, 2009). (Ramdani & Witteoloostuijn, 2010) argued that CEO duality plays an important role in affecting the value of a firm. A single person being the Chairman and the CEO leads to the enhancement of the firm’s value and the cost is minimized. This is supported by (Rechner & Dalton, 1991) who argued that a combined leadership helps in monitoring the activities of top management and thus decreases the agency costs. However, (Baliga, Moyer, & Rao, 1996) indicate that CEO duality can lead to the board’s worse performance as the board is unable to fire under or nonperforming CEO which can generate agency costs in cases where the CEO works for his own interest as opposed to the shareholders. (Yan Lam & Kam Lee, 2008), (Yussof & Alhaji, 2012) argue that, when the CEO and board chair positions are separate, it increases the firm’s value. (Brickley et al., 1997) argue that CEO duality in a firm favours the under or nonperforming CEO as it is difficult for the board to remove him. Based on the previous arguments and other supporting ones, it is reasonable to test the following hypothesized relationship:

**H3:** There is a significant relationship between CEO duality and firm performance.

**2.1.4 CEO Tenure and Firm Performance:**

This is how long a CEO served in that position before he or she is removal or resignation from office. All other things being equal, the longer a CEO stays in office the better the corporate performance. This is because the CEO as the head of the executive needs job security to be able to take decisions that would enhance firm performance. In this regard, longer tenure is expected to have a positive influence on performance, although some studies have revealed that long serving CEOs resort to building an empire rather than focusing of productivity. However, some studies conducted to investigate the relationship between CEOs tenure and firm performances found mixed results. Example, (Kyereboah - Coleman, 2007) found that there is negative relationship between CEO tenure and Ghana firms’ performance. Performance-related turnovers are clearly observed in cases where the CEO left before retirement. Simply put, the shorter the CEO’s tenure in office, the poorer is his performance and vice versa. Contrary, in an earlier study carried out by (Hill & Phan, 1991), it was found that there is no significant relationship between CEO tenure and firm performance. Thus it is meaningful to test the relationship postulated in the following hypothesis:

**H4:** There is a significant positive relationship between CEO tenure and firm performance.

The study also considered the effect of two control variables namely, firm size and leverage, when investigating the corporate board characteristics and firm performance relationship. The two variables are as follows and briefly described.

**2.1.5 Firm Size**

Using firm size as the control variable in this study is motivated by the fact that it has been found to be associated with companies with different characteristics. (Cheng, Evans, & Nagarajan, 2008) argued firm size and growth are important determinants of the size and structure of the boards. They found that firm size is directly related to the size and inversely proportional to the proxy for growth opportunities, that insider representation is inversely proportional to firm size and directly related to the proxy for opportunities growth and thus, a firm size has an effect on the firm performance.

**2.1.6 Leverage**

Leverage has been widely used as a control variable by a number of empirical studies (such as (Kyereboah-Coleman & Biekpe, 2006); (Alsaeed, 2006) that have examined the relationship between corporate governance and financial performance of the company. In their attempt to justify taking the leverage as a control variable,
these studies have revealed that the debt has an effect on the financial performance of the company. As suggested by (Alsaeed, 2006), the firm leverage was measured by dividing total of liabilities by the total of assets. In the light of the above discussion, Table 1 summarizes the operational definitions of the variables used in this study following the common literature.

2.1.7 Measuring Firm Performance
This study also considered these performance indicators normally include profitability, efficiency, size, leverage and liquidity. According to (Bourne, Franco, & Wilkes, 2003) a good performance measure must have broad base measure, Structured understanding of strategy, provide feedback and take actions on results. This study emphatically focused on those predominant measures that are important for the success of the various companies. In that regard, the study would measure the financial performance of firms using accounting based measures. Examples used commonly in the governance literature namely ROA and ROE (Yusoff & Alhaji, 2012); (Abduh, Omar, & Duasa, 2011); and (Yusoff & Alhaji, 2012) and EPS.

3. Methodology
Research design: In order to achieve the objectives of this study, the correlation study research design was used to investigate the relationship (namely board size, board composition and independence(non-executive directors), CEO duality, CEO tenure, firm size and leverage as independent variables and firm performance using Return on Asset, Return on Equity, Earnings per share as dependent variables.

