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MANAGEMENT DIVERSITY AND CORPORATE SOCIAL RESPONSIBILITY OF QUOTED FIRMS IN NIGERIA

Adedeji Daniel Gbadebo
Department of Accounting Science
Walter Sisulu University, Mthatha, South Africa
Corresponding Author: agbadebo@wsu.ac.za

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ABSTRACT

In recent years corporate social responsibility has become a major focus of interest for policymakers, regulators, and academics. Corporate social responsibility (CSR) is basically a concept of voluntary business activities whereby corporations integrate social concerns and other environmental concerns into their economic activities. The study hinged on stakeholder theory to serve as the main theoretical framework. Pool OLS with tests for fixed and random effects was employed to estimate the impact of board diversity, and CSR. The study employs the Generalized Least Square (random effects) regression to examine how board diversity components, including nationality, educational qualifications and gender, affect CSR of 20 listed industrial and commercial goods on the Nigerian Exchange Group, during 2015-2019. The result shows that it is only gender diversity that has a significant positive relationship with corporate social responsibility expenditure while foreign nationality and educational diversity have revealed no significant effect on corporate social responsibility expenditures. This result is revealing that an increase in female representation in the boardroom will result in a corresponding increase in CSR expenditures of companies. This result confirms that women directors might take CSR issues more seriously than their male counterparts not only because of their stronger moral orientations.

INTRODUCTION

In recent years corporate social responsibility has become a major focus of interest for policymakers, regulators, and academics. It has environmental and social themes, and thus, corporations in their policies and decision-making processes would need to integrate a lot of social concerns with new environmental strategies (Moir 2001; Ekatah et al 2011). Corporate social responsibility is basically a concept of voluntary business activities whereby corporations integrate social concerns and other environmental concerns into their economic activities. Companies which support corporate social responsibility are already some steps close to achieving their sustainability objectives. (Aljerf & Choukaife 2016; Zaid et al 2019). Corporate social responsibility simply means firms generally acknowledging their ethical, social and environmental obligations in the quest towards achieving a sustainable business.

Businesses may choose whether to be concerned primarily with the interests of shareholders or social interests. Even though profit maximization and wealth maximization are the most discussed business objectives, these might not be enough when issues concerning societal needs are important. Companies have economic and profitability responsibilities to its shareholders first, then to another stakeholder. Corporate social responsibility activities could be used to drive the financial performance of an organization upwards, while some corporations undertake then for other reasons (Moir 2001). If corporate social responsibility could effectively address the social concerns of all stakeholder group, it would result into a better financial performance (Ekatah et al., 2011), while its failure may result in negative consequence such as, impairment of goodwill, reputational risk, litigations, sanctions, fines and penalties that will directly or indirectly affect the financial performance. Globally, Corporate social responsibility is seen a major concern in management strategy that affects the competitiveness of firms and is becoming an effective resource for enhancing the stakeholders participation to achieve the going concern objectives or corporate sustainability of a business.

Diversity in board composition has affected corporate social responsibility in several ways, from the development of all-inclusive organizational policy to stakeholder-friendly CRS expenditures that contribute to business sustainability. A diverse board ensures a more in-depth perspective to decision making on social responsibility issues, thereby making the firm more acceptable to all the stakeholders which will later translate to profitability and sustainability (Ibrahim & Hanefah, 2016). The diversity of the board of directors involves having men and women of different backgrounds, that will bring great benefit to the organization. Such attributes shaped the emergence of an effective board and influenced their perception to the environmental and social implications of the company's operation, which in the long run creates a level of trust that will attract investors because a more diverse board could promote international best practices. Implementation of CSR-related expenditures could also be significantly enhanced by female board members.

Moreso, female directors on board could have a strong incentive to actively influence firms to spend much of their resources on gender inclusion. They will bring contributions to the board from the feminine standpoint, thus inclusion of females at the forefront of decision-making will lead to greater corporate social responsibility participation (Bear et al., 2010). Director with an advanced degree and professional qualifications are more likely to have established strong CSR commitments and are better positioned to deliver corporate social responsibility performance (Ceres, 2019). This could be attributed to the fact that members of the

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board with further education would have wider perspectives and a better sense of corporate social responsibility. It is assumed that companies dominated by foreign board members are more vigilant in monitoring corporate social responsibility activities through benchmarking their own organization with international best practices (Otuya et al., 2017).

