



# Board Features and Corporate Social Responsibility Practices in Nigerian Oil and Gas Companies

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## Original research paper

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**Abstract:** *This study assessed the effect of three board attributes on corporate social responsibility practices (CSR) in ten Nigerian oil and gas companies for the period, 2011-2020. Relevant information was obtained from the companies' published annual financial reports. Panel data analysis was employed with Random effects generalised least square model as estimation technique. Results reveal that board size and its composition have a positive and significant influence on CSR. The findings further show an insignificant association between board gender diversity and CSR. Overall, findings provide evidence in support of stakeholder theory. It is recommended that corporate boards should consist of larger size with higher proportion of non-executive directors having diverse experience, skills and expertise. These attributes are necessary for effective monitoring of corporate managers' activities, especially when policies that affect cordial relationship between the organisation and the host communities are formulated and implemented.*



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**Keywords:** Board Composition; Board Size; Board Gender; Corporate Social Responsibility; Stakeholder Theory

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## Introduction

The importance of oil and gas sector to the Nigerian economy cannot be overemphasised. The sector generated between 90% and 95% of the country's foreign exchange earnings in the last five years. In 2021, the sector contributed 70% of budget revenues and 5.19% to the real gross domestic product (NBS, 2021). However, activities of the firms (especially major oil corporations) in this sector at least in the last three decades have had a negative impact on the natural environment in form of soil degradation, water, air and noise pollution, toxic waste generation, oil spillage and gas flaring (Eneh & Agbazue, 2011; Eze, Nweze & Eneke, 2016; and Ajape, Adeyemi & Omolehinwa, 2021). On the social aspect, the host communities where these oil and gas companies carry on their exploration activities are concern about their environment and series of agitations have led to communal clashes and disruption in activities of these companies.

Findings from previous studies suggest that companies involved in corporate social responsibility activities for so many reasons, such as enhancement of image and reputation (Rhou & Singal, 2020); higher valuation (Ng & Rezaee, 2015); and reducing the asymmetric information between managers and their stakeholders (Jizi, Salama, Dixon & Stratling, 2014), among others. The oil and gas companies in Nigeria are now becoming aware that when an organisation supports its host communities and society well-being, this may significantly improve the company's position, reputation, image, productivity and performance (Sinagar & Bachtiar, 2010; Kajola, Anene & Oworu, 2016; and Ghaderi, Mirzapour, Henderson & Richardson, 2019).

In various countries' codes of corporate governance, boards of companies are mandated to put in place policies that address environmental and social issues as part of their business strategies (Mahmood & Orazalin, 2017). According to the stakeholder theory, corporate board characteristics are capable of having influence on a firm's CSR practices policy formulation/implementation.

Several studies that addressed the corporate board attributes- CSR practices/ disclosures linkage abound in the empirical literature, especially for the developed economies. The major criticism of previous studies is inconsistent and mixed findings that are produced. Some of the likely reasons for these are firstly, lack of universally acceptable theory that explicitly explains why corporate organisations involve in social responsibility activities, which warrant their voluntary disclosure (in annual reports). Secondly, different proxies for measuring corporate board attributes and corporate social responsibility disclosure (Tarus, 2020). Thirdly, diverse sample size and study time frame. Lastly, the disparity in institutional framework in developed and developing countries was not taken into consideration.

Paucity of empirical study conducted so far in the developing countries (Nigeria inclusive) is the major reason for this study. Furthermore, most of the studies conducted in Nigeria focused on non-oil sectors (for instance, Ali and Isa, 2018 used data from cement companies, Osemene and Fagbemi, 2019 sourced data from consumer goods companies) with very few in oil and gas sector. Attempts were made by Hamid (2012) and Issa, Abdulkadir, Sanni and Ibrahim (2020) by using data from the Nigerian oil and gas sector. However, Hamid (2012) utilised data from four companies for period of eight years (2005-2012), while Issa *et al.*, (2020) used data from 8 companies for 7 years (2012-2018). Findings from the two studies produced mixed results.

The current study seeks to examine the effect of three corporate board attributes (size, composition and gender diversity) on CSR practices in selected Nigerian companies that operate in the petroleum industry. Extending studies conducted by Hamid (2012) and Issa *et al.*, (2020) is of interest to this study too.