3.1 Data Collection and Procedure.
In my research, I selected my sample from companies listed on the Ghana stock exchange. The total number of companies listed on the Ghana stock exchange are 42 as at 31 March 2018, I could collect unique data for (28) active Nonfinancial Companies representing 67% on the Ghana Stock Exchange covering a six year period from 2012-2017. Financial Companies such as banks and other financial institutions were also (14) represents 33% on the Ghana Stock Exchange totaling 42 companies. These companies have been excluded in this study owing to the differences in the regulatory requirements of the financial reports of the non-financial companies (Alsaeed, 2006). This study also employed secondary data to answer the research questions. The data was secondary collected from the annual reports of the selected companies that were on the Ghana Stock Exchange website. These annual reports includes; financial statements namely, Income statements, Cash flow statements, statement of changes in owner’s equity, Statement of financial position, statement of corporate Governance as well as from the director’s profile. The study used panel data framework which follows (Abor & Biekpe, 2007). It involves the pooling of observations on cross-sections of units over several time periods and it provided results that are not noticeable pure time-series in pure cross section or pure time series studies. Also firms that lack the independent variables’ data are excluded and those lacking data for calculating the proxies for firm performance are also excluded. Hence, the final panel’s data are of 28 observations, by this way the real contents only are retained and this is useful to maintain data away from any distortion.

3.2. The Proxy of Firm Performance
From the prior empirical studies the most commonly used proxies to measure the firm performance are ROA, ROE, and EPS (Denis & Sarin, 1999; Eisenberg et al., 1998), (Lipton & Lorsch, 1992) and (Hillman & Dalziel, 2003), (Ameer, Ramli, & Zakaria, 2010). All of these researches and many others used the same proxies for measuring performance. ROA is the accounting proxy for measuring performance.

Table 1: Performance Variables and Their Descriptions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Return on Asset</td>
<td>Net Income as a percentage of total Assets</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
<td>Net Income as a percentage of shareholder’s equity.</td>
</tr>
<tr>
<td>EPS</td>
<td>Earnings Per Share</td>
<td>Net Income – Dividend on preferred stock Average outstanding shares</td>
</tr>
</tbody>
</table>

3.3. Independent Variables
Independent variables are defined and shown in Table 2 Measurements and expected relations are consistent with prior research.

Table 2: Measurements and Expected Relations

<table>
<thead>
<tr>
<th>Board Characteristics</th>
<th>Definition</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOARD SIZE</td>
<td>Board size</td>
<td>Number of directors on the board</td>
</tr>
<tr>
<td>COMPOSITION &amp;</td>
<td>Number of non-executive</td>
<td>Proportion of non-executive directors sitting on</td>
</tr>
</tbody>
</table>
INDEPENDENCE directors on the board (NED) the board to the total number of directors on board.

CEO Duality Role of CEO A binary that equal one if the CEO is Chairman of the board and 0 otherwise.

CEO Tenure Number of years served. Number of years in the position

3.4 Table 3: Control Variables

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>Definition</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE (No. of employees)</td>
<td>Firm size in terms of total assets owned</td>
<td>Log of total assets</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>Leverage %</td>
<td>The ratio of total liabilities to total assets.</td>
</tr>
</tbody>
</table>

4.0 Data Analysis And Model Specification

4.1. Data Analysis and Management

Model Specification

The relationship that is subject to investigation is firm performance as a function of board characteristics. The panel data analysis has been simply shown as:

\[ ROA_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BCMP_{it} + \beta_3 DUL_{it} + \beta_4 TENURE + CTRL_{it} + \epsilon \]

ROA: RETURN ON ASSETS
BS: BOARD SIZE
BCMP: BOARD COMPOSITION
DUL: CEO DUALITY
TENURE: CEO TENURE
CTRL: CONTROL VARIABLE (firm size and Leverage)
And Error term.

To ensure the robustness of the model and to reduce specification bias, the model includes control variables. Therefore, the model is restated as performance is a function of board structure and control variables.

\[ \text{FIRMPFR}=\beta_0 + \beta_0 (\text{board structure}) + K (\text{Control factors}) + \epsilon \]

5. Result and Discussion

5.1 Descriptive Statistics

The main objective of this analysis is to measure the level of firm performance of the nonfinancial companies. The descriptive analysis study shows the average of firm performance and the averages of the other components of dependent and independent variables.

