Board Characteristics and Firm’s Financial Performance in Nigeria

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Abstract

The fallout from the financial crisis has placed a heavier focus on best practices for corporate governance principles. Boards of directors feel more pressure than ever before to be transparent and accountable. The study examined the effect of board size and its independence on the performance of listed entities in Nigeria. It further determined the effect of board diligence and board diversity on the performance of quoted firms in Nigeria. These were with the view of examining the relationship that exists between board characteristics and performance of quoted firms in Nigeria. The study which covered a ten-year period (2009–2018) made use of secondary data sourced from published annual reports and accounts of 35 purposively selected listed companies on the Nigerian Stock Exchange (NSE). The Pooled Ordinary Least Square (OLS) and Generalised least square method of regression techniques were employed in analyzing the data obtained. Findings from the study revealed that a significant negative relationship exists between earnings per share and board size with a coefficient of -0.33 and p-value of 0.0095 (>0.01) and between earnings per share and board diligence with coefficients of -0.43 and -0.48 and p-value of 0.02 (>0.05) and 0.0095 (>0.01) respectively, but no significant relationship exists between earnings per share and board independence with coefficients of -2.67 and -1.64 and p-value of 0.0218 and 0.49 respectively and between earnings per share and board gender diversity with coefficients of 0.06 and 0.08 and p-value of 0.42 and 0.36 respectively. The study concluded that board size and board diligence have impact on the performance of quoted companies in Nigeria, while board independence and gender diversity do not have effect on the performance of quoted firms in Nigeria. It was recommended small board size of diverse educational background and wide experiences of members, and regular meetings to discuss matters that concern the performance of firms.

Keywords: Corporate Governance, independent directors, board characteristics, Performance,

JEL Classification: L25, M21

1. Introduction

Issues of governance and corporate performance have received serious empirical consideration in recent times. This unending enthusiasm on governance research may have been sustained by the high profile corporate demise, financial scandals and the global financial meltdown resulting in general loss of public confidence and investor's apathy. Corporate governance transcends the daily management of business activities (Bairathi, 2009). The board of director has a part to play in corporate governance as their main duty is that of supervising the management to ensure proper accountability to shareholders and other stakeholders. Since the board of director is vested with the responsibility of monitoring the interest of
shareholders, they ought to have greater interest in the appointment of directors to ensure that qualified, experienced and educated directors are appointed. Individual firms apart from the Security and Exchange Commission (SEC, 2011) requirements have specified the profile requirements expected of their directors. Corporate governance is dynamic and appears broader than the conventional management practices. It is concerned with transparency in business dealings, probity and accountability, ethical conduct, fairness and strict compliance with both regulatory and ethical standards. Against the backdrop of the robustness of governance issues, one fundamental question becomes pertinent: do board characteristics affect the performance of the firm?

Studies have shown that corporate governance can be measured through board size, board women, CEO duality, board education, working experience, outside directors, compensation and block holders (Vo & Phan, 2013). Several studies have examined the impact of CEO duality, board composition, board size, board independence on firm performance. In Nigeria, studies like Sanda, Mukailu, and Garba (2005), Ehikioya (2009), Babatunde and Olaniran (2009), Kajola (2010), and Akhalumeh, Ohiokho, Ohiokha (2011) have studied corporate governance and firm performance, but did not consider the elements of gender diversity, age, educational qualification, board diligence, board experience, and board independence. Therefore, this study aims to bridge the gap between the inconclusive results because of various reasons such as fast changing of the market, management methods and different approaches from earlier studies by using the main corporate board characteristics such as; Board size, Board Independence, Board Diligence, and Gender diversity to explain the relationship between board characteristics and performance of quoted entities in Nigeria. The main objective of this study is to investigate the effect of board characteristics on performance of quoted firms, using Nigerian corporate entities listed on the Nigerian Stock Exchange.

2. Literature review

2.1 Theoretical background

This study uses the agency theory as a theoretical background to form an empirical framework for assessing board composition and firm performance of selected listed companies in Nigeria. Agency theory was developed by Jensen and Meckling (1976). They suggested a theory of how the governance of a company is based on the conflicts of interest between the company’s owners (shareholders), and its managers. Each of these groups has different interests and objectives.

The shareholders want to increase their income and wealth. Their interest is with the returns that the company will provide in the form of dividends, and also in the value of their shares. The value of their shares depends on the long-term financial prospects for the company. Shareholders are therefore concerned about dividends, but they are even more concerned about long-term profitability and financial prospects, because these affect the value of their shares. The managers are employed to run the company on behalf of the shareholders. However, if the managers do not own shares in the company, they have no direct interest in future returns for shareholders, or in the value of the shares. Managers have an employment contract and earn a salary. Unless they own shares, or unless their remuneration is linked to profits or share values, their main interests are likely to be the size of their remuneration package and their status as company managers.