From the foregoing, it could be suggested that a well-diversified board of directors in terms of gender, education and nationality of members is able to efficiently deliberate and come out with more strategic decisions that will better the company's approach to social responsibility, thereby impacting the profitability of the business. This study intends to further empirical evidence on the link among board diversity, CSR and profitability. Some studies examine the link between board diversity and corporate social responsibility (Feng et al., 2020; Abdul & Mustafa, 2016; Cabeza-García et al., 2017; Ibrahim et al., 2016; Bear, Rahman & Post, 2010; Kang et al., 2019; Issa et al., 2019; Khan & Saeed, 2019; Harjoto et al., 2014; Rao & Tilt, 2016). Some scholars established relationships between the variables while others assert no relationship (khan et al 2019; Olarewaju et al 2020; Akinwunmi et al 2019).

Prior studies made use of amount spent on corporate social responsibility activities as a measure for CSR, (Chen, Hung & Wang, 2018) which has previously received little consideration compared to the bulk of CSR research that uses CSR disclosure as measuring parameter. Furthermore, prior research on board diversity has focused more on gender diversity (e.g. Yaseen et al. 2019). Past efforts fail to properly spell out board compositional requirements. Whereas quotas were properly spelt out in the code of corporate governance of some developed nations. Specific policies on board composition will boost both local and foreign investors' confidence, thereby creating an atmosphere that helps business to maximise profits, creating wealth for all its stakeholders and embarking on more CSR activities. The country stands to gain comparative advantage among other nations if it creates a more friendly business environment for its investors by initiating right policies on board composition which will boost investors' confidence and could translate into profitability and more CSR expenditures. The paper attempts to address the following question: How and to what extent does board diversity impact corporate social responsibility expenditures of listed industrial and commercial goods firms in Nigeria? We attempt to determine the extent to which board diversity impacts CSR performance of listed industrial and commercial goods firms in Nigeria.

We find that it is only gender diversity that has a significant positive relationship with corporate social responsibility expenditure while foreign nationality and educational diversity revealed no significant effect on corporate social responsibility expenditures. This result is revealing that an increase in female representation in the boardroom will result in a corresponding increase in CSR

expenditures of companies. This result confirms that women directors might take CSR issues more seriously than their male counterparts not only because of their stronger moral orientations, but also because they have reputational reasons to do so (Eunjung Hyun et al 2016). The findings are useful to regulatory bodies such as Nigerian Stock Exchange and Financial Reporting Council of Nigeria in arriving at a more comprehensive code of corporate governance. The remainder of the research is considered as follows. Section 2 is literature; section 3 discusses the methods. Sections 4 (5) provides the study's results (conclusions).

EMPIRICAL REVIEW

Boardroom diversity literature and the way it impacts corporate social responsibility has been in discussion in the last decade. Scholars in the international space from both developing and developed nations have examined the relationship that exists between different forms of diversities and its effects on the firm's corporate social responsibility. Bear, Rahman, and Post (2010) explores in their international study how the diversity of board resources and the number of women on boards affect firms' corporate social responsibility ratings, and how, in turn, CSR influences corporate reputation. They hypothesized whether CSR ratings mediate the relationships among board resource diversity, gender composition, and corporate reputation using OLS regression results and lagged data from fortune 2009 world's most admired companies. It was discovered that CSR ratings had a positive impact on reputation and mediated the relationship between the number of women on the board and corporate reputation.

Harjoto et al. (2014) examined further, using 1,489 firms in a developed country like United States between 1999 and 2011, also found out that board diversity is positively associated with CSR performance. Data for this study was analyzed with multivariate regression analysis and descriptive statistics. Cabeza-Garcíae et al. (2017) extended the debate from a developed nation perspective by studying board gender diversity and the disclosure of corporate social responsibility (CSR) information. An ordered random effect probit model was applied to a panel of Spanish non-financial and non-insurance listed firms over the 2009–2013 period. The analyses revealed that a higher percentage of women in boardrooms and in groups of outside and independent directors imply better CSR disclosure. The result hold for corporations with a critical mass of three women on the board and among outside directors.