## **Literature Review**

### **Corporate social responsibility (CSR) practices /disclosure**

CSR is basically incorporation of the aspirations of the communities in the business plan of companies operating in their domain at a given time. The needs of the communities could be economic, legal, ethical or philanthropic. Although, these community needs are non-compulsory as they are supposed to be provided by governments (local and national), but companies have the choice to participate in any activities they believe will uplift the economic and living condition of their host communities as well as other stakeholders like suppliers, shareholders, customers and creditors.

CSR disclosure is the dissemination of information that relate to a company's involvement in CSR activities to the employees, suppliers, shareholders, creditors, communities and other stakeholders. This disclosure enables the various groups to be adequately informed of the impact the company is having on the wellbeing of its various stakeholders through various initiatives that covers product involvement, philanthropic, employee welfare and community contributions (Egbunike & Tarilaye, 2017).

### **Board attributes**

#### **Board size**

Corporate board is an important internal corporate governance mechanism as it not only provides the policy direction for the organisation, it also involves in monitoring and supervision of the works of the corporate managers. The size of the board therefore is very important for any business. Having a larger or smaller board has been a topical issue in corporate governance for a very long time. Proponents of a larger board (Akbas, 2016; Bajahar and Al-Hajili, 2017; Imagbe, Okoughenu and Igbineweka, 2018; Emmanuel *et al.*, 2018; and Osemene and Fagbemi, 2019) suggested that these diverse members will use their wealth of experience to direct the affairs of the business and enable effective monitoring of the activities of the management to be achieved. A larger board will also enhance better disclosure of all the activities (including social responsibility) of the company to the public. On the other hand, proponents of a smaller board (Manzoor and Joiya, 2018; and Tarus, 2020) opined that this will have reduction in cost of board administration, effective communication between members and efficient control of the affairs of the organisation. Thus, a company with smaller board size is expected to disclose better corporate social responsibility information to the various stakeholders.

Majority of findings from recent studies favoured a direct association between board size and CSR disclosures. Akbas (2016) used data of 62 listed non-financial firms in Turkey to analyse the nexus between board attributes and environmental disclosure for financial year end of 2011. The environmental disclosure was measured by content analysis while board size was one of the four board characteristic proxies. The result from pooled OLS indicated that board size and environmental disclosure were positively related.

Muktar, Mohammad, Jibril and Mohammad (2016) used data from 5 Nigerian food product industry for the period 2008-2012, to examine the effect of corporate governance on CSR disclosure. Non-survey research method was used as research design and pooled OLS as estimation technique. The findings showed that only board size significantly influences CSR disclosure as other corporate governance proxies produced insignificant relationship.

Ofoegbu, Odoemelom and Okafor (2018) explored the influence of corporate board characteristics on environmental disclosure of listed firms in Nigeria and South Africa. The study utilised data from 303 listed companies (90 Nigeria and 213 South Africa) for the 2015 financial year. Pooled OLS was adopted as estimation technique. The outcomes of the study

showed that, for the whole sample, Nigerian sample and South African sample, board size and environmental disclosure were positively related.

However, Tarus (2020) in an attempt to provide insight to effect of board size on environmental disclosure in Kenya used 27 listed firms for the period of 2008-2017 in the investigation. Content analysis was used to measure environmental accounting disclosure. Random effects regression results suggested that board size and environmental disclosure were significant negatively related.

Some other studies, such as, Bukair and Rahma (2015); Ashafoke and Ilaboya (2017) and Miras-Rodriguez, Martinez-Martinez and Escobar-Perez (2018) disclosed an insignificant relationship. Aligning with the prediction of stakeholder theory, the study proposes that:

H1: Board size has a significant positive effect on CSR practices.

### **Board composition**

Board composition otherwise known as board independence is the proportion of external directors sitting in corporate boards. These members come with diverse experience, skills, expertise and objective opinion and are relatively less subjected to pressure from the stakeholders of the organisation (Hussain, Rigoni & Orji, 2018). With all these traits, the stakeholder theory opined that, non-executive directors have the incentive to influence positively the discussion on CSR expenditure and disclosure of corporate organisations.