Table 4: Descriptive Statistics Of Panel Data: 2012-2017

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min.</th>
<th>Max.</th>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>(0.62)</td>
<td>21.58</td>
<td>(91.64)</td>
<td>29.76</td>
<td>465.59</td>
<td>(2.13)</td>
<td>10.25</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>4.51</td>
<td>27.50</td>
<td>(70.81)</td>
<td>61.65</td>
<td>756.30</td>
<td>(0.56)</td>
<td>3.51</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>(17.01)</td>
<td>109.83</td>
<td>(568.00)</td>
<td>232.00</td>
<td>12,062.00</td>
<td>(3.47)</td>
<td>20.07</td>
</tr>
<tr>
<td>Board Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Size</td>
<td>8.46</td>
<td>1.58</td>
<td>5.00</td>
<td>11.00</td>
<td>2.50</td>
<td>(1.33)</td>
<td>3.93</td>
</tr>
<tr>
<td>Board Composition</td>
<td>4.14</td>
<td>1.83</td>
<td>2.00</td>
<td>8.00</td>
<td>3.36</td>
<td>1.09</td>
<td>3.30</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>CEO Tenure</td>
<td>2.57</td>
<td>1.79</td>
<td>0</td>
<td>5.00</td>
<td>3.19</td>
<td>0.19</td>
<td>1.77</td>
</tr>
<tr>
<td>Control Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>16.98</td>
<td>3.49</td>
<td>11.48</td>
<td>22.94</td>
<td>12.12</td>
<td>(0.18)</td>
<td>1.89</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.45</td>
<td>0.58</td>
<td>(0.79)</td>
<td>1.87</td>
<td>0.34</td>
<td>(0.22)</td>
<td>3.51</td>
</tr>
</tbody>
</table>

Table 4 shows the descriptive statistics of the panel data for the period tested (2012 – 2017). On the average, most of the companies achieved return on asset of -0.6% with the maximum of -91.64% and minimum of
29.76% respectively. The mean value of the return on equity was 5%, maximum of 62% and minimum of -71%.
In terms of EPS, the mean value was -17% meaning and minimum value -6% and a maximum value of 2%.
The descriptive statistics for board size shows that the average number of board members is 8 members of the sample.
It also shows the minimum number in the sample is 5 members and the maximum is 11 members. Moreover, the
average percentage of the independent directors in the board of the checklist is 4.14%. However, the minimum
percentage of independent directors in the board is 2% and the maximum is 8% of the board is independent
directors. The average number of years that CEOs stays in office is 2.5 years this is up to a maximum of 5 years
and minimum of less than 1 year. Besides, relating to the standard skewness statistics which shows the normality
of data. The data to be normally distributed the standard skewness should be within the range ±1.96 (Haniffa &
Hudaib, 2006). From table 4, it’s observed that board size, board composition, CEO duality and CEO tenure are
normally distributed and within the range of standard skewness.

5.2 Correlation Analysis
This analysis is done as an initial step in the statistical modeling to determine the relationship between the
dependent and independent variables. Prior to carrying out the multiple regression analysis, a correlation matrix
was developed to analyze the relationship that exit between the independent variables as this will help in
developing a prediction multiple models which will reveal no relationship in cases where the value of the
correlation is 0. On the other hand, a correlation of ±1.0 means there is a perfect positive or negative relationship
(Hair, 2010). The values are interpreted between 0 (no relationship) and 1 (perfect relationship). Also, the
relationship is considered small when r = ±0.1 to ±0.29, while the relationship is considered medium when r =
±0.30 to ±0.49, and when r is ±0.50 and above, the relationship can be considered strong. Table 5 below reveals
the correlation between board size, board composition, CEO duality, CEO tenure, firm size and leverage with
firm performance (ROA), (ROE) and EPS