Country specific literature on board diversity and social responsibility reporting are relatively few in the developing countries compared to the developed nations since it is a recent discussion. Ahmad, Rashid and Gow (2018) in a developing nation's investigation on corporate board gender diversity and

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corporate social responsibility reporting in Malaysia between 2008 and 2013. With the aid of checklist content analysis used to ascertain the level of CSR reporting. The reporting index comprising of 51 items built around six subjects or theme namely, general, environment, community, marketplace, human resources and other. Ordinary least square regression was utilized to decide the relationship between both gender diversity and educational background and CSR reporting. The outcomes uncover that the extent of female directors and directors' educational background are not related with CSR reporting levels. The study was hinged on critical mass theory as the portrayal of women on corporate board in Malaysia is exceptionally low in recent times, supervisory bodies and policymakers ought to be more severe in checking board diversity. Overall, this study recommends that a very much managed diversity adds to a board's effectiveness, accordingly, serving to defend all stakeholders' interests. This study additionally gives new bits of knowledge and adds to the writing on board diversity and corporate social responsibility reporting with regards to a developing nation.

Khan, Khan and Saeed (2019) from Pakistan further the developing country discussion by analysing data using GMM regression from 86 firms listed in Pakistan Stock Exchange from 2010 to 2017. The result indicated that firm's diverse resources lead to improve CSR disclosure. The results also exhibit that educational background diversity on the board would reduce CSR disclosure. Table 1 provides a summary of related empirical literature.

Table 1: Diversity and Corporate Social Responsibility

Author(s)	**Country & Scope**	**Theory**	**Methodology**		**Major Findings**
			Variables	**Method(s)**	
Cabeza-García et al. (2017)	Spanish insurance firms (2009–2013)	Agency theory and Resource dependence theory	Women, %Independent women, Return on assets (RAO), Board Size, Size, Lev	Probit model	The analyses revealed that a higher percentage of women in boardrooms and in groups of outside and independent directors imply better CSR disclosure.
Abdul & Mustafa (2016)	ASE listed companies, 2007 and 2011	Resource dependence theory and Agency theory.	Gender diversity, Independent directors, directors' Nationality, directors' Age, ROA	Ordinary Least Square (OLS)	Panel data analysis show that the level of CSR disclosure has increased over the period of study. Results also reveal a positive and significant association between the level of CSR disclosure and board diversity variables.

Bear et al. (2010)	689 firms on Fortune's 2009 Most Admired List	Dependence theory and Agency theory	1Board resource diversity, Female board member, Technical strength, Total reputation, CEO duality, ROA, Stock change, Institutional strength,	OLS	CSR ratings had a positive impact on reputation and mediated the relationship between the number of women on the board and corporate reputation.
Yeong et al. (2019)	a sample of 1828 Korean firms from 2002 to 2015 provide evidence to support the predictions	Institutional theory, behavioural theory and stakeholder theory.	Donation, Anglo director rate, non-Anglo director rate, Anglo director number, firm size, ROA, debt ratio, firm age.	Regression	Findings shows that inside foreign directors have a greater impact on board CSR decisions than outside foreign directors in Korean companies is insightful.
Khan et al. (2019)	86 Pakistan Stock Exchange (2010 to 2017)	Resource Base View Theory	age, Gender, Nation, Ethnic, Education Background, Tenure, Board Size, Tenure, Board meetings, Leverage.	GMM regression	Result indicating that firm's diverse resources lead to improve QCSR disclosure results also exhibit that educational background diversity on the board would reduce CSR disclosure.
Maretno et al. (2014)	1,489 U.S. firms (1999 to 2011)	Instrumental theory and Stakeholder theory	CSR, Firm Age, Race, Age, Gender, Tenure, Asset, Sale	Multivariate regression	Study finds that board diversity is positively associated with CSR performance.

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Kathyayini Rao Carol Tilt, (2016)	115 Australian companies (2009-2011)	Stakeholder theory and resource dependency theory	CSR disclosure, Diversity variables, Board size, leverage.	Regression Analysis	The results based on the regression analysis reveal that three of the board diversity attributes (gender, tenure and multiple directorships) and the overall diversity measure have the potential to influence CSR reporting. The relationship between independent/non-executive directors and CSR disclosure however is not clear. In addition, three of the control variables (firm size, Industry and CEO duality) are found to have some influence on CSR disclosure whereas board size and profitability are found to be insignificant. The results also indicate the existence of some possible interaction effects between gender and multiple directorships.
Ahmad et al. (2018)	Public firms in Bursa Malaysia (2008–2013)	Resource-dependency theory and Critical Mass theory	Directors with financial background, board size, director's ownership, proportion of female directors, proportion of directors with law background.	Probit regression analysis	This study proposes that a well-managed diversity contributes to an effective board, thus serving to safeguard all stakeholders' interests. This study provides new insights and contributes to the literature on the practices of boardroom diversity and corporate social responsibility reporting in the context of a semi-developed country.
Stefania Veltri et al. (2020)	Firms listed on FTSE-MIB index, (2010–2019)	Stakeholder and Agency theory	Firm Age, Debt, ROE, Natural Log of Asset, Board Size, Ration of female directors by boardsize, Social	Multiple Regression	The BoD' diversity positively affects CSP only interms of independent directors, while gender diversity is not signifi-cantly associated with CSP. it also shows a negative correlation between ROE and CSP, and the positive