Jensen and Meckling (1976) defined the agency relationship as a form of contract between a company’s owners and its managers, where the owners (as principal) appoint an agent (the managers) to manage the company on their behalf. As a part of this arrangement, the owners must delegate decision-making authority to the management. The owners expect the agents to act in the best interests of the owners. Ideally, the ‘contract’ between the owners and the managers should ensure that the managers always act in the best interests of the owners. However, it is impossible to arrange the ‘perfect contract’, because decisions by the managers (agents) affect their own personal welfare as well as the interests of the owners. This raises a fundamental question. How can managers, as agents of their company, be induced or persuaded to act in the best interests of the shareholders?
2.2 Board Size and Firm Performance

Board size affects the quality of deliberation among members and ability of board to arrive at optimal corporate decisions. However, determining an ideal size of the board has being an ongoing and controversial debate in corporate governance literature. Several arguments arise in the literature on whether the size of corporate boards determines corporate performance. This argument always prevails due to the strategic posture of board members in companies’ policies and strategies. Among others, Said et al. (2009) evidenced a significant negative relationship between board size and corporate performance, advocating that large board size result to ineffectiveness in communication, coordination and decision-making. However, a study conducted on a sample of public listed Indonesian companies by Siregar and Bachtiar (2010) found a non-linear relationship between board size and improved corporate performance. The study noted that a large board would be able to exercise better monitoring, but too large board will render the monitoring process ineffective. Chang et al. (2012), Esa and Mohd-Ghazali (2012) provide evidence of a positive relationship between board size and corporate performance. Based on the positive findings, Esa and Mohd-Ghazali (2012) argued that larger boards offer more knowledge and experience and also put forward different ideas in board deliberations. Similarly, Haji and Mohd-Ghazali (2013) concluded that large board size is connected with increased monitoring capacity which could lead to sharing of a variety of experiences in boardrooms. Besides, a corporate governance-sustainability disclosure study conducted on a sample of 50 Pakistan companies by Lone, Ali, and Khan (2016) established that a large number of directors on corporate boards bring the experiences of diverse backgrounds which affect the level of corporate performance. More recently, Sadou et al. (2017) highlighted that larger boards are more effective and have greater influence over companies’ performances. On the other side, some literature provided evidence of a negative association between board size and sustainability disclosure. In Nigeria, the rule guiding the size of a corporate board is spelled out in the country’s corporate governance code. Specifically, the revised code of corporate governance 2018 stipulates that corporate board size should be relative to the complexity and scale of companies’ operations. The code further specifies that the number of directors in company’s board should not fall below five (5). However, the governance code did not specify the maximum number of directors a company should appoint for any specified period. Therefore, considering the provision in Nigeria’s revised corporate governance code, this study expects board size to have a positive effect on corporate performance.

**Hypothesis 1:** The size of the board will have significant impact on the performance of quoted firms.

2.3 Board Independence and Firm Performance

The presence of independent directors on a board can help to segregate the management and control tasks of a company and this is expected to offset inside members’ opportunistic behaviours (Jensen and Meckling, 1976 cited in Hussain et al., 2016). In addition, independent directors generally have stronger and extended engagement with wider groups of stakeholders (Wang and Dewhirst, 1992), and they tend to have a broader perspective that is likely to result in a greater exposure to performance requirements (Rupley et al., 2012). However, despite several support for independent directors on corporate boards, debates were still ongoing whether independent directors are able mechanism for aligning managerial interests with those of shareholders and also their value creation merits for corporate performance. Huang (2010) concluded that independent directors act as a monitoring mechanism that ensures companies are properly managed by corporate management and also work towards enhancing corporate image and performance. A study conducted on a sampled US firms by Zhang, Zhu, and Ding (2013) claims that independent directors have more diverse background and represents external stakeholders of companies. As such, they have a stronger orientation towards better operation strategies than their counterparts in the boardroom. Studies Sharif and Rashid (2014), Kaur et al., (2016) indicated a positive link between board independence and improved corporate performance.
Conversely, Abdullah et al. (2011) affirmed that independent directors are not effective in discharging their duties, talk less of going against other members of the boards. Additionally, Al-Moataz and Hussainey (2012) reiterated that higher number of independent directors on companies’ boards leads to less effective board monitoring and equally lower levels of corporate transparency. Michelon and Parbonetti (2012), Janggu et al. (2014) provided evidence of an insignificant relationship between independent directors and improved corporate performance. This suggests that board independence does not seem to play a vital role in improving or determining a firm's extent of performance. Based on the insignificant result observed, managers are perceived as moral agents other than opportunistic individual. As such, their role is to achieve a balance between the interests of diverse stakeholders (Shankman, 1999; cited in Bello and Kamarul, 2017). Therefore, it is presumed that a corporate board with a higher proportion of independent directors will ensure improved board monitoring quality and also work toward satisfying the needs of all stakeholders. Therefore, based on the positive result observed in the extant literature, this study anticipates a significant positive relationship between board independence and corporate performance. This implies that with a higher proportion of independent directors on a corporate board, a company will exhibit more concern and give more attention to corporate performance.