Table 5: Correlation of variables

<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>Perf</th>
<th>EPS</th>
<th>ROA</th>
<th>ROE</th>
<th>BOARD SIZE</th>
<th>BCOMP</th>
<th>CEO DUALITY</th>
<th>CEO TENURE</th>
<th>FIRM SIZE</th>
<th>LEV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings per share</td>
<td></td>
<td>0.96</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>0.46</td>
<td>0.23</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Equity</td>
<td>0.75</td>
<td>0.57</td>
<td>0.56</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Size</td>
<td>0.17</td>
<td>0.19</td>
<td>-0.04</td>
<td>0.08</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Composition</td>
<td>0.11</td>
<td>0.01</td>
<td>0.58</td>
<td>-0.08</td>
<td>-0.02</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO Duality</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO Tenure</td>
<td>0.02</td>
<td>0.09</td>
<td>0.34</td>
<td>0.12</td>
<td>-0.49</td>
<td>-0.33</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>0.03</td>
<td>0.02</td>
<td>0.12</td>
<td>-0.16</td>
<td>-0.17</td>
<td>-0.36</td>
<td>0.00</td>
<td>0.66</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>0.09</td>
<td>0.09</td>
<td>-0.17</td>
<td>0.20</td>
<td>-0.17</td>
<td>0.34</td>
<td>0.00</td>
<td>0.14</td>
<td>-0.08</td>
<td>1.00</td>
</tr>
</tbody>
</table>

****P<0.01
****P<0.05

Table 5 shows the correlation between firm performance, governance variables and the control variables.
These findings reveal that Board size is negatively correlated (r = -0.04, p<0.05) with ROA but significant at the
0.05 level of significance. Moreover, there is also a Board compositions positive correlation (r= 0.58, p<0.01)
with ROA at level of significance. However, CEO tenure is positively correlated (r=0.34, P<0.01) but not
significant at 0.01. The firm size is also positively correlated (r=0.12, P>0.05) with ROA, whiles leverage is
negatively correlated (r= -0.17, P>0.05) and CEO duality has no relationship and it’s insignificant. To sum up, it
is evidenced from above that, three variables namely, Board composition, CEO tenure and firm size have a
positive correlation with ROA. In contrast, two variables, board size, and leverage have a negative correlation
with ROA whiles CEO duality has no correlation with ROA.
5.3 Hypothesis Testing, Results and Discussions

In order to test the hypothesis of the study, the multiple linear regression analysis was adopted using the firm’s financial performance (ROA), ROE and EPS as dependents and Board characteristic comprising board size, board composition, CEO duality and Tenure as independent variables and the firm size and leverage as control variables. The result of the regression was posted in Table 6. Based on the regression the model meaning that, at least one of the variables is a significant determinant of the firm performance (F value= 15.403, p<0.001). Besides, the variables included in the model were to explain % of the variance in the ROA, ROE and EPS as shown by the adjusted by R2 indicator. These results also indicate that 57% of the variance in the ROA, ROE and EPS might be explained by other factors which were not included in the model.

Table 6: The Coefficients of Multiple Regression Analysis

| Performance Measures | Coefficients | Z    | P>|z| |
|----------------------|--------------|------|------|
| Earnings per share   | 1.0001       | 1068.22 | 0.000 |
| Return on Assets     | 0.9984       | 162.41 | 0.000 |
| Return on Equity     | 1.0016       | 208.92 | 0.000 |

| Board Factors        | Coefficients | Z    | P>|z| |
|----------------------|--------------|------|------|
| Board Size           | 0.6927       | 4.86 | 0.000 |
| Board Composition    | 2.0039       | 7.31 | 0.000 |
| CEO Duality          | 0.00         | 0.00 | 0.000 |
| CEO Tenure           | 1.5581       | 12.40 | 0.000 |

| Control Factors      | Coefficients | Z    | P>|z| |
|----------------------|--------------|------|------|
| Firm Size            | 0.9267       | 25.40 | 0.000 |
| Leverage             | 0.0000       | 0     | 0.000 |
| Cons                 | -4.1365      | -3.32 | 0.001 |

