The Impact of Board Structure on Firm Performance: Evidence from Ghana

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Abstract

Global crises and scandals in the past decades triggered interest in corporate governance, resulting in an increasingly growing regulatory environment, which would lead to more effective corporate governance and improved performance. Thus, the fundamental aim of this study is to examine the relationship between board structure and firm performance among non-financial Ghanaian listed companies. Therefore, to achieve the study's objectives, we collected data on a sample of 28 non-financial companies listed on the Ghana stock exchange (GSE) covering six financial year periods, 2012-2017. The variables such as board size, board composition, CEO duality, and CEO tenure were considered predictors of firm performance. We measured firm performance by employing accounting-based performance measures such as the return on assets (ROA), return on equity (ROE), and earnings per share (EPS) as proxies and, after that, using a multiple regression analysis within a balanced panel data framework. The results confirm that the three predictor variables revealed a significant positive impact on firm performance in Ghanaian listed companies. Based on the study's findings, we consider the study as offering several managerial policy implications that can be helpful to corporate boards, regulators, and practitioners championing the smooth course of corporate governance and firm performance. **Keywords:** Corporate governance, Board structure, firm performance, and non-financial listed companies.

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1. Introduction

Corporate governance represents the channel and solution that manage the relationship between shareholders, Boards, and company directors. There is always an uncertainty factor represented by the shareholders regarding how the directors of the companies 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 those directors use, there must be a solution that reduces the gap between shareholders and companies' management. This solution is referred to as a corporate governance mechanism that aligns the interests of shareholders and company management. Thus, the Board of directors assumes a monitoring function that aligns managers' interests with that of interested parties such as shareholders. Generally, corporate boards play an oversight responsibility, primarily an essential role in corporate governance, to oversee the company's operations and supervise management to achieve long-term value creation (Agyemang & Castellini, 2015). Accordingly, businesses worldwide require economic growth and development to attract financiers. Investors usually ensure that the companies in question are financially stable, secured, and able to generate profits in the long run before these investors put in their finance (Bhimani, 2008). Therefore, when companies' positions are not as promising as they may expect, investors will make no economic sense to invest in these businesses. However, the failure to attract enough capital will negatively affect the business and the general economy. The economic well-being of every nation is also accredited to the repercussions of the performance of its companies. Thus, low development and economic growth levels in developing countries are attributed to companies' poor performances due to low corporate governance practices. Given this, the World Bank, other international organizations, and researchers have identified these countries as not having the capacity to manage their resources but depend on the developed countries. Therefore, the emphasis placed on good corporate governance practices in the existing literature as the most crucial problem facing developing countries such as Ghana is worth acknowledging. However, the relationship between board structure and firm performance has received much attention, especially in developed countries like the US and UK and the developing countries, yet this has yielded many varying results (Alias, Yaacob, & Jaffar, 2017; Buallay, Hamdan, & Zureigat, 2017; Detthamrong, Chancharat, & Vithessonthi, 2017; Krause, 2017).