Empirical findings from previous studied produced mixed results. In Pakistan, Manzoor and Joiya (2018) investigated the impact of corporate governance on CSR in 10 oil and gas companies during 2007-2016. Results from the multiple regression analysis revealed a positive significant effect of independent directors on CSR.

Osemene and Fagbemi (2019) explored the association between corporate governance attributes and environmental reporting in 20 Nigerian consumer goods firms. The study period was for the period 2008-2018. Contents analysis was used to measure environmental reporting. The results from the fixed effects estimation technique revealed a positive significant effect of board independence on environment reporting.

Ali and Isa (2018) examined the influence of board attributes on corporate social responsibility performance in 3 Nigerian cement firms during 2004-2014. A dichotomous variable, with score one (1) if the company revealed CSR information in its annual report, or zero (0), otherwise, was used to capture corporate social responsibility performance. As for the board attributes, 3 variables (board size, board composition, managerial ownership) served as surrogates. The findings, using the pooled OLS and generalised least square regression, revealed that board composition and CSR performance have no relationship.

Some other studies (see, Naseem *et al.*, 2017; Bansal, Lopez-Perez and Rodriguez-Ariza, 2018; and Adib and Xianzhi, 2019) provided evidence that board composition negatively influenced firms' CSR practices. The study proposes the following hypothesis:

H2: Board composition has a significant positive effect on CSR practices.

### **Board gender diversity**

The importance of female directors in boardrooms of corporate entities cannot be overemphasised. Female directors can help organisations in effective monitoring management on behalf of the shareholders (Bear, Rahman & Post, 2010; and Seto-Pamies, 2015); enhance strategic decision making; and are more likely than the male counterpart to be support specialists and community influential (Hillman, Cannella Jr., & Harris, 2002). Having more women directors may also sensitize boards on issues relating to employees' work safety,

community involvement and environmental initiatives and protect the interest of every stakeholder.

Empirically, Inua and Emeni (2019) studied the influence of 5 corporate governance attributes (chief executive officer tenure, executive compensation, board gender diversity, board size) on social sustainability reporting in 35 Nigerian financial and non-financial companies during the period 2010-2016. The proxy for sustainability reporting was dummy variable 1 (if the company reports social sustainability information in its annual report) and 0, if otherwise. Probit panel regression was adopted as analytical technique. Findings indicated that only board gender diversity was the only driving variable that influenced social sustainability reporting.

Some studies however, provided evidence that were inconsistent with the positive relationship as reflected above. Ashafoke and Ilaboya (2017) assessed the effect of board features on environmental disclosure in 10 Nigerian listed banks for the financial years 2012, 2013 and 2014. The CSR disclosure was measured by using an environmental disclosure index of 19 items. For the board attributes, board size, board independence, foreign director and gender diversity were adopted. The OLS regression revealed a negative and significant effect of gender diversity on CSR disclosure. Ghabayen, Mohamad and Ahmad (2016); Alodia and Atmadja (2016); Sanan (2018); and Manzoor and Joiya (2018) also produced a negative significant relationship, while Akbas (2016) and Kamangari and Gerayli (2017) indicated no significant relationship.

Following the stakeholder theory, a direct association is expected between the two variables. Study therefore hypothesises that:

H3: Board gender diversity has a significant positive effect on CSR practices.

## Conceptual Model

Conceptual model of the study is as shown in Figure 1.

The study's main objective is to examine the link between each of the three corporate board attributes (board size, composition, gender) and CSR activities (disclosures) of sampled companies. This is expected to be achieved by testing hypotheses H1, H2 and H3 as shown in Figure 1.

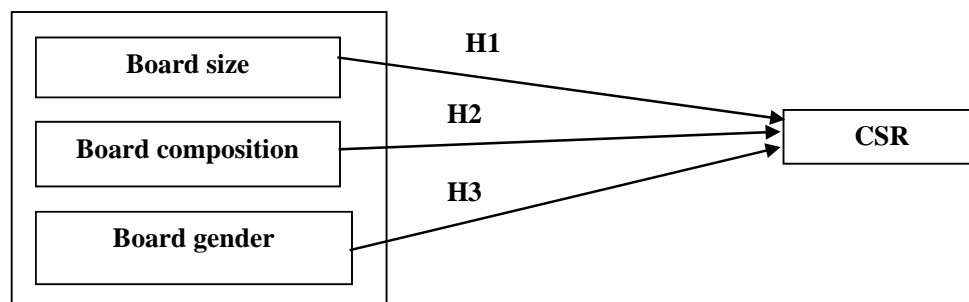


Figure 1. Conceptual model

Source: Authors' conceptualization (2022).