Based on the result in Table 6, board size was found to have a positively significant effect on firm performance at the 0.05 level of significance (β= 0.6927, z= 4.86, p<0.000) which is consistent with the hypothesis predicted. Therefore, the hypothesis (H1) is accepted. This result suggests that larger boards are better than smaller boards, therefore the larger the board the better the performance of the company. This position is established on the assumption that larger boards are created with members with different skills and professional expertise from different backgrounds. This facilitates a better decision making and places the board in the better position to monitor the activities of management. This is support of (Rechner & Dalton, 1991) who reported that large boards are associated with stronger performance. These results supported the conclusion made by (Pfeffer, 1972) and (Zahra & Pearce, 1989) regarding the relationship between the board size and firm performance. A negative effect supports the findings of Shirk (2008) and Jesse (1993). This is also consistent with the agency theory perspective that a smaller board is related to better firm performance (Gertner and Kaplan, 1996; Yermack, 1996; Eisenberg et al., 1998; Sanda et al, 2005, Denis and Sarin, 1999). However, due to management costs and free rider problems inherent in large boards, shareholder groups generally favor smaller boards and have pressured companies to reduce board size (Gertner & Kaplan, 1996). Similarly, the board composition was also found to have a positively impact on firm performance (β= 2.0039, Z= 7.31, p<0.000) at the 0.000 level of significance. This means that, the hypothesis formulated (H2) is accepted. Therefore, this is supported by (John & Senbet, 1998)(Brickley, Coles, & Jarrell, 1997), (Abor & Adjasi, 2007), (Khan & Awan, 2012) argued that a board is seen to be more independent if it has more non-executive directors. They all found is a positive relationship between independent directors and firm performance. Also (Rashid, De Zoysa, Lodh, & Rudkin, 2010) documented that firms with independent directors have less agency problems and have more alignments to shareholders. Again, there was no relation between CEO duality and firm performance. CEO duality has no relationship with firm performance. Therefore, I reject the H3. This means that, the only way to maintain the CEO position is performance. Following the same reasoning, CEO tenure was also found to have a positive impact on firm performance at the 0.000 level of significance (β=1.5581, Z=12.40, p<0.000). The statistical results provide a support for the hypothesis H4 regarding the relationship between CEO tenure and firm performance. I therefore accept the hypothesis H4. This result indicates that the longer period the CEO spends in his position the better the firm performance. This is because if the job security of the CEO is guaranteed then he/she would be prepared to take capital investment decisions that would have long-term effect on performance. It is also important that the board adopt a comprehensive approach in evaluating the performance of the CEO so that they do not concentrate only on the short term earnings of the firm but must look into the future the benefits the firm is likely to derive from decisions taken.

While the firm size was not a significant predictor of the firm performance (β= 0.9267, z= 25.4, p>0.1), the leverage was found to have no significant predictor of the firm performance at the 0.1 level of significance (β=
0.000, Z=0.00, p<0.1).

6. Conclusion

The main objective of this research work was to examine the impact of board structure on firm performance evidence from the nonfinancial listed companies on Ghana stock exchange upon the firm performance; Coefficients of Multiple Regression Analysis was utilized. The correlation analysis results regarding the relationships between the corporate governance variables, control variables and the firm performance displayed in Table 6. Generally, the results show that board structure as corporate governance mechanism; board size, Board composition, CEO tenure all has a positive correlation with firm performance. The findings show that nonfinancial companies must have the right board size which is highly independent from the management of the company and with the appropriate expertise and skills. This would ensure that the board is well diversified and have the competence to give the strategic direction of the company.

Furthermore, the result is an indication that the nonfinancial companies are well positioned to support the Ghanaian economic growth and development. With Good corporate governance records, these nonfinancial companies would be able to generate more resources to create more employment opportunities, pay dividend to shareholders and generate more tax revenue to government. Again, through efficient management of their financial resources, they would be able to support the growth of investment in the economy through their financial intermediation role by channeling resources to the critical areas of the economy.

However, the study could not investigate other corporate governance characteristics due to data constraints. Therefore important factors such as Audit committee, remuneration committee, nomination committee, CEOs remuneration, disclosure and frequency of board meetings among others could not be included. Again, since only twenty eight (28) companies studied are listed on the stock exchange, I could not use market performance measures. Furthermore, the performance of a company is influenced by more factors than just Board structure as a good corporate governance mechanism. Issues of social, legal, economic and the political environment are equally important. It is therefore suggested that future research should consider some of these factors in exploring the impact of corporate governance on firm performance.

References