Meanwhile, there is no consensus on the ideal board structure regarding the Board size (Agyemang & Castellini, 2013). Again there is also an unsolidified controversy surrounding whether the Board should be composed mainly of "insiders or outsiders (Roy & Pal, 2017; Yasser, Al Mamun, & Rodrigs, 2017). The agency theory argues that board independence is important if the management team is effectively monitored because insider-dominated boards are not independent of management. Hence, the presence of outsider directors on the Board who are independent of management helps check management's actions (Aryani, Setiawan, & Rahmawati, 2017). On the contrary, the steward theory also argues that inside directors are more effective because they have more knowledge of the company's operations than outside directors and are also diligent as non-executive directors because of their legal responsibility and their interest in the company (Tulung, 2018; Yasser et al., 2017). 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; (Bokpin, 2009; Darko, Aribi, & Uzonwanne, 2016; Ofoeda, 2017) and a few others. Specifically, no study has yet been undertaken to examine the relationship between board structure and the firm performance of non-financial listed companies on the Ghana stock exchange, despite the important contributions of the non-financial sector to the economy of Ghana. The importance of Boards of directors was spelled out by a study carried out by (Fama & Jensen, 1983), who considered it one of the main elements of governance. It was further evidenced by (Limpaphayom & Connelly, 2006), who also stressed the need and the effective characteristics of the role of the Board of directors in overseeing management. Boards become essential for the smooth functioning of organizations. Boards are expected to perform different functions, which include monitoring management to mitigate agency costs (Madhani, 2017; Pearce II & Patel, 2018; Shleifer & Vishny, 1997). Hiring and firing management (Jensen, 2019), providing and giving access to resources (Oh & Chang, 2018), grooming CEO (Eguchi & Waldenberger, 2017; Schepker, Nyberg, Ulrich, & Wright, 2018), and providing strategic direction for the firm (Judge, 2017; Madhani, 2017; Stieglitz & Heine, 2007). Boards are also responsible for initiating organizational changes and facilitating processes that support the organizational mission (Kabeyi, 2019).

The agency theory establishes that an agency relationship is a contract whereby one or more persons (principals) engage another person (agents) to perform some service or duty on their behalf, which involves delegating some decision-making authority to the agent (Jensen & Meckling, 1976). The theory further postulates the inappropriateness of management or the agent to take 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 shareholders' 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 the chief executive officer (CEO) and chairman of the Board influence the firm and its financial performance (Fama & Jensen, 1983).

The non-financial 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 non-financial sector to the development of the Ghanaian economy coupled with the non-existing study on this subject, there is a compelling ground to conduct this research. This article is organized into five parts: the introduction, a review of relevant literature, followed by the methodology, data analysis and results, discussion, conclusion, recommendation, limitation of the studies, and future directions.

2. Literature Review

It is generally argued that when firms have good governance systems, they exhibit better performance than other firms. This study explores the existing literature of prior studies that examined the relationship between corporate governance (board structure) and firm performance. Several studies were done in developed and developing countries (Al-Matari, Al-Swidi, Fadzil, & Al-Matari, 2012; Hassan & Farouk, 2014), which examined the relationship between corporate governance. 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 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's bases come from an economic theory exposited by (Alchian & Demsetz, 1972) and further developed by (Jensen & Meckling, 1976). Agency theory is "the relationship between the principals, such as shareholders, and agents such as the company executives and managers."

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

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

Resource dependency theory focuses on the role of the Board of directors in giving access to the needed resources by the firm. Oh and Chang (2018) explain that resource dependency theory concentrates on the function directors 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 about the topic, the impact of board structure on firm performance, as well as some theories and views of others who have previously studied 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, the board size, board composition, CEO duality, and CEO tenure, with the firm's performance.

2.1 Hypotheses Development

2.1.1 Board Size and Firm 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 (Denis & Sarin, 1999; Eisenberg, Sundgren, & Wells, 1998a; Gertner & Kaplan, 1996; Sanda, Mikailu, & Garba, 2005; Yermack, 1996). 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 company's Board of directors. (Lipton & Lorsch, 1992) argue that the optimal size of the Board of directors should be between seven and nine to ensure accountability and coordination, reduce the free-ridding problem and faster decision making, enhancing 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, and the findings were 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. (Haniffa & Hudaib, 2006) argued that large boards are seen as ineffective in monitoring performance and could also cost 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 on Canadian public companies. His conclusion implies that the board size also negatively affected performance measured by return on sales, sales efficiency, and ROA. However, prior studies about 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 has a significant economic impact on firm value. Large boards are viewed to lead to better business performance owing to the wide variety of skills for better decision-making and monitoring of the CEO's performance.