## Theoretical Framework

The stakeholder theory is considered to be a balanced theory that has been widely employed to offer explanation to issues on CSR activities and disclosure (Liao, Luo and Tang, 2015 and Depoers, Jeanjeon and Jerome, 2016). Thus, stakeholder theory is the underpinning theory for

this study. The theory suggests that a corporate entity should take cognisance of the interest of all the various constituents (such as the employees, government, shareholders, bondholders, supplier of inputs, customers, community, etc.) that have anything to do with the organisation. The link between the company and stakeholders must be well managed, for instance, through dissemination of information that clearly highlights its social responsibility activities in order to gain support from each of the segments that make up the stakeholder (Ofoegbu *et al.*, 2018). Unlike shareholders wealth maximisation objective of a firm, the stakeholder theory treats the various constituents that make up a corporate stakeholder equally (Ali & Rizwan, 2013; and Frynas & Yamahaki, 2016).

In relation to this study, the stakeholder theory predicts that the corporate board (being a potent internal governance mechanism) can be used to address the need of the various interest groups that have connection to the company. This is achieved through CSR investment and disclosure. It therefore shows that a larger board, which comprises members with different diversity of stakeholders, will promote better monitoring and ensure better disclosure of corporate social responsibility activities (Hassan & Kouhy, 2015; and Dias, Rodrigues & Craig, 2017).

## Methodology

An ex-post facto research design approach was adopted as data are historically available from published annual reports of the companies for the study period, 2011-2020. As at 31<sup>st</sup> December 2020, Nigeria had thirteen listed oil and gas companies. Due to incomplete data set necessary for the achievement of the objective of this study from three companies, the sample size of the study was restricted to the remaining ten companies.

## Model specification

Consistent with some prior studies (see Ofoegbu, *et al.*, 2018; Osemene and Fagbemi, 2019; and Tarus, 2020), with modification, the econometric model used to formulate the relationship between CSR practices and corporate board attributes is as presented in equation (1).

$$CSR Pit = \beta_0 + \beta_1 BSZ_{it} + \beta_2 BCO_{it} + \beta_3 BGD_{it} + \beta_4 PRF_{it} + \beta_5 FSZ_{it} + \varepsilon_{it} \quad (1)$$

Where:

CSR P = Corporate social responsibility practices;

BSZ = Board size;

BCO = Board composition;

BGD = Board gender diversity;

PRF = Profitability

FSZ = Firm size

$\beta_1, \dots, \beta_5$  = Variable parameters;

$\varepsilon$  = Error term.

Consistent with the prediction of the Stakeholder theory, we expect a positive coefficient in each of the board attributes. Thus, *a priori* expectation is  $\beta_1, \beta_2, \beta_3 > 0$ .

## Variable description and measurement

The measurement of study variables is depicted in Table 1.

**Table 1.** Measurement other variables

Variable	Measurement	Source
Corporate social responsibility practices (CSRP)	Log of amount of corporate social responsibility expenditure per annum	Duke and Kankpang (2013); Nwangi and Oyenje (2013); Kajola <i>et al.</i> , (2016); Awodiran and Jimba (2019); Issa <i>et al.</i> , (2020)
Board size (BDS)	The total number of directors	Eke, Akpanuko and Umoffong (2019); Tarus (2020)
Board composition (BCO)	The ratio of non-executive and/or independent directors to total board membership	Manzoor and Joiya (2018); Osemene and Fagbemi (2019); Shubita (2020)
Board gender diversity (BDG)	The ratio of female directors to total board membership	Imagbe <i>et al.</i> , (2018); Hosam, Eko and Salsabila (2019); Issa <i>et al.</i> , (2020)
Profitability (PRF)	Proportion of profit after tax of total asset	Kajola, Sanyaolu, Alao and Ojurongbe (2019); Efuntade and Akinola (2020)
Firm size (FSZ)	Log of total assets	Ghabayen <i>et al.</i> , (2016); Miras-Rodriguez <i>et al.</i> , (2018); Inua and Emeni (2019); Uyar <i>et al.</i> , (2020)

Source: Authors' compilation from various empirical studies (2022)

### Dependent variable

Based on the theoretical and empirical reviews, the study's dependent variable is corporate social responsibility practice and is surrogated by the amount spent by a company on corporate social responsibility activities per annum.

