MANAGEMENT & ACCOUNTING REVIEW

Volume 18 No. 3
December 2019
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The Influence of Board Gender Diversity on Financial Performance of Listed Companies in Nigeria

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ABSTRACT

This study examined the impact of board gender diversity on the financial performance of listed companies in Nigeria. Using a sample of 400 firm-year observations for the period of 2012-2016. The data for the study were extracted from the annual reports of the sampled firms and the Thompson Reuters DataStream. The data was analysed by means of the Panel Corrected Standard Error (PCSE). The study found that gender diversity (female directors) influenced the financial performance of companies listed on the Nigerian Stock Exchange. The findings supported the argument that gender diversity enhances the financial outcomes of firms. Consistent with the Resource Dependency Theory, the result implied that female directors contribute to the upper echelon of the firm’s decision. The findings inform regulators and other stakeholders on the roles of female directors in explaining the corporate financial outcomes.

Keyword: Firm performance, Female directors, Big 4 Auditors, Resources dependency theory
INTRODUCTION

Investigating the determinants of financial performance is as old as mankind. Firm financial performance is the major concern of shareholders and potential investors (Kurawa & Garba, 2014). Generally, capital market players are paying closer attention and interest on the performance matrix of the firm. The most common consideration is the level of firm’s profitability. Firm’s profitability has become a major yardstick as whether to invest or disinvest in their course to maximize a higher return on their investment. Therefore, identifying those factors that influence financial performance would help in aligning the interest of all stakeholders and invariably improve the market value of the firm. Recent studies have indicated that female officers play a significant role and outperform their peers in enhancing the financial performances of the firm (Francoeur, Labelle, & Sinclair-Desgagné, 2008). For example, evidence by Krishnan and Parsons (2008) show that gender diversity enhances the growth and the performance of the firms. In Nigeria, there is an advocacy at the political level that women should be given 35% of political positions (Nnabuife, Okaro, & Okafor, 2015). The Nigerian Code of Corporate Governance 2011 is silent as to the number of women to be appointed on the board. The advocacy to increase the number of women has given the need for empirical studies on gender diversity in Nigeria.

Gender diversity has been extensively studied in many parts of the world (e.g. Abdullah & Ismail 2013; Tinsley, Wade, Main and O’reilly, 2017; Low, Roberts, & Whiting, 2015) Utilising a sample of Asian firms from Hong Kong, South Korea, Malaysia and Singapore, this study shows that increasing numbers of female directors on the board have a positive effect on firm performance, as measured by return on equity (ROE. However, evidence from Nigerian listed companies is virtually scarce and skewed to a particular sector (e.g. Garba, & Abubakar, 2014; Abubakar & Mamman, 2016). It is suggested that female directors can help challenge management to demonstrate responsibility beyond shareholders. This is pertinent in emerging countries like Nigeria, with a high level of corruption and poor institutional setting that pose a serious challenge to corporate governance and economics. In spite of the increasing need to diversify the board, not many studies appear to examine the influence of board gender diversity on the performance
of listed companies in Nigeria. This study chose Nigeria because firm performance in Nigeria is volatile due to political instability and multicultural diversity which affects a firm’s financial outcomes. In addition, the Securities and Exchange Commission in Nigeria has the requirement to include more female directors on boards. Such a requirement aims at harnessing women’s contribution to boards’ dynamics through their ideas, approaches, and skills. Several research studies have examined the effects of director gender on boardroom dynamics (Terjesen et al. 2009) and organizational outcomes (Abdullah et al. 2016; Adams and Ferreira 2009; Bear, Rahman & Post, 2010).

Hence, this study examined how female directors influence the financial performance of listed non-financial companies in Nigeria. The remaining part of the paper is as follows. Section two reviews the literature, theories and hypothesis, section three presents the research methodology, while section four discusses the research findings and the conclusion is presented in section five.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical Background

In general, corporate board diversity refers to heterogeneity of the board members which include gender, age, religion, ethnic, and nationality (E-Vahdati, Zulkifi, & Zakaria, 2018; Hannah Heekyung Jun & Hyojin Kim, 2017). Theoretically, the linkage between gender diversity and financial performance has been postulated by the Agency Theory. Gender diversity as one of the characteristics of the board and is expected to boost the capacity of the board and contribute to the firm’s decision making (Jensen & Meckling, 1976). In relation to this, Reguera-Alvarado, de Fuentes and Laffarga (2017) concluded that gender diversity has a significant positive influence on financial performance of the firms. An agency theoretical rationale for these findings supports that female directors bring a fresh outlook in solving complex problems (Carrasco, Francoeur, Labelle, Laffarga, & Ruiz-Barbadillo, 2014).
Apart from the Agency Theory, proponents of the Resource Dependency Theory assume that presence of women may increase the independence of the board (Galbreath, 2018). Women are expected to be more active and offered additional skills in the upper echelon of the firms (Hillman & Dalziel, 2003). In Nigeria, Ujunwa et al (2012) used both the Agency and Resources Dependency Theory to investigate the impact of gender diversity on financial performance of companies in Nigeria. The authors established that female directors play a significant role in improving financial outcomes. Consistent with the Resource dependency Theory, Mandala, Kaijage, Aduda and Iraya (2017) propose that female board members enhance the corporate decision through policy formulation that enhance and promote better governance practices which will invariably enhance performance.