Moreover, (Rechner & Dalton, 1991) 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 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 economics, organizational science literature, and finance on the empirical and 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 (professional referees) are not involved in the firm's day-to-day management but the decision-making and planning policies. To a large extent, the proportion of directors would 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 and Reishus (1990) and Byrd and Hickman (1992) argued that a board is seen to be more independent if it has more non-executive directors. Therefore, the studies by (Abor & Adjasi, 2007; Brickley, Coles, & Jarrell, 1997; John & Senbet, 1998) found a positive relationship between independent directors and firm performance. Also (Rashid & Rudkin, 2010) documented that firms with independent directors have fewer agency problems and shareholder alignments. It has also been debated that the effective way 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, more independent directors generally provide better firm performance. It has been concluded by (Al-Matari et al., 2012) that the proportion of independent directors affects firm performance. Previous studies examining the relationship between board composition and firm performance have been inconsistent. While some studies found that firms with a Board of directors dominated by outsiders can perform better (Adams & Mehran, 2005; John & Senbet, 1998; Kyereboah-Coleman & Biekpe, 2006) and supported by (Wang & Coffey, 1992) who also found 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 & Dalton, 1992); (Pearce & Zahra, 1992); (Baysinger & Butler, 1985)) Arguably supported the premises of the agency theory. (Hermalin & Weisbach, 1991) and (Bhagat & Black, 2001) (Mura, 2007) found no relation between the degree of board independence and four measures of firm performance. Based on the 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 that has given rise to concern is the personality phenomenon involving 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 same person holds the Chief Executive Officer and chairperson positions. CEO duality is an important governance mechanism due to the sensitive nature of the relationship between agents and principals (Krause & Bruton, 2014; Tian & Lau, 2001). Agency theory suggests that CEOs 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 work for the corporation's favor, as they are a steward of corporate assets. Managers are working to make a high reputation for themselves, which benefits the corporation.

CEO non-duality leads to better performance than CEO duality (Brickley et al., 1997; Ramdani & Witteloostuijn, 2010). Ramdani and Witteloostuijn (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 combined leadership helps monitor top management's activities and thus decreases agency costs. However, Baliga, Moyer, and 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 interest as opposed to the shareholders. Yan Lam and Kam Lee (2008) and Yusoff and Alhaji (2012) argue that when the CEO and board chair positions are separate, the firm's value increases. Brickley et al. (1997) argue that CEO duality in a firm favors 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 their 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 take decisions

that would enhance firm performance. In this regard, longer tenure is expected to influence performance positively. However, some studies have revealed that long-serving CEOs resort to building an empire rather than focusing on productivity. However, some studies investigating the relationship between CEOs' tenure and firm performance found mixed results. For example, Kyereboah-Coleman (2007) found a negative relationship between CEO tenure and Ghana firms' performance. Performance-related turnovers are observed in cases where the CEO left before retirement.

But, the shorter the CEO's tenure in office, the poorer his performance, and vice versa. Contrary, in an earlier study carried out by Hill and 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.

Figure 1. Theoretical framework and hypothesized relationships

3. Research Methodology

3.1 Research Design

To achieve the objectives of this study, a multiple regression analysis was used to investigate the relationship between (board size, board composition and independence (non-executive directors), CEO duality, and CEO tenure as independent variables and firm performance using Return on Asset, Return on Equity, Earnings per share as dependent variables and also using firm size, and leverage as controlling variables.

3.2 Data Collection and Procedure

In our research, we selected the sample from companies listed on the Ghana stock exchange (GSE). The total number of companies listed on the Ghana stock exchange (GSE) active non-financial companies representing 67% of the total number of companies listed on the exchange, covering six years from 2012-2017. Financial Companies such as banks and other financial institutions were also (14) representing 33% on the GSE, 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). The data was collected from the selected companies' annual reports on the Ghana Stock Exchange website. These annual reports include; financial statements, namely, Income statements, Cash flow statements, statements of changes in owner's equity, Statements of financial position, and statements of corporate governance as well as from the director's profile. The study used a balanced panel data framework (Abor & Biekpe, 2007). It involves the pooling of observations on cross-sections of units over several periods. It provides results that are not noticeable in pure time series in pure cross-section or pure time series studies. Firms that lack the independent variables' data and those lacking data for calculating the proxies for firm performance are also excluded. Hence, the final panel's data are of 168 firm-year observations, by this way, the real contents only are retained, and this is useful to maintain data away from any distortion.