**Hypothesis 2:** The independence of board members will improve the performance of quoted firms.

2.4 Board Diligence and Firm Performance

Board diligence here refers to the number or frequency of board meetings. Some studies advise against frequent board meetings, while others believe that frequent meetings will enhance the performance of the firm. Ghosh (2007) found a statistically significant impact of board diligence on firm performance, noting that 10% increase in diligence increases the performance of the organisation by 1%. Ntim and Osei (2011) found a positive relationship between board meeting frequency and firm performance in their study on South African listed firms for the period of 2002 to 2007. The board members’ capacity for consultation, supervision and management increased because they met regularly through meetings, and this situation resulted in good firm financial performance. Similarly, Irshad and Ali (2015) discovered that independent directors, board meeting frequency and board size exert a positive effect on firm performance measured through coefficients of Q and returns on asset (ROA). Akpan (2015) obtained similar results in his study on 79 listed companies in Nigeria from 2010 to 2012. Johl et al. (2015) categorized board diligence as part of the key corporate governance mechanism that helps in guiding and advising the management towards the pursuit of shareholder interest amidst other control functions. The aforementioned study also detailed the regulation placed on Malaysian companies by regulators. The Malaysian code encourages regular board meetings and regular disclosure of details of frequency as well as member attendance. This is said to increase board effectiveness and also bring the board members into one mind by serving as a medium for disseminating salient information to all board members as regards the progress of the company.

However, others believe that Board meeting frequency negatively affects firm performance in the current year because board meetings are costly in terms of time and costs incurred in relation to the meetings (Vafeas, 1999). A study conducted with a sample of 328 Malaysian listed companies from 2003 to 2007 reported that high board meeting frequency causes low firm performance (Amran, 2011). Francis et al. (2012) used a financial crisis as a sample period to examine the extent to which corporate boards affect firm performance. The results showed that board meeting frequency and directors’ attendance behaviour and age affect firm performance during a crisis. Unlike previous studies, the study of Horváth and Spirollari (2012) used a sample of 136 firms traded on S&P 500 Index from 2005 to 2009 to examine the relationship between firm performance and several factors related to the characteristics of the board of directors, including board meeting frequency. They found no relationship between firm performance and board meeting frequency. The impact of board meetings on firm performance is an important issue in transition literature. A different view is that board meetings are not necessarily useful because the limited time external directors spend together is not used for the meaningful exchange of ideas among themselves or with the management (Jensen, 1993). Johl, Kaur and Cooper (2013) used financial and non-financial data from companies listed on the Malaysian Stock Exchange market in 2009. The result of the study reported a negative relationship between board diligence and financial performance. The implication of the finding
is that less frequent, but meaningful meetings should be encouraged. Frequent meetings will result in diverting organizational resources to less productive activities (Chorsch & Maclver, 1989). This negative relationship is also consistent with Johl (2013) and Lipton and Lorsch (1992).

**Hypothesis 3:** The diligence of board members will have significant impact on the performance of quoted firms.

### 2.5 Board Gender Diversity and Firm Performance

The number of studies on board gender diversity and firm performance from different countries has increased in recent years because of the unique knowledge, information and variety of experiences, skills and networks of gender-diverse boards (Hillman et al., 2007; Miller & del Carmen Triana, 2009). A board with female members is more able to integrate the interest of multiple stakeholders, including employees, customers, suppliers and the communities with the performance-based interests of shareholders (Harrison and Coombs, 2012). This argument is supported by Smith et al. (2006) cited in Vo and Phan, (2013), who considered three different reasons to recognize the importance of female on a board. First, female board members usually have a better understanding of a market in comparison with male members. As such, this understanding will enhance the decisions made by the board. Second, female board members will bring better images in the perception of the community for a firm and this will contribute positively to firm’s performance. Third, other board members will have enhanced understanding of the business environment when female board members are appointed. Hence, as a result of women on board, a firm’s performance is improved directly and indirectly. Low, Roberts and Whiting (2015) investigated Asian firms in Hong Kong, South Korea, Malaysia and Singapore and found that the appointment of female directors can positively affect the firm’s performance. Rao and Tilt (2016) conducted a comprehensive review of prior board diversity and overall corporate performance. Based on the review, Rao and Tilt concluded that the impact of having females on corporate board is likely to be minimal except when there is a critical mass. A growing body of contemporary research on boards and board roles suggested that women directors on board have the potential to increase board effectiveness and firm performance (Carter et al., 2003; cited in Bello and Kamarul, 2017). Women on board facilitate in-depth discussions and alternative perspectives and are more likely to be beneficial in the course of uncertainties and complex decisions.

Conversely, Adams and Ferreira (2009) and Pletzer, Nikolova, Kedzior, and Voelpel (2015) highlighted a negative relationship between female directors and firm performance due to these directors’ lack of skills and experiences in monitoring the performance of their firms. Strydom, Au Yong, and Rankin (2016) found that board gender diversity may not affect firm performance in terms of earnings quality. They also found that a higher proportion of female directors on the board of Australian firms corresponds to a lower stock price volatility. They added that female directors might not be employed based on their level of expertise and experiences but rather based on their family relationships (Bianco, Ciavarella, & Signoretti, 2015; Saeed, Yousef & Alharbi, 2017).