			performance Scores, Independent directors by boardsize		relation between the level of indebtedness and CSP means that profitable and risky Family firms improve the financial performance at the expense of the CSP.
Eunjung Hyun et al. (2016)	Standard & Poor's (S&P) 1500 index firms (2000–2009)	Gender socializati on theory and theory of leadership	CSR scores, Board size, ROE, Tobin Q, R and D Intensity, Directors Age, female executive director, female independent director.	OLS	The number (or proportion) of women independent directors is positively associated with a firm's CSR ratings and that the strength of this relationship depends on the level of the firm's consumer market orientation.

METHODOLOGY

This study uses stakeholder theory in examining theoretically the impact of board diversity on corporate social responsibility. Fryxell and Lerner (1989) propose that stakeholder's theory tends to take into consideration peculiarities of minority representation in the boardroom. The stakeholder theory recommends that the firm should mirror the interests of different all stakeholder groups and not just the shareholders or investors. Late writing on corporate administration as often as possible underlines this point of view. Those stakeholders other than investors add to the creation of significant value to the business (Nurulyasmin, Rashid and Gow 2018). In line with stakeholder theory, diversity in board composition and characteristics is a way to consider interest of directors alongside with other stakeholder group that important to taking decision that affects CSR Adams & Ferreira 2009; Cabeza-García, Fernández-Gago & Nieto 2017; Ahmad et al., 2018; Khan et al., 2019; Zaid et al 2019).

To demonstrate the effect of board diversity on corporate social responsibility expenditure, the paper modifies the model from Stefania Veltri et al. (2020) to examine how board diversity measures, including number of female gender on the board ($FMBD_{i,t}$), number of foreigners on the board ($FORBD_{i,t}$), number of PhD holders on the board ($PHDBD_{i,t}$), financial performance using the return on asset ($ROA_{i,t}$), firms' leverage ($LEV_{i,t}$), firms' board size ($SIZE_{i,t}$), firms' age ($FAGE_{i,t}$), firm's Asset ($ASST_{i,t}$), *impact* Corporate Social Responsibility expenditures ($\mathrm{CSRE}_{i,t}$). Essentially, we estimate the model (1) below:

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$$\text{CSRE}_{i,t} = \alpha + \beta_1 FORBD_{i,t} + \beta_2 FMBD_{i,t} + \beta_3 PHDBD_{i,t} + \beta_4 ROA_{i,t} + \beta_5 LEV_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 FAGE_{i,t} + \beta_8 ASST_{i,t} + \varepsilon_{it} \quad (1)$$

We estimate the sensitively model by considering an alternative measure of financial performance, the return on equity ($ROE_{i,t}$). Hence, we specify the model as equation (2).

$$\text{CSRE}_{i,t} = \alpha + \beta_1 FORBD_{i,t} + \beta_2 FMBD_{i,t} + \beta_3 PHDBD_{i,t} + \beta_4 ROE_{i,t} + \beta_5 LEV_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 FAGE_{i,t} + \beta_8 ASST_{i,t} + \varepsilon_{it} \quad (2)$$

Where, α captures the intercept which is assumed to be constant over time and across sections. β captures the slope coefficient while ε_{it} measures the residual.

The decision to control explanatory variables was consistent with extant literature. The study presents a few numbers of control explanatory variables which are extensively utilized by earlier researchers who concentrated on board diversity and financial performance. Corporate Social Responsibility expenditures was used consistent with Akinleye and Adedayo (2017). $FMBD_{i,t}$ measures number of female genders on the board, consistent with Reguera-Alvarado et al (2015). The foreigners on the board measures number was included as considered Ozordi et al (2018), PhD holders were used for education level consistent with Boadi and Osarfo (2019). The board size is used in the study model, since the bigger the board size, the higher the possiblilty of having a more diverse board (Conyon & He 2017). Board size was estimated by the absolute number of the boardroom directors. Board size is expected to significantly affect firm's performance, since bigger board allows for more diversity which may probably affects an organisations' performance (Luo & Bhattacharya, 2006; McWilliams & Siegel, 2001). We control leverage since high leverage ratios are considered risky. Consequently, managers look to get other stakeholders' confidence through non-financial disclosure such as money expended on CSR (Naser et al., 2006). Leverage was calculated as a percentage of total liabilities in total equity. It is sensible to assume that huge firm size with higher influence and more resources has adequate assets to take part in CSR exercises (Andrew et al., 1989; Akinleye and Adedayo 2017). Thus, this review added total asset as a control explanatory variable, which is estimated as a log of total asset. The firm age as a control variable reflects that more established firms are more likely to be more diverse and more likely to engage in corporate social activities (Roberts, 1992).