3.3. Measurement of variables

3.3.1 Dependent Variable

From the prior empirical studies, the most commonly used proxies to measure firm performance are ROA, ROE, and EPS (Ameer, Ramli, & Zakaria, 2010; Denis & Sarin, 1999; Eisenberg, Sundgren, & Wells, 1998b; Hillman & Dalziel, 2003; Lipton & Lorsch, 1992). All of these researches and many others used the same proxies for measuring performance. Therefore, this study also considered these performance indicators normally include profitability, efficiency, size, leverage, and liquidity. According to Bourne, Franco, and Wilkes (2003), a good performance measure must have a broad base measure, a structured understanding of strategy, provide feedback and take action on results. This study certainly focused on those predominant measures that are important for the success of various companies. Based on the above, this study follows the existing works from the prior studies and adopts the same proxies to measure firm performance. These represent accounting-based proxies for measuring a company's financial performance. Examples are used commonly in the governance literature, namely ROA, ROE, and EPS (Abduh, Omar, & Duasa, 2011; Yusoff & Alhaji, 2012).

3.3.2 Independent Variables

The study examines the impact of corporate governance mechanism - i.e., board structure on firm performance in Ghana. Board structure includes board size, Board composition, CEO duality, and CEO tenure.

Board size is measured as the total number of directors on the company's Board. The company law of Ghana stipulates for public directors to be 5 to 13 members. This role is dual when the CEO also serves as the chairman of a board of directors. Therefore, CEO duality is measured using a binary variable, where "1" indicates whether the CEO also serves as chairman and "0" means otherwise. A non-executive board member is known as independent board member. It is computed as the proportion of independent board members on the Board. CEO tenure depicts how long the person has occupied such a position in the said company.

3.3.3 Control variables.

Beyond the predictor variables, we introduced some control variables theoretically relating to firm performance in the regression model. Therefore, our analysis includes the following two control variables: firm size, and leverage. The two variables are briefly described as follows; **Firm Size**

It is measured as the company's total assets. Using firm size as the control variable in this study is motivated by the fact that it is associated with companies with different characteristics. Cheng, Evans, and 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 and that insider representation is inversely proportional to firm size and directly related to the proxy for opportunities growth; thus, firm size affects firm performance.

Leverage

Leverage is calculated as total liabilities divided by the total assets. Several empirical studies, such as Kyereboah-Coleman and Biekpe (2006) and Alsaeed (2006), have widely used leverage as a control variable that has examined the relationship between corporate governance and the financial performance of the company. In their attempt to justify taking leverage as a control variable, these studies have revealed that debt affects the company's financial performance. As Alsaeed (2006) suggested, firm leverage was measured by dividing the total liabilities by the total assets. In light of the above discussion, a detailed description and the measurements of all the variables (i.e., three dependent variables, four independent variables, and two control variables) are summarized in Table 1.

Category	Description	Abrev.	Definition/Measurement
Dependent Variable	Firm performance		
	Return on Asset	ROA	Net Income as a percentage of total Assets
	Return on Equity	ROE	Net Income as a percentage of total shareholder's equity.
	Earnings Per Share	EPS	Net Income – Dividend on preferred stock average outstanding shares.
Independent Variables	Board factors		
	Board size	BS	The number of directors on the Board.
	Board composition	BIND	The proportion of non-executive directors sitting on the Board to the total number of directors.
	CEO Duality	CDual	A binary variable, "1" where the CEO is Chairman of the Board, and "0" indicates otherwise.
	CEO Tenure	CEO Ten	Number of years in the position
Control Variables	Company Size	Size	Log of total assets at the period end.
	Leverage	Lev.	The ratio of total liabilities to total assets.

Table 1: Summary of variables, their descriptions, and measurements.

Source: Author's computation based on prior studies.