In the context of Nigeria, culture plays a pivotal role in restricting women’s participation in corporate boards. However, this perception is gradually fading out. As such the significance of gender diversity is nowadays becoming obvious and visible (Şener and Karaye, 2014). An example is the recent measure put in place by the Central Bank of Nigeria (CBN) to boost female representation in board formation in the country. The CBN through its banker’s committee imposes mandatory quota target on deposit money banks. The aim is to increase women’s representation on companies’ boards to 30 percent (Şener and Karaye, 2014). Therefore, considering the recent changes in Nigerian gender diversity policies and also the view of stakeholder theory which supports a positive association between board diversity and firm performance, this study expects women on board to have a positive and significant effect on firm performance.

**Hypothesis 4:** Board gender diversity will affect the performance of quoted firms.
3. **Methodology**

The researchers employed purposive sampling technique to select the 35 listed entities from the Nigerian Stock Exchange as at 31st December, 2008 across nine sectors out of the entire (eleven) sectors in Nigeria as the sample for the study. Purposive sampling technique was adopted to ensure that companies with adequate data within the selected years are selected in order to have a balanced panel. Sample will be drawn from nine sectors namely: Conglomerates, Consumer Goods, Financial Services, Healthcare, ICT, Industrial Goods, Industrial Services, Oil & Gas and Services. The other two sectors, Agriculture and Real estate, were exempted from selection because sufficient data were not available for the studied years (2009-2018) to enable the researched to arrive at a reasonable conclusion. The reason for using those sectors is to ensure that all industries with adequate data for the years under consideration are included. This paper employed secondary data sourced from the audited reports and accounts of the selected firms available on the **Nigerian Stock Exchange Fact Books for 2009 to 2018**. The choice of the study is guided by the availability of relevant data.

In order to examine the effect of board characteristics (independent variables) proxied by board size, board experience, board independence and gender diversity on firm performance (dependent variable) measured by Earning Per Share (EPS), we specify the following equation can be computed as:

\[ Y = \beta_0 + \beta X_1 + \beta CV + \mu_{it} \]  \hspace{1cm} (1)

Where:
- \( Y \) = Quoted Firm Performance (Dependent variable)
- \( X \) = Board Characteristics (Independent variable)
- \( CV \) = Control Variables such as firm size, liquidity and leverages
- \( \beta \) = Coefficient
- \( \mu_{it} \) = Error term

Equation 1 can be more clearly defined as:

**Quoted Firm Performance** = \( f \) (Board Characteristics) + c \hspace{1cm} (2)

Equation 2 is further expanded by introducing the constructs of Quoted Firm Performance and Board Characteristics, including a control variable, hence formulating equation 3.

Earnings Per Share = \( f \) (board size, board diligence, board independence, gender diversity, firm size, liquidity and leverages) + c \hspace{1cm} (3)

The model specification based on regression is:

\[ EPS_{it} = BS_{it} + BD_{it} + BI_{it} + GD_{it} + FZ_{it} + LQ_{it} + LEV_{it} + \mu_{it} \] \hspace{1cm} (4)

Where:
- \( EPS \) = Earnings Per Share is the proxy for measuring quoted firm performance.
- \( BS \) = Board Size; which is the number of board of directors running the affairs of the company.
- \( BD \) = Board Diligence; It is the number or frequency of board meetings.
- \( BI \) = Board Independence; which is the number of independent directors among the board members.
- \( GD \) = Gender Diversity; which is the ratio of male to female among the board of directors.
- \( BS \) = Size of the firm measure by logarithm of firms’ total asset
- \( LQ \) = Total debt divided by shareholders’ equity
- \( LV \) = Current asset divided by current liabilities
- \( \beta \) = Coefficient of parameters
- \( \mu \) = Error term, which captures other explanatory variables not explicitly included in the model.
- \( \mu_{it} \) = time coefficient; i.e. for firm \( i \) in year \( t \)

The equation (4) was estimated using pooled OLS and Generalised least square.

4. **Research findings**

Table 1 showed the mean, the median, the maximum, minimum, the standard deviation, the skewness, the Kurtosis, Jarque-Bera, the probability, the sum, the sum square deviation and the observations
of all the variables used in the research project. The data were obtained from the annual reports of 35 companies listed across nine (9) sectors on the Nigeria Stock Exchange (NSE) from 2009 to 2018 with a total number of 338 observations.

<table>
<thead>
<tr>
<th>Table 1 - Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
</tr>
<tr>
<td>Mean 2.078698</td>
</tr>
<tr>
<td>Median 0.410000</td>
</tr>
<tr>
<td>Maximum 54.26000</td>
</tr>
<tr>
<td>Minimum 0.000000</td>
</tr>
<tr>
<td>Std. Dev. 5.310360</td>
</tr>
<tr>
<td>Skewness 5.944205</td>
</tr>
<tr>
<td>Kurtosis 46.09717</td>
</tr>
<tr>
<td>Jarque-Bera 28148.37</td>
</tr>
<tr>
<td>Probability 0.000000</td>
</tr>
<tr>
<td>Sum. 702.6000</td>
</tr>
<tr>
<td>Sum Sq. Dev. 9503.372</td>
</tr>
</tbody>
</table>

The results from the analysis of the Earnings Per Share (EPS) shows that the highest Earnings Per Share of 54.26 and the lowest of 0.00 with a standard deviation of 5.31%. The statistics on board independence (BI) indicates that a significant portion (69.57%) of total board members with maximum of 100% and 38%. The mean board size (BZ) is about eight (8) suggesting that firms listed on the Nigerian Stock Exchange (NSE) have relatively moderate board sizes. There is a maximum board size of twenty (20), minimum board size of five (5) and standard deviation of 2.75, implying that quoted firms in Nigeria have relatively similar board sizes.