### Independent variables

The study adopts three corporate board mechanisms- board size, composition and gender diversity as explanatory variables. Findings from empirical literature, especially in developed economies, suggest that these variables are capable of influencing corporate social responsibility practices in the selected companies.

### Control variables

Since it is not possible for the study to make use of all the variables that can affect CSR practices, the study in line with the studies of Rhou, Singal, and Koh (2016) and Uyar *et al.*, (2020), utilised two variables- firm size and firm profitability, as control variables. Theoretically, a larger firm, due to more public scrutiny, is expected to disclose more CSR information than a smaller firm (Uyar *et al.*, 2020). In the same vein, a more profitable firm has higher financial capacity to make costly investment on CSR activities than smaller firms (Kuzey & Uyar, 2017). Thus, the study expects a positive association between the two control variables and CSR practices.

### Estimation technique

The study was panel data in nature and employed multiple regression analysis. Pooled ordinary least squares (POLS), fixed effects least squares model (FEM) and random effects generalised least squares model (REM) were adopted as data analytical techniques.

## Results and Discussion

### Descriptive statistics

Descriptive statistics summary result is shown in Table 2.

**Table 2.** Descriptive statistics

Variable	Mean	Minimum	Maximum	Standard deviation
CSRP	6.466	0.000	8.927	2.408
BSZ	8.690	4.000	13.000	2.168
BCO	0.649	0.375	0.857	0.110
BGD	0.145	0.000	0.375	0.093
PRF	0.011	-1.648	0.426	0.225
FSZ	10.779	8.560	12.118	0.568

Source: Authors' computation (2022).

The descriptive result shows that the mean CSR investment is ₦2,924,152 ( $\log^{-1}$  6.466), which is about US \$7,000, with minimum of zero and a maximum of ₦845,278,845 ( $\log^{-1}$  8.927), about US \$2 million. The board size has a mean of about 9 and this varies between 4 and 13 members. The mean board composition is 0.649. This indicates that 64.9% of board membership consisted of non-executive and independent directors and 35.1% of executive directors. This is in line with Nigerian corporate governance codes (SEC, 2011 and FRC, 2018). Board gender diversity has a mean of 14.5%, with a minimum of zero (some boards have no female representation during the period of study) and a maximum value of 37.5%. Profitability reveals a mean of .011, indicating that the management of the sampled oil and gas firms did not judiciously utilise their resources, as on the average, only 1.1% return was generated on the assets employed by the firms. The maximum profitability is 42.6% while the minimum is -164.8%. The firm size shows an average of ₦60.117 billion ( $\log^{-1}$  10.779), about US \$137 million; minimum of ₦363.078 million ( $\log^{-1}$  inverse 8.560), about US \$825 million and a maximum of ₦1,312.2 billion ( $\log^{-1}$  12.118), about US \$3 billion. CSR practices having standard deviation of 2.408 has the highest dispersion from mean, while board gender diversity having standard deviation of .093 has the least dispersion from mean.

## Correlation

Pearson correlation reflects the association between study variables and is exhibited in Table 3.

**Table 3.** Correlation matrix

	CSRP	BSZ	BCO	BGD	PRF	FSZ
CSRP	1					
BSZ	0.188** (0.031)	1				
BCO	0.242** (0.008)	0.065 (0.261)	1			
BGD	0.051 (0.307)	-0.138* (0.086)	0.354*** (0.000)	1		
PRF	0.161* (0.056)	0.076 (0.227)	-0.141* (0.083)	-0.032 (0.377)	1	
FSZ	0.367*** (0.000)	0.494*** (0.000)	0.121 (0.117)	0.022 (0.416)	0.242*** (0.008)	1

\*  $p < 10\%$ ; \*\*  $p < 5\%$ ; \*\*\*  $p < 1\%$ ,

Source: Authors' computation (2022).