4 Data Analysis and Model Specification

4.1 Model Specification

In other to test firm performance empirically, we followed the existing literature and modeled firm performance as a function of board structure with the control variables. Hence, the study estimates the following panel data regression model:

$$ROA_{it} = \alpha_i + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 CDUAL_{it} + \beta_4 Tenure_{it} + \beta_5 CSIZE_{it} + \beta_6 LEV_{it} + \varepsilon_{it}$$
(1)

where, ROA represents return on assets, BSIZE denotes Board size, BIND means Board composition, CDUAL is CEO Duality, Tenure shows CEO Tenure, CSIZE indicates company size, LEV means leverage, ε depicts the error term, i is the cross-sections, and t denotes the time series.

Using similar models, we again investigate the remaining two proxies of firm performance. Thus, ROE and EPS models:

$$ROE_{it} = \alpha_i + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 CDUAL_{it} + \beta_4 Tenure_{it} + \beta_5 CSIZE_{it} + \beta_6 LEV_{it} + \varepsilon_{it}$$
(2)

$$EPS_{it} = \alpha_i + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 CDUAL_{it} + \beta_4 Tenure_{it} + \beta_5 CSIZE_{it} + \beta_6 LEV_{it} + \varepsilon_{it}$$
(3)

where, ROE shows return on equity and EPS denotes earnings per share.

5. Result and Discussion

5.1 Descriptive Statistics

The main objective of this analysis is to measure the level of firm performance of non-financial companies. The descriptive analysis study shows the firm performance and the averages of the other components of dependent and independent variables as well as the controlling variables.

Table 2: Descriptive Statistics of Panel Data: 2012-2017.

Variables	Obs	Mean	Std. Dev.	Min.	Max.	Variance	Skewness	Kurtosis
Return on Assets	168	0.62	21.58	(91.64)	29.76	465.59	(2.13)	10.25
Return on Equity	168	4.51	27.50	(70.81)	61.65	756.30	(0.56)	3.51
Earnings per share	168	17.01	109.83	(568.00)	232.00	12,062.00	(3.47)	20.07
Board Size	168	8.46	1.58	5.00	11.00	2.50	(1.33)	3.93
Board composition	168	4.14	1.83	2.00	8.00	3.36	1.09	3.30
CEO Duality	168	0	0	0	0	0	0	0
CEO Tenure	168	2.57	1.79	0	5.00	3.19	0.19	1.77
Firm Size	168	16.98	3.49	11.48	22.94	12.12	(0.18)	1.89
Leverage	168	0.45	0.58	(0.79)	1.87	0.34	(0.22)	3.51

Table 2 shows the descriptive statistics of the panel data for the period tested (2012 - 2017). On average, most companies achieved a return on assets of 0.62%, with a maximum of -91.64% and a minimum of 29.76%, respectively. The mean value of the return on equity was 5%, a maximum of 62%, and a minimum of -71%. In terms of EPS, the mean value was 17%, meaning and minimum value of -6% and a maximum value of 2%. The descriptive statistics for board size show that the average number of board members is 8 and ranges between a minimum of 5 and a maximum of 11 members.

Moreover, the Board's average number of independent directors on the Board is 4.14, with a minimum of 2 and a maximum of 8 members. CEOs' average number of years in office is 2.5 years, up to a maximum of 5 years and a minimum of less than 1 year. Besides, the standard skewness statistics show the normality of the data. The data to be normally distributed, the standard skewness should be within the range ± 1.96 (Haniffa & Hudaib, 2006). **Table 2** shows 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. Before carrying out the multiple regression analysis, a correlation matrix was developed to analyze the relationship between the independent variables. This helped to develop a prediction in the models, revealing no relationship in cases where the correlation value 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 $r = \pm 0.1$ to ± 0.29 , while the relationship is considered medium when $r = \pm 0.30$ to ± 0.49 , and when r is ± 0.50 and above, the relationship can be considered strong. **Table 3** below reveals the correlation between board size, board composition, CEO duality, CEO tenure, firm size, and leverage with firm performance (ROA), (ROE), and EPS.