The board diligence (BD) in terms of board meetings indicates that the number of board meetings ranged from a minimum of 2 to a maximum of 12 with an approximation of 5.19. The mean gender diversity (GD) is about six (6), maximum gender diversity is about fifteen (15), minimum gender diversity is about one (1) and standard deviation of 3.27. The mean value of the firm size (FS) is 24.55, the maximum is 29.23 while the minimum value is 0.00 and the deviation is 1.49. The firms listed on the stock exchange are highly liquid as the mean show 3.39 with maximum value of 191.21 and minimum of 0.00. The firms generally depended more on debt equity financing as indicated by the highly leverage figure of 1.83.

<table>
<thead>
<tr>
<th>Table 2: Correlation Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
</tr>
<tr>
<td>EPS 1.000000</td>
</tr>
<tr>
<td>BS -0.014095</td>
</tr>
<tr>
<td>BD -0.103803</td>
</tr>
<tr>
<td>BI -0.083818</td>
</tr>
<tr>
<td>GD 0.044881</td>
</tr>
<tr>
<td>FZ 0.180776</td>
</tr>
<tr>
<td>LQ -0.004071</td>
</tr>
<tr>
<td>LV -0.069023</td>
</tr>
</tbody>
</table>

**p<0.01; *p<0.05 at tailed level**

The researcher carried out a correlation analysis of dependent variable with independent variables and control variables in order to answer the hypotheses laid down for this study. The correlations are given in Table 3. It is evident from the table that the dependent variable (Earnings Per Share) performance is
having negative relationship with board size ($r = -0.01$), board diligence ($r = -0.10$), board independence ($r = -0.08$), liquidity ($r = -0.00$), leverage and ($r = -0.06$). This pattern of correlation suggests that low level of associations subsists between these variables and earnings per share. However, the performance of earnings per share is positive to gender diversity ($r = 0.04$) and firm size ($r = 0.18$). This suggests that high level of associations exists between the variables and earning per share. Board size in relations to other variables shows positive relationship to board diligence ($r = 0.14$), gender diversity ($r = 0.02$), firm size ($r = 0.55$), liquidity ($r = 0.16$), but negative to board independence ($r = -0.28$) and leverage ($r = -0.9$). In the case of board diligence, it is positive to firm size ($r = 0.15$) and liquidity ($r = 0.01$), but negative to board independence ($r = -0.01$), gender diversity ($r = -0.06$) and leverage ($r = -0.06$). Board independence in comparison with other variables has positive relationship to gender diversity ($r = 0.01$) and leverage ($r = 0.13$) but otherwise to firm size ($r = -0.22$) and liquidity ($r = -0.05$). Gender diversity has positive relationship with firm size ($r = 0.04$), liquidity ($r = 0.12$) and leverage ($r = 0.09$). Liquidity is negative to leverage ($r = -0.07$).

**TABLE 3**: Regression Results (USING POOLED OLS)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>-0.326783*</td>
<td>-0.482640*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0095)</td>
<td>(0.0095)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD</td>
<td>-0.439725**</td>
<td>-1.641281</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0218)</td>
<td>(0.4899)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI</td>
<td>-2.672182</td>
<td>0.080425</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.2645)</td>
<td>(0.3627)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GD</td>
<td>0.068899</td>
<td>0.400756*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.4288)</td>
<td>(0.3627)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FZ</td>
<td>0.610209*</td>
<td>0.381274*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0000)</td>
<td>(0.0017)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LQ</td>
<td>-0.015937</td>
<td>-0.020905</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.5419)</td>
<td>(0.4944)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LV</td>
<td>0.512943</td>
<td>-0.019312</td>
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</tr>
<tr>
<td></td>
<td>(0.1210)</td>
<td>(0.4291)</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>-5.549228</td>
<td>0.056917</td>
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</tr>
<tr>
<td></td>
<td>(0.1357)</td>
<td>(0.0070)</td>
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</tr>
<tr>
<td>R-squared</td>
<td>0.078846</td>
<td>0.040542</td>
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<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.059306</td>
<td>0.029017</td>
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</tr>
<tr>
<td>F-statistic</td>
<td>4.035168*</td>
<td>3.517697*</td>
<td></td>
<td></td>
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<tr>
<td>Prob(F-statistic)</td>
<td>0.000294</td>
<td>0.007883</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*, **, means Significant at 1%, 5%, Figures in ( ) are P-value