The above background provides adequate evidence that gender diversity could positively influence firm performance

**Gender Diversity and Performance**

Empirical studies on gender diversity and financial performance have employed several methods in assessing and evaluating the nature and extent of firm’s financial status. To date, no single measure is generally agreed by both researchers and practitioners. Generally, performance is measured in two ways: accounting-based measures and market-based measures. Accounting measures includes return on equity (ROE), return on assets (ROA), earnings per share (EPS). The market-based measures include stock return and Tobin’s Q. Hence, the choice of the measures depends largely on the aspect of performance the researcher wants to capture.

This paper employed the use of accounting measure (ROA) to assess firm performance in Nigeria. Return on assets (ROA) was used as a proxy because prior scholars such as Galbreath (2018), Khan, Hassan and Marimuthu (2017) and Mandala, Kaijage, Aduda and Iraya (2017) suggested that ROA is effective in providing adequate information regarding the financial status of a firm.

Board diversity refers to characteristics of individual board members in terms of gender, race, nationality and ethnicity (Rose, 2007). Recent development in women’s social and economic status has generated a
growing concern on the need for women at the top management level (McKinsey & Company, 2007). The diversity of the board in terms of gender composition is expected to promote board communication and monitoring ability (Terjesen, Sealy, & Singh, 2009). Specifically, board gender has been established as an important internal governance mechanism. Choy, Gul and Yao (2011) reported that presence of women on the board leads to a better discussion and influences the director’s ability to enhance a firm’s financial position. Prior studies have also advocated that female directors are commonly regarded as being more conservative and risk averse.

Empirically, the role of gender diversity and its relationship with financial performance has attracted the interest of several scholars (Low et al., 2015; Reguera-Alvarado et al., 2017). These studies suggested that female members on the board allow for good deliberation and improve the financial position of the firms. Gordini and Rancati (2017) studied female directors and financial performance of listed firms in Italy. The authors document that female directors are more likely to improve the financial performance of firms. Hence, female participation is expected to provide a greater benefit in the board room. Khan, Hassan and Marimuthu (2017) urge that women directors enhance positively the performance of listed companies in Malaysia. Accordingly, Kyaw, Olugbode and Petracci (2017) concluded that gender diversity also proved to be more effective in improving a firm’s social performance. The authors advocate that the introduction of gender laws can promote corporate social performance and the benefit can be enhanced with the presence of at least a female director to the boardroom. It has also been suggested that gender diversity promotes and increases performance (Low et al., 2015). In Nigeria, scholars such as Garba and Abubakar (2014) suggested that gender diversity among others influence the performances of insurance firms in Nigeria. Supporting the proponents of gender diversity, Schwab, Werbel, Hofmann and Henriques (2016) investigated gender diversity of Portuguese financial companies. The authors demonstrated the significant positive influence of female directors in enhancing financial outcomes.

On the other hand, some scholars such as Abdullah and Ismail (2013), Ujunwa, Nwakoby and Ugbam (2012) and Ujunwa (2012) formulated a contrary argument that gender diversity negatively influences financial performance. Another evidence from Nigeria indicated that gender diversity could not influence the financial performance of listed deposit money banks.
(Abubakar & Mamman, 2016). In contrast, Snday and Godwin (2017) directly investigated how gender diversity affects the financial performance of banks in Nigeria. The study found an insignificant relationship between gender diversity and financial performance of banks in Nigeria. In line with the Resources Dependency Theory, this paper hypothesized that:

$$H_1: \text{ Female directors have a significant positive association with a firm’s financial performance}$$

**METHODOLOGY**

This paper examined the relationship between board gender diversity and financial performance of listed companies in Nigeria. The population comprised 170 companies listed on the Nigerian Stock Exchange as at 2016. From the total of 170, 55 financial companies were excluded. Also, 14 companies were delisted during the study period by the Nigerian Stock Exchange (NSE), 12 companies lacked the required data and information and finally 9 companies from alternative securities exchange market (ASEM) were excluded to arrive at a sample of 400 firm-year observations as presented in Table 1. Data on financial performance (ROA), tangibility and leverage were generated from the Thomson Reuters data stream, while data regarding board gender and auditor type (BIG 4) were extracted from the annual reports of the sampled companies.