Variables	EPS	ROA	ROE	BS	BCOMP	CDUAL	TENURE	CSIZE	LEV.
Earnings per share	1.00								
Return on Assets	0.23	1.00							
Return on Equity	0.57*	0.56*	1.00						
Board Size	0.19**	0.04**	0.08**	1.00					
Board Composition	0.01***	0.58***	0.08***	-0.02	1.00				
CEO Duality	0.00	0.00	0.00	0.00	0.00	0.00			
CEO Tenure	0.09*	0.34**	0.12**	-0.49*	-0.33*	0.00	1.00		
Firm Size	0.02**	0.12**	-0.16	-0.17	-0.36*	0.00	0.66***	1.00	
Leverage	0.09**	-0.17	0.20	0.08	0.34*	0.00	0.14	-0.08	1.00

Table 3: Pearson's Correlation coefficients of the study variables.

Note: *Significance at 10% level, **Significance at 5% level, ***Significance at 1% level.

Table 3 shows the correlation between firm performance, governance mechanism, and control variables. These findings reveal that Board size is positively correlated (r = 0.19, p<0.05), (r = 0.04, p<0.05), (r = 0.08, p<0.05), with EPS, ROA and ROE, and significant at the 0.05 level, respectively. Moreover, there is also a Board compositions positive correlation (r = 0.01, p<0.01), (r = 0.58, p<0.01), (r = 0.08, p<0.01), (r = 0.01, p<0.01), (r = 0.00, p<0.00), with ROA, whiles leverage is negatively correlated (r = -0.17, P<0.05), and CEO tenure, and firm size, positively correlate with EPS, ROA and ROE. In con

5.3 Hypothesis Testing, Results, and Discussions

To test the hypothesis of the study, the multiple regression analysis was adopted using the firm's financial performance (ROA), ROE, and EPS as dependents and Board structure 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 4**. Based on the regression model, it means that at least one of the variables is a significant determinant of the firm performance. Since the predictor variables included in the model explains 58.5%, 58.3% and 52.4% of model fitness in the ROA, ROE, and EPS as shown by the R^2 indicator. Additionally, these results also indicate that over 60% of the variance in both ROA and ROE, and 53% in EPS might be explained by other factors which were not included in the model and has been corrected with the standard error as also indicate in the adjusted R^2 indicator.

Table 4: The Coefficients of Multiple Regression Analysis

Variables	ROA	ROE	EPS	
Board Size	0.6927**	1.0061**	1.0001**	
Board composition	2.0039***	0.056***	0.536***	
CEO Duality	0.00	0.00	0.00	
CEO Tenure	1.5581**	0.881**	0.732***	
Firm size	0.9267**	0.524	0.769**	
Leverage	0.0000*	0.979	0.818	
Cons_	-4.1365	124.320	-295.359	
Obs	168	168	168	
R-Squared	0.585	0.583	0.524	
Adjusted R-Squared	0.651	0.613	0.526	

Note: *Significance at 10% level, **Significance at 5% level, ***Significance at 1% level.

Based on the results in Table 4, board size was found to have a significant positive effect on firm performance at the 0.05 level of significance

 $(\beta=0.6927, p<0.000), (\beta=1.0061, p<0.000), (\beta=1.0061, p<0.000) for ROA, ROE and EPS respectively, which is consistent with the hypothesis predicted. Therefore, hypothesis (H1) is accepted. This result suggests that larger boards are better than smaller boards. Thus, the larger the Board, the better the company's performance. This position is established on the assumption that larger boards are created with members with different skills and professional expertise from different backgrounds. This facilitates better decision-making and places the Board in a better position to monitor management activities. This is in support of (Rechner & Dalton, 1991), who reported that large boards are associated with more robust performance. These results supported the conclusion made by (Pfeffer, 1972) and (Zahra & Pearce, 1989) regarding the relationship between board size and firm performance. A negative effect supports the findings of (Jessen 1993) and (Shakir, 2008). This is also consistent with the agency theory perspective that a smaller board is related to better firm performance (Gertner and Kaplan, 1996; Yermack, 1996; Eisenberg$ *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 favor smaller boards and have pressured companies to reduce board size (Gertner & Kaplan, 1996).