**TABLE 4**: Regression Results (USING GENERALISED LEAST SQUARE)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>-0.326783*</td>
<td>-0.324858*</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(0.0090)</td>
<td>(0.0082)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD</td>
<td>-0.439725**</td>
<td>-1.641281</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.0212)</td>
<td>(0.4894)</td>
<td></td>
<td></td>
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<tr>
<td>BI</td>
<td>-2.672182</td>
<td></td>
<td>-1.641281</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.2637)</td>
<td>(0.4894)</td>
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<td></td>
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<tr>
<td>Variable</td>
<td>GD</td>
<td>FZ</td>
<td>LQ</td>
<td>LV</td>
</tr>
<tr>
<td>----------</td>
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<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
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<td>0.068899</td>
<td>0.610209*</td>
<td>-0.015937*</td>
<td>-0.118943*</td>
</tr>
<tr>
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<td>(0.0000)</td>
<td>(0.5415)</td>
<td>(0.1201)</td>
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<tr>
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<td>0.596973*</td>
<td>0.381274*</td>
<td>-0.011599*</td>
<td>-0.112393*</td>
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<tr>
<td></td>
<td>(0.0000)</td>
<td>(0.0016)</td>
<td>(0.6555)</td>
<td>(0.1387)</td>
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<tr>
<td></td>
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<td>(0.0007)</td>
<td>(0.4940)</td>
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<td>(0.0000)</td>
<td>(0.4285)</td>
<td>(0.1857)</td>
</tr>
</tbody>
</table>

*, **, mean Significant at 1%, 5%

Table 4 showed the results between the independent variables (BS, BD, BI, GD) and dependent variable (EPS) using control variables (FZ, LQ and LV). Table 5 results is just a robustness check over the table 4 results. As a result, the two tables gave the same results. Attention will be paid to table 4 to explain each findings in order to support or reject the hypotheses of the research.

4.1 Discussion of findings

4.1.1 The effect of board size on the performance of quoted firms.

Model 1 of Table 4 described that the coefficient of the variable BS was -0.33 with a p-value of 0.0095 (>0.01). It can be deduced that board size has a negative and significant impact on the performance of quoted firms which does not provide support for the hypothesis. Theoretically, findings are not consistent with agency theory that proposes that larger board corporate boards improve monitoring function of the board and accordingly improve firm performance. The implication of the results is that large number of directors in the board has negative impact on the performance of the firm. It is therefore advised that board size appropriate for firm size for positive impact should be advocated for. The way forward here is to decrease the board size by 33% in order to increase the earnings per share of an entity by 1%. This result was in line with the work of Said et al. (2009) that evidenced a significant negative relationship between board size and corporate performance. This work advocates that large board size result to ineffectiveness in communication, coordination and decision making. Firms must maintain moderate size of the board members for smooth flow of communication and timely decision making. Other results of negative relationship between the board size and firm performance were documented by a number of researchers (Eisenberg, Sundgren, & Wells, 1998; Garg, 2007; Ghosh, 2006; Kota & Tomar, 2010; Guo & Kga, 2012).

However, more recently, Sadou et al. (2017) highlighted that larger boards are more effective and have greater influence over companies’ performances. Also, the work of Širegar and Bachtiar (2010) found a non-linear relationship between board size and improved corporate performance. The study noted that a large board would be able to exercise better monitoring, but too large board will render the monitoring process ineffective. As result of the relationship that exists between board size and quoted firm performance as indicated above, the Null hypothesis is rejected. The Alternative hypothesis which states that board size will have significant impact on the performance of quoted firms is hereby accepted.

4.1.2 The effect of board independence on the performance of quoted firms.

Model 1 of Table 4 describes that the coefficient of the variable BI was -2.67 with a p-value of 0.26. Model 4 of table 4 shows that the coefficient of the variable BI was -1.64 with a p-value of 0.49. In the two scenarios, the results revealed a negative and insignificant relationship between the board independence and quoted firms performance. Agency theory, suggests that if companies have a proportion of board members who are independent, this may contribute to better decision-making, help companies to connect with their external environment and enhance their vital resources (Nguyen et al., 2014). The possible reason for negative relationship between the board independence and quoted firm performance could be that not
all independent directors are truly independent. A further reason could be that both the role of independent directors in Nigeria and the appointment process differ from what was stipulated from the corporate governance code of conduct. Another reason may be that insiders are the most effective directors because they have more information about the firm than outsiders and thus outside directors must rely on them to make decisions. This result of negative relationship between the board independence and quoted firm performance is supported by the work of Abdullah et al. (2011) affirmed that independent directors are not effective in discharging their duties, let alone of going against other members of the boards. Al-Moataz and Hussainey (2012) reiterated that higher number of independent directors on companies’ boards leads to less effective board monitoring and equally lower levels of corporate transparency. Conversely, Huang (2010) concluded that independent directors act as a monitoring mechanism that ensures companies are properly managed by corporate management and also work towards enhancing corporate image and performance. Studies Sharif and Rashid (2014), Kaur et al., (2016) indicated a positive link between board independence and improved corporate performance. In view of the above, we can conclude that the Alternative hypothesis is rejected to give way to the Null hypothesis which states that independence of board members will not have significant effect on the performance of quoted firms.