From Table 3, board size (BSZ) has a positive association with CSR practices (CSRP) at 5% level. Board composition (BCO) also has a positive association with CSRP at 5% level. Board gender diversity (BGD) on the other hand has a positive association with CSRP, but is not



significant. The two control variables, profitability (at 10%) and firm size (at 1%) have positive association with CSR.

The result also reveals that no variable has a coefficient of at least 0.7. This suggests absence of multicollinearity among the study's explanatory variables (Rumsey, 2007; and Wooldridge, 2012).

### Collinearity test

In testing the presence of multicollinearity among the series, the study used two other approaches - tolerance value (TV) and variance inflation factor (VIF). Table 4 indicates the results of the test.

**Table 4.** Collinearity test results

Variable	TV	VIF
BSZ	0.718	1.392
BCO	0.832	1.202
BGD	0.842	1.187
PRF	0.912	1.096
FSZ	0.691	1.447

Source: Authors' computation (2022).

Table 4 shows that the VIF of the study variables ranges between 1.096 (profitability) and 1.447 (firm size) and none of the variables has VIF of 10 and above. Also, the TV reports a minimum value of 0.691 for firm size and highest value of 0.912 for profitability and no variable with less than TV of 0.1. All these results confirm absence of multicollinearity among the study independent variables (Alsaeed, 2006; Greene, 2008 and Gujarati & Porter, 2009).

### Regression Result

The study initially employed three regression techniques- POLS, FEM and REM. Results are presented in Table 5.

Redundant fixed log likelihood ratio test was employed to discriminate between the pooled OLS and the fixed effects model, and the summary result is as shown in Table 5. *Prob* value is 0.002 (which is less than 0.05) and this indicates that the FEM is a better estimation technique than the POLS. This outcome therefore necessitated the conduct of Hausman (1978) specification test that discriminates between FEM and REM analytical techniques. Summary of Hausman test result as shown in Table 5 reveals a chi-square value of 2.349 (*prob* = .799 > 0.05). Thus, the test favours the use of REM as the most appropriate analytical technique to be employed in this study.

The adjusted  $R^2$  is 0.602, which suggest that 60.2% of the variation in CSR is explained by the three explanatory factors (BSZ, BCO and BDG), while 39.8% of the variations are due to other variables not included in the model. F-stat of 3.231 with *prob* value of 0.001 (which is less than 0.01) indicates that the model is properly fitted. Durbin-Watson stat value, 1.751, is within the allowable threshold (Alsaeed, 2006) and therefore suggests absence of serial autocorrelation in the variables used in the study.

Table 5. Regression Results

	POLS	FEM	REM
Constant	1.592 [0.115]	1.555 [0.124]	2.047** [0.044]
BSZ	2.971*** [0.005]	2.632*** [0.008]	2.839*** [0.006]
BCO	3.637*** [0.000]	3.577*** [0.001]	2.444** [0.017]
BGD	0.191 [0.849]	-0.542 [0.589]	0.205 [0.838]
PRF	1.752* [0.083]	1.225 [0.224]	0.923 [0.359]
FSZ	2.902*** [0.004]	2.515** [0.019]	3.041*** [0.003]
R <sup>2</sup>	0.649	0.618	0.685
Adjusted R <sup>2</sup>	0.593	0.519	0.602
F-stat	2.239**	2.516***	3.231***
F-stat (prob)	0.029	0.005	0.001
Durbin-Watson stat	1.693	1.806	1.751
Observations	100	100	100
Redundant log likelihood ratio test stat/ (prob)	26.303 (0.002)		
Hausman chi-square value/ prob value	2.349 (0.799)		

\* p < 10%; \*\* p < 5%; \*\*\* p < 1%

Source: Authors' computation (2022).