Similarly, the board composition was also found to positively impact firm performance with (β = 2.0039, p<0.000), (β = 0.056, p<0.000), (β = 0.536, p<0.000) for ROA, ROE and EPS respectively at the 0.001 level of significance. This means that the hypothesis formulated (H2) is accepted. Therefore, this is supported by (Brickley et al., 1997; John & Senbet, 1998), (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 a positive relationship between independent directors and firm performance. Also (Rashid et al., 2010) documented that firms with independent directors have fewer agency problems and have more alignments with shareholders. Again, there was no relation between CEO duality and firm performance. CEO duality has no relationship with firm performance.

Therefore, we reject the H3. This means that the only way to maintain the CEO position is through performance. Following the same reasoning, CEO tenure was also found to positively impact firm performance at the 0.001 level of significance with (β =1.5581, p<0.000), (β = 0.881, p<0.000), (β = 0.732, p<0.000) for ROA, ROE and EPS respectively. The statistical results support hypothesis H4 regarding the relationship between CEO tenure and firm performance. We, therefore, accept hypothesis H4. This result indicates that the longer the CEO spends in his position, the better the firm performance. This is because if the CEO's job security is guaranteed, they would be prepared to make capital investment decisions that would have a long-term effect on performance. It is also important that the Board adopt a comprehensive approach in evaluating the CEO's performance so that they do not concentrate only on the short-term earnings of the firm but must look into the future and the benefits the firm is likely to derive from decisions taken.

While the firm size was not a significant predictor of the firm performance with (β = 0.9267, p>0.1), (β = 0.524, p<0.000), (β = 0.0769, p<0.000) the leverage was found to have no significant predictor of the firm performance at the 0.1 level of significance with (β = 0.000, p<0.1), (β = 0.979, p<0.000), (β = 0.818, p<0.000) to ROA, ROE and EPS respectively.

6. Conclusions

The main objective of this research was to examine the impact of board structure on firm performance evidence from the non-financial listed companies on the Ghana stock exchange. A Multiple Regression Analysis was used to establish the relationships, and the results regarding the relationships between the corporate governance variables, firm performance, and control variables are displayed in **Table 4**. Generally, the results show that board structure as a corporate governance mechanism; board size, Board composition, and CEO tenure positively correlate with firm performance, while CEO duality shows no relationship.

6.1 Recommendations

Based on the findings mentioned above, the study suggests the following managerial policy implications for corporate boards, regulators, and practitioners in Ghana, other developing countries, and around the world interested in promoting good corporate governance practices to promote the financial performance of companies towards achieving the economic well-being of their societies to drive accelerated development.

 First, Ghanaian non-financial companies must have the right board size, be highly independent of the company's management, and with the appropriate expertise and skills. This would ensure that the Board is well diversified and competent to give the company's strategic direction.

- Secondly, they are encouraged to consider increasing the number of non-executive directors on their boards to enhance the
 independence of the Board for quality decision making and policy planning, transparency of operations, and achieving profitability
 and accountability of the companies. This will ensure that shareholders' and managers' interests are well protected.
- Also, CEO Tenures should be well specified to ensure their job security so that they would make decisions that would reflect the company's performance. CEOs' tenure extension should be reviewed based on performance to prevent long-serving CEOs from building an empire.
- Finally, Ghanaian companies should position themselves well to support economic growth and development. With Good corporate governance records, adoption of the governance code, and adherence to good corporate governance practices, these non-financial companies could generate more resources to create more employment opportunities, pay dividends to shareholders and generate more tax revenue for the government. Again, through efficient management of their financial resources, they could support the growth of investment in the economy through their financial intermediation role by channeling resources to the critical areas of the economy.

6.2 Limitations and future research studies.

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

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