4.1.3 The effect of board diligence on the performance of quoted firms.

Focusing on the relationship between board diligence and quoted firm performance, it can be seen from the table above that there exists a negative but significant relationship. Model 1 of table 4 showed that the coefficient of the variable BD was -0.43 with a p-value of 0.02 (>0.05), while model 2 of table 4 described that the coefficient of the variable BD was -0.48 with a p-value of 0.0095 (>0.01). At 5% level of significance, it implies that 43% reduction in corporation board meeting will improve earnings per share by 5%. While at 1% level of significance, it implies that 48% reduction in corporation board meeting will improve earnings per share by 1%. This research contributes to discovering the critical role of the Board of director Meetings (BM) on quoted firm performance. Meetings take a large amount of time to prepare for, attend and follow-up on. The board must ensure that their meetings add value to the organization. Then this finding supports the believe that Board meeting frequency negatively affects firm performance in the current year because board meetings are costly in terms of time and costs incurred in relation to the meetings (Vafeas, 1999). A study conducted with a sample of 328 Malaysian listed companies from 2003 to 2007 reported that high board meeting frequency causes low firm performance (Amran, 2011). However, study conducted by Ghosh (2007) found a statistically significant positive impact of board diligence on firm performance, noting that 10% increase in diligence increases the performance of the organisation by 1%. Akpan (2015) obtained similar results in his study on 79 listed companies in Nigeria from 2010 to 2012. Based on the above finding, it can be said that the Null hypothesis is rejected in order to accept the Alternative hypothesis which states that the diligence of board members will have significant impact on the performance of quoted firms.

4.1.4 The effect of gender diversity on the performance of quoted firms.

Model 1 of table 4 showed that the coefficient of the variable GD was 0.06 with a p-value of 0.42, while model 3 of table 4 described that the coefficient of the variable GD was 0.08 with a p-value of 0.36. The results showed positive but insignificant relationship between gender diversity and quoted firm performance as measured by earnings per share. This may be as a result of small number of female directors in the boardroom. It can be explained by a previous study done by Wang and Clift (2009) where there is no strong relationship between gender diversity on the board and financial performance, and it is assumed that this is due to very few female directors in the sample. Besides, Kramer, et. al. (2008) argued on the effectiveness of having more than one woman in the boards to fulfil the interest of the stakeholders and lead to better decision making. Since most of the companies who have women directors in the sample of this study have one woman only, the benefits of gender diversity might not be fully utilized and thus the result cannot be generalized. This reason is supported by Huse and Solberg (2006) in which the reason for failure to find a significant relation between women directorship and firm performance is due to the benefits of increased gender diversity does not materialize as expected. Therefore, it can be said that the larger number of women in boards could significantly have an effect on the company performance. Smith et al. (2006)
cited in Vo and Phan, (2013), who considered three different reasons to recognize the importance of female on a board. First, female board members usually have a better understanding of a market in comparison with male members. As such, this understanding will enhance the decisions made by the board. Second, female board members will bring better images in the perception of the community for a firm and this will contribute positively to firm’s performance. Third, other board members will have enhanced understanding of the business environment when female board members are appointed. Hence, as a result of women on board, quoted firms performance is improved directly and indirectly. Low, Roberts and Whiting (2015) investigated Asian firms in Hong Kong, South Korea, Malaysia and Singapore and found that the appointment of female directors can positively affect the firm’s performance. Conversely, Adams and Ferreira (2009) and Pletzer, Nikolova, Kedzior, and Voelpel (2015) highlighted a negative relationship between female directors and firm performance due to these directors’ lack of skills and experiences in monitoring the performance of their firms. Strydom, Au Yong, and Rankin (2016) found that board gender diversity may not affect firm performance in terms of earnings quality. They also found that a higher proportion of female directors on the board of Australian firms corresponds to a lower stock price volatility. As a result of the finding above, the Null hypothesis is accepted because board gender diversity has no effect on the performance of quoted firms contrary to what is supported by the Alternative hypothesis.

5. Conclusion and policy implications

The fallout from the financial crisis has placed a heavier focus on best practices for corporate governance principles. Boards of directors feel more pressure than ever before to be transparent and accountable. The study examined the effect of board size and its independence on the performance of listed entities in Nigeria. It further determined the effect of board diligence and board diversity on firm performance. These were with the view of examining the relationship that exists between board characteristics and firm performance of quoted entities in Nigeria. The research project which covered a ten-year period (2009–2018) made use of secondary data sourced from published annual reports and accounts of 35 purposively selected listed companies on the Nigerian Stock Exchange (NSE). The Pooled Ordinary Least Square (OLS) regression model was employed in analyzing the data obtained.