As revealed in Table 5, board size (BSZ) and corporate social responsibility practices (CSR) are positively associated at 1% level ( $t = 2.839$ ;  $p = 0.006 < 0.01$ ). This indicates the board size of the companies, the higher the tendency of the management involve in CSR spending and disclosure. The result is in agreement with *a priori* expectation and found support in the studies of Ofoegbu *et al.*, (2018) and Awodiran and Jimba (2019). The finding is however inconsistent with the studies of Giannarakis (2014), Bukair and Rahma (2015); Ashafoke and Ilaboya (2017); and Miras-Rodriguez *et al.*, (2018); which produced insignificant relationship and that of Uyar *et al.*, (2020) that exhibited a significant negative effect. The outcome confirms the validity of hypothesis 1 (board size and CSR have significant positive association).

Board composition (BCO) and CSR are positively associated at 5% level ( $t = 2.444$ ;  $p = 0.017 < 0.05$ ). The outcome is consistent with *a priori* expectation and indicates that as more external members sit in boardrooms, the higher will be the propensity to involve in CSR expenditure and disclosure. The finding has the support of Osemene and Fagbemi (2019); Uyar *et al.*, (2020) and Issa *et al.*, (2020). The finding is however not supported by the studies of Bukair and Rahman (2015); Ashafoke and Ilaboya (2017) and Ali and Isa (2018), which reported insignificant relationship. Hypothesis 2 is validated by the outcome of this study. Thus, board composition has a positive and significant association with CSR.

Result indicated a positive and insignificant association between board gender diversity (BGD) and CSR ( $t = 0.205$ ;  $p = 0.838 > 0.05$ ). The finding is contrary to the study's *a priori* expectation. It however suggests that the presence of female directors in corporate boards has no meaningful effect on CSR expenditure by companies. This perhaps may be predicated on inadequate representation of female directors in corporate boards compared to their male counterpart. An average board representation of 14.5% (see Table 2) as observed by Arfken, Beller and Helms (2004) can be considered to be grossly insignificant to make any meaningful impact during board's discussion on issues that affect CSR strategy and oversight. The outcome is consistent with the findings of Akbas (2016) and Kamangari and Gerayli (2017). The result is

however not consistent with stakeholder theory and empirical findings of Awodiran and Jimba (2019); and Inua and Emeni (2019), which showed positive significant relationship and those of Ashafoke and Ilaboya (2017); Manzoor and Joiya (2018) and Sanan (2018) that indicated a significant negative relationship. Based on the outcome of the study, hypothesis 3 is not valid; hence board gender diversity is not an important variable that influences CSR.

As for control variables, profitability has a positive and insignificant relationship with CSR. This indicates that the higher the profits of the companies, the more their engagements in corporate social responsibility activities. The result is however not significant. The result corroborates with the findings of Bear *et al.*, (2010) and Osemene and Fagbemi (2019) but not consistent with the position of Ghaderi *et al.* (2019), which revealed a significant positive relationship...and Firm size has a significant positive relationship with CSR. This suggests that the larger the size of the companies, the more the likelihood to spend on corporate social responsibility activities. The result corroborates with the finding of Osemene and Fagbemi (2019) but at variance with the findings of Manzoor and Joiya (2018) and Uyar *et al.*, (2020), which revealed a significant negative relationship.

## **Conclusion and Recommendations**

In an attempt to extend the work of Hamid (2012) and Issa *et al.*, (2020), the study empirically examined the effect of three board attributes on CSR practices in ten Nigerian listed oil and gas companies. The CSR was measured by the annual expenditure incurred on CSR activities embarked upon by the sampled companies during the period under study.

Results from the data analysis revealed a significant direct relationship between board size, board composition and CSR practice. These findings are in agreement with the prediction of stakeholder theory. However, against theoretical expectation, the findings indicated an insignificant relationship between board gender diversity and CSR.

It is recommended that a corporate organisation be encouraged to have a larger board size (say 13 as in Table 2). This will enable diverse members to use their wealth of experience to direct affairs of the business and effectively monitor the activities of corporate managers, especially when issues that affect the relationship between the organisation and host communities (such as CSR practices) are discussed. Also, more external or non-executive directors, who come with diverse experience, skills and objective opinion, should be allowed to sit in the boardroom as their presence has the tendency to influence positively discussion on CSR practices.

The study is limited to the small sample size in one sector- oil and gas. The need to increase the sample size and consider other sectors of the economy should be taken into consideration in future studies.

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