<table>
<thead>
<tr>
<th>Table 1: Sample Selection Procedure</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms listed on Nigerian Stock Exchange as at 31/12/2016</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Services companies</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>firms from Alternative Securities Exchange Market</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Dead and delisted firm during the period</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Firms without complete data on CEO ownership, expertise and tenure</td>
<td>12</td>
<td>90</td>
</tr>
<tr>
<td>Firms in the final sample</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Number of years</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Firm-year observations</td>
<td>400</td>
<td></td>
</tr>
</tbody>
</table>
Measurement of Study Variables

Dependent Variables

The dependent variable is firm performance, this study measured performance as net income after tax divided by total assets (ROA) (Hassan & Ahmed, 2012; Ujunwa et al., 2012).

Independent Variables

The independent variables in this study is board gender diversity and is defined as the number of female directors on the board (Srinidhi, Gul, & Tsui, 2011; Tinsley et al., 2017)Meager evidence supports significant progress over the past decade in the United States. The authors examine archival board data (for more than 3,000 U.S. publicly traded firms.

Control Variables

In line with previous studies on gender diversity and firm performance (Hannah Heekyung Jun & Hyojin Kim, 2017; Khan et al., 2017; Zainal, Zulkifli, & Saleh, 2013), this study included BIG 4, Firm size (LOG), leverage (LVRG) and Tangibility (TANG) as control variables.

Model Specification and Variables Measurement

To test our hypothesis that gender diversity influences the financial performance of listed companies in Nigeria, the empirical model is presented below.

\[ \text{ROA}_{it} = \beta_0 + \beta_1 \text{BGEN}_{it} + \beta_2 \text{BIG 4}_{it} + \beta_3 \text{FSIZE}_{it} + \beta_4 \text{LVRG}_{it} + \beta_5 \text{TANG}_{it} + \epsilon_{it} \]  \hspace{1cm} (1)

Where ROA represents return on assets, BGEN measures the number of female directors on the board, BIG 4 is a dummy variable 1 if the firm is audited by a BIG 4 and zero if otherwise. FSIZE was measured as the natural logarithm of total assets. While LVRG was measured as firm’s total liabilities to the total assets. TANG is the proportion of property plant and equipment to the total assets of the firms. \( \epsilon \) stand for error term, \( \beta_0 \) is the intercept, \( \beta_1, \beta_2, \beta_3, \) and \( \beta_4 \) represent the model parameters respectively. \( i \) represent firm and \( t \) is the time. Table 2 provides a summary of variable measurement.
Table 2: Measurement of study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Acronym</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Asset</td>
<td>ROA</td>
<td>Net income after tax divided by total assets</td>
<td>Miko and Kamardin (2016)</td>
</tr>
<tr>
<td>Independent Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Gender</td>
<td>BGEN</td>
<td>Number of female directors on the Board</td>
<td>Gul, Srinidhi and Ng (2011)</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big4 auditors</td>
<td>Big4</td>
<td>Dummy variable 1 if firm is audited by any of the big4 auditing firm otherwise 0</td>
<td>Alquhaif, Abdul Latif and Chandren (2017)</td>
</tr>
<tr>
<td>Firm Size</td>
<td>FSIZE</td>
<td>Natural logarithms of total assets</td>
<td>Gordini and Rancati (2017).</td>
</tr>
<tr>
<td>Leverage</td>
<td>LEV</td>
<td>Interest bearing liabilities to total asset</td>
<td>Ajay and Madhumathi (2015)</td>
</tr>
<tr>
<td>Tangibility</td>
<td>TANG</td>
<td>proportion of non-current asset to the total asset of the firm</td>
<td>Al-Jaifi (2017)</td>
</tr>
</tbody>
</table>

**Normality Test**

To test the normality of the data, the study used the Jack-Bera test to determine if the inferences suffered from normal distribution. Interestingly, the result suggested that the data was normally distributed with the Jack-Bera Chi-square value of 0.6264. This means that the null hypothesis that the samples come from a normal distribution is accepted since the p-value was greater than 5%.