Findings from the study revealed that a significant negative relationship exists between earnings per share and board size with a co-efficient of -0.33 and a p-value of 0.0095 (>0.01) and between earnings per share and board diligence with co-efficient of -0.43 and -0.48 and p-values of 0.02 (>0.05) and 0.0095 (>0.01) respectively, but no significant relationship exists between earnings per share and board independence with co-efficient of -2.67 and -1.64 with p-values of 0.0218 and 0.49 respectively and between earnings per share and board gender diversity with co-efficient of 0.06 and 0.08 and p-values of 0.42 and 0.36 respectively. This paper draws the following conclusions from its findings:

A significant negative relationship was found to be existing between the board size and quoted firms performance. The result showed -0.33 with a p-value of 0.0095 (>0.01) which indicated a negative, yet significant relationship between board size and quoted firm performance. This implies that board size has an impact on quoted firm performance. It was concluded that the smaller board size are more effective than larger board size because smaller good board size with upright personal traits, relevant core competences, wealth of experiences, different educational background and entrepreneurial spirit knowledgeable in board matters will enhance earnings per share of listed companies in Nigeria. Therefore larger board size should be discouraged. This work is in line with that of (Lipton and Lorch, 1992) who argued that A large board could also result in less meaningful discussion, since expressing opinions within a large group is generally time consuming and difficult and frequently results in a lack of cohesiveness on the board. Also, Said et al. (2009) evidenced a significant negative relationship between board size and corporate
performance. This work advocates that large board size result to ineffectiveness in communication, coordination and decision making. Firms must maintain moderate size of the board members for smooth flow of communication and timely decision making.

Concerning board diligence, the result also showed a significant negative association between board diligence and quoted firm performance. The study concluded that at 5% level of significance, 43% reduction in corporation board meeting will improve earnings per share by 5%. While at 1% level of significance, 48% reduction in corporation board meeting will improve earnings per share by 1%. The board members need to reduce the number of meeting and pay serious attention to issues that has impact on the business of the companies. Then this finding supports the believe that Board meeting frequency negatively affects firm performance in the current year because board meetings are costly in terms of time and costs incurred in relation to the meetings (Vafeas, 1999).

Regarding the investigation of board independence on quoted firm performance, the OLS result showed a negative and insignificant relationship between board independence and quoted firm performance. The reason for this result may be as a result of the fact that not all independent directors are truly independent. A further reason could be that both the role of independent directors in Nigeria and the appointment process differ from what was stipulated from the corporate governance code of conduct. This result of negative relationship between the board independence and quoted firm performance is supported by the work of Abdullah et al. (2011) affirmed that independent directors are not effective in discharging their duties, let alone of going against other members of the boards.

The study also examined the relationship between gender diversity and earnings per share. The results reveal that the ratio of female director in the boardroom has no significant impact on quoted firm performance as measured by earning per share. It is therefore suggested that more female director should be allowed in the board position. Therefore, it can be said that the larger number of women in boards could significantly have an effect on the company performance. Smith et al. (2006) cited in Vo and Phan, (2013), who considered three different reasons to recognize the importance of female on a board. First, female board members usually have a better understanding of a market in comparison with male members. As such, this understanding will enhance the decisions made by the board. Second, female board members will bring better images in the perception of the community for a firm and this will contribute positively to firm’s performance. Third, other board members will have enhanced understanding of the business environment when female board members are appointed.

Among the control variables included in the equations, only the firm size (FZ) yielded significant positive relationships at a 1% confidence, while other control variables such as liquidity (LQ) and leverage (LV) were insignificant at a greater than 5% confident level. The control factors contributed to the explanatory power of the models.

This study has relevant implications for management and shareholders. This paper has shed some new light on the factors of board characteristics that affect performance of quoted firms in Nigeria. Hence, it will enable the firms’ management and policymakers to make a better decision on issues regarding board characteristics. By improving on the characteristics of board members in the running of company’s businesses, the performance of quoted firm will also increase. The findings of this study imply that both existing and potential shareholders can assess the board characteristics to make a better decision on their investment. Also, result of this study provided evidence to corporate governance theories, thereby, indicating the needs for corporate governance regulators to gain more insight into board's practices.
Based on the findings of this study, the following recommendations are made for efficient performance of listed companies on the Nigeria Stock Exchange:

a. Reduction of board sizes will be critical to the success and survival of corporate listed firms in Nigerian while firms should also increase their size through increase in liquidity and put these to efficient use in order to enjoy economies of scale. The size of the board must not be unwieldy so that company’s businesses can be managed effectively and efficiently by the board members.

b. Firms should make appointment of independent directors to dominate the appointment of inside executive directors so as to enable the firms to maximally reap the benefits of board independence. Also, independent directors are expected to carry out their duties in line with the specifications and directions of revenant Nigerian laws and codes governing their operations.

c. Attendance of board at various meetings should be scrutinized to determine the level of commitment of the board. Strategic and informed decisions that will improve the performance of quoted firms are expected to be made in the board meetings. Board meetings should be scheduled in such a way that it will be convenient enough for all the board members to be in attendance.

d. Female participation in the boardroom should be encouraged. The Nigerian government should encourage and promote the idea of gender diversity by implementing policies that will set a minimum number of female directors firms should have. The women named to corporate boards can use their values, experiences and knowledge to add value to the organization. The inclusion of female directors in the boardroom will challenge the male counterpart to be more proactive for performance improvement.

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