To effectively examine the effect of diversity and corporate social responsibility, the study employed the Pooled Least Squares Estimator. The

estimator is adopted because it seeks to restrict the influence of inalienable stochasticity on the regressand to provide evaluations of relational parameters that represent the information being watched as reliable and accurately. According to Gujariti and Porter (2010), the OLS is a method that is generally desirable for its parameters as it aids unbiasedness, efficacy, and accuracy. The model disregards the data panel structure across the sections. In other words, the estimator disregards the heterogeneity factor which may arise across the coefficients of the units. The subscripts i or t is not made important because they are assumed to be the same over time and across unit (Olabusoye et al. 2015).

This study relies solely on listed firms as at the time of this study because of the ease of accessing different companies' annual report in public domains for the verifiability. The population of this study focused on twenty (20) listed firms under consumer and industrial goods categories of the Nigeria Exchange Group. The choice of these sectors was informed by data availability and moreover, they represent the most sensitive sectors to the economic cycle, as they produce goods that are consumed by households, manufacturing businesses and construction. The study used available data from both consumer and industrial goods sector (Egbunike & Okerekeoti, 2018). Data was drawn from annual audited reports published between the period of 2015-2019 and firms without consistent annual reports were eliminated to support data consistency.

RESULTS

Table 2 contains a summary report for the descriptive statistics of all variables. The average percentage return on asset which is a measure for dependent variable is 5.5% where the minimum return on asset stood at -6% and the maximum return on assets is 23.2%. Return on equity in study is used as a measure of dependent variable, it has a percentage average return of 10.5%, when the minimum return on equity stood at -22% and maximum return on equity is 40%, which depicts that there is 40% returns for equity holders and at the same time there is a risk percentage of -22% to equity holders. CSR expenditures *is* another measure of dependent variable with an average expenditure of 134 million naira, when the minimum CSR expenditures stood at 0.633million naira while the maximum CSR expenditures is 993 million naira. Female representation on the board is a measure for independent variable.

The average female representation on the board is 2.4% of board members, where the least representation stood at 1 female per board and the maximum representation was 5 persons. Foreign nationals on the board are another measure of independent variable. There is an average representation of 4.5 persons per

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board, when the least representation stood at 1 foreigner per boardroom and the maximum representation of 8 persons. PhD holders show an average of 1.3 people with a PhD on the board, when the minimum is 1 person, and the maximum is 3 PhD holders in a boardroom. The average leverage to be 1.38, when the minimum leverage stood at 24% and the maximum was 375% leverage. The average number of board members is 13.2 persons, when the minimum board size is 7 persons and a maximum 18 persons. Firm age is a measure of control variables. The average firm age is 53.6 years, while the minimum age is 14years and the maximum age is 72 years. Firm asset is another measure of control variables in this study. The average firm asset is 197 billion naira, when the least firm asset is 2.250 billion naira, and the maximum is 578 billion naira.

Table 3 shows the correlation metric. The return on asset has a weak positive relationship with return on equity, female on board, foreigner on board, CSR expenditures, board size and total asset, with correlation coefficients 0.159, 0.0332, 0.068, 0.199, 0.049 and 0.278 respectively. This depicts that an increase in return on asset will result into a corresponding increase in return on equity, female on board, foreigner on board, CSR expenditures, board size, total asset and vice versa. Return on asset has a weak negative relationship with PhD holders on the board, firm's leverage and firm's age, with correlation coefficients -0.065, -0.029, and -0.258 respectively. This implies that an increase in return on assets will result in a decrease in PhD holders on the board, firm's leverage, firm's age and vice versa. There exists a weak positive relationship between return on equity and CSR expenditures with a correlation coefficient of 0.013, implies that an increase in return on equity will bring about an increase in CSR expenditures and vice versa. The table also shows return on equity has a weak negative relation with female on board, foreigner on board, PhD holders on the board, firm's leverage, board size, firm's age and total asset with correlation coefficients -0.170, -0.031, -0.053, -0.722, 0.154, -0.082, and -0.01 respectively. This implies that an increase in return on equity will result to decrease in female on board, foreigner on board, PhD holders on the board, firm's leverage, board size, firm's age, total asset and vice versa. The result of the Hausman test (Table 4) is significant, indicating that random effects is preferred.