**EMPIRICAL RESULT**

**Descriptive Statistics**

From the descriptive results as presented in Table 3, the mean, minimum and maximum coefficients of ROA is 0.058, -0.903 and 0.544. This implies that on average Nigerian listed companies generated 5.8 Naira as return on asset for the period 2012-2016. The mean value of 1.068, minimum of 0.000, and maximum of 5 for BGEN signified that on average Nigerian listed firms had 1 female director, the maximum value of 5 implies that some firms had 5 female directors on their board.
Table 3: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>OBS</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>400</td>
<td>0.058</td>
<td>-0.903</td>
<td>0.544</td>
<td>0.123</td>
</tr>
<tr>
<td>BGEN</td>
<td>400</td>
<td>1.068</td>
<td>0.000</td>
<td>5.000</td>
<td>0.980</td>
</tr>
<tr>
<td>FSIZE</td>
<td>400</td>
<td>16.556</td>
<td>12.967</td>
<td>21.114</td>
<td>1.645</td>
</tr>
<tr>
<td>BIG4</td>
<td>400</td>
<td>0.573</td>
<td>0.000</td>
<td>1.000</td>
<td>0.495</td>
</tr>
<tr>
<td>LVRG</td>
<td>400</td>
<td>0.561</td>
<td>0.007</td>
<td>1.486</td>
<td>0.292</td>
</tr>
<tr>
<td>TANG</td>
<td>400</td>
<td>0.453</td>
<td>0.004</td>
<td>3.087</td>
<td>0.277</td>
</tr>
</tbody>
</table>

Firm size (FSIZE) had a mean, minimum and a maximum value of 16.55, 12.97 and 21.114 respectively. BIG 4 has a mean value of 0.573, minimum of 0.00 and maximum of 1.000. This result implied that 57% of listed companies in Nigeria were audited by BIG 4 auditors. LVRG had a coefficient of 0.561, 0.007 and 1.486 respectively. This is an indication that 57% of firms total capital was financed by external sources (DEBT). While the mean coefficient of 0.453 for TANG implied that fixed assets represented 45% of Nigerian listed company’s assets.

Correlation Matrix

Table 4 presents the result of the correlation matrix; the correlation coefficient shows the extent and the direction of the relationship between the studied variables. Table 4 shows that the inference did not suffer from multicollinearity problems since the highest coefficient is -0.239 between ROA and LVRG. A correlation of less than 0.9 could not pose severe multicollinearity problems (Hair, Black, Babin, & Anderson, 2014).
From Table 4, BGEN, FSIZE and BIG 4 were found to have a positive significant relationship with ROA. On the other hand, the coefficient of LVRG indicated a negative significant relationship with ROA. Finally, TANG was found to have a negative but insignificant relationship with ROA.

Regression Result

Table 5 presents the results on the relationship between board gender diversity and financial performance of listed companies in Nigeria. The outcome of the regression indicated that board gender (BGEN) is positive and significantly related with financial performance ($\beta = 1.894, P < 0.01$).
This implies that presence of women directors influences the financial performance of listed companies in Nigeria. The result is consistent with the proposition of the Resource Dependency Theory that diversifying the board improves a firm’s decision making since female members are expected to provide additional skills to enhance the decision making of the firms (Hillman & Dalziel, 2003; Hoang, Abeysekera, & Ma, 2018). Empirically, the result is consistent with previous studies (e.g. Low, Roberts, & Whiting, 2015; Reguera-Alvarado, de Fuentes, & Laffarga, 2017) who found that female directors have a significant positive effect on financial performance. The result of BIG 4 auditors as shown in Table 5 indicates a significant positive relationship between BIG 4 auditors and firm financial performance. This signifies that companies audited by BIG 4 auditors are more likely to have improved performance.

For the other control variables, evidence as shown in Table 5 indicates that FSIZE is positive and significantly related with firm financial performances (β 1.113, P < 0.01). This result implies that larger firms in term of total assets are more likely to have improved performance. This is consistent with the findings of Low et al.(2015). On the other hand, the coefficient of TANG and LVRG reveal a negative significant relationship with financial performance (β -10.97, P < 0.01), (β -4.487, P < 0.05), which suggests that high leverage and high fixed assets are more likely to reduce financial performance of firms in Nigeria.

CONCLUSION

Based on the panel data of listed non-financial companies in Nigeria for the period 2012-2016, this study examined the influence of board gender diversity on a firm’s financial performance. The result indicates that female directors significantly and positively influence the financial performance of listed firms in Nigeria. Thus, implies that giving opportunities for women to participate on the board will expand the capacity of the board and enhance the financial performance.

Moreover, we also show that high leverage may lead to reduction of a firm’s financial performance since a substantial part of the profit will be used to settle the obligation of debt holders. The implication of our findings is that
board gender diversity may promote the strength of corporate governance and reduce likely agency conflicts, hence, better performance. Thus, the study draws the attention of regulators especially the Nigerian Securities and Exchange Commission (NSEC) to legislate and mandate the appointment of female board members on the board.

While the study evaluates the impact of board gender on financial performance in an emerging country, the study is limited to only non-financial companies in Nigeria. Another limitation is that performance could be measured using both accounting and market-based measurements. However, in this research, only one of the accounting-based measurement (i.e. ROA) was used. Hence, future studies may consider other proxies such as ROE, EPS and Tobin’s Q.

REFERENCE


THE INFLUENCE OF BOARD GENDER DIVERSITY


THE INFLUENCE OF BOARD GENDER DIVERSITY