Table 2: Descriptive Statistics

Variables	Statistics		
	Mean	Maximum	Minimum
$ROA_{i,t}$	0.055	0.232	-0.060
$FMBD_{i,t}$	2.433	5.000	1.000
$FORBD_{i,t}$	4.533	8.000	1.000
$PHDBD_{i,t}$	1.3	3	1
$\mathrm{CSRE}_{i,t}$	134	993	0.633
$LEV_{i,t}$	1.38	3.71	0.24
$SIZE_{i,t}$	13.2	18.0	7.0

$FAGE_{i,t}$	53.6	72.0	14.0
$ASST_{i,t}$	197	578	2.250

Source: Author's Computation

Table 3: Correlations

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
$ROA_{i,t}$ (1)	1.000	0.033	0.068	-0.065	0.199	-0.030	0.050	-0.258	0.278
$FMBD_{i,t}$ (2)	0.033	1.000	0.291	0.061	0.598	0.212	0.419	0.266	0.416
$FORBD_{i,t}$(3)	0.068	0.291	1.000	0.253	0.379	0.070	0.770	0.091	0.627
$PHDBD_{i,t}$(4)	-0.065	0.061	0.253	1.000	0.078	0.018	0.412	0.080	0.233
$CSRE_{i,t}$(5)	0.199	0.598	0.379	0.078	1.000	0.134	0.491	0.097	0.727
$LEV_{i,t}$(6)	-0.030	0.212	0.070	0.018	0.134	1.000	0.140	0.016	0.153
$SIZE_{i,t}$(7)	0.050	0.419	0.770	0.412	0.491	0.140	1.000	0.095	0.709
$FAGE_{i,t}$(8)	-0.258	0.266	0.091	0.080	0.097	0.016	0.095	1.000	-0.024
$ASST_{i,t}$(9)	0.278	0.416	0.627	0.233	0.727	0.153	0.709	-0.024	1.000

Source: Author's Computation

Table 4: Hausman Test

	FE (A)	RE (B)	Difference (A-B)
$FMBD_{i,t}$	-0.4242	-0.1914	-0.2329
$FORBD_{i,t}$	-0.1149	0.3241	-0.4390
$PHDBD_{i,t}$	-0.1926	-0.2894	0.0968
$ROA_{i,t}$	0.0854	0.2263	-0.1409
$FAGE_{i,t}$	-0.0932	0.0092	-0.1023
$LEV_{i,t}$	-0.0111	-0.0079	-0.0032
$ASST_{i,t}$	0.2535	0.7476	-0.4940
$SIZE_{i,t}$	0.0176	0.0276	-0.0100
Chi2 =	0.0003		

Source: Author's Computation

Table 5 presents the result of the analysis for model 1 which captures the impact of board diversity on CSR performance using OLS regression. The result shows that female board directors with coefficients 0.731 depicts there is a positive significant relationship between female directors in the boardroom and CSR expenditures. The estimation reveals that firm's asset with coefficients 0.707 depicts a positive significant relationship between firm asset and CSR expenditures. The R-squared with coefficients 0.653, implying that the independent variables cumulatively explain appropriately up to 65% of the dependent variable. The first result from model 1 is fairly in tandem with H1, which states that: board diversity has significant positive effect on CSR of some listed industrial and commercial goods firms in Nigeria. If diversity is to be measured only in terms of numbers on women in the boardroom, then this outcome is in line with several previous

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developing and developed country studies (Ahmed et al 2018; Cabeza-Gacia.et al 2017).

Boardroom diversity was further considered in terms of foreigners represented in the boardroom and how it affects corporate social responsibility. The result obtained is not in support of H1, which states that: board diversity has significant positive effect on CSR of some listed industrial and commercial goods firms in Nigeria. This outcome is also contrary to a number of previous developing and developed country studies (Estélyi & Nisar 2016; Kang et al 2019). Further insight into to the result revealed that if diversity is to measure only in terms of numbers of PhD holders represented in the boardroom shows the result is contradictory to H1 (which state that: board diversity has significant positive on CSR), but consistent with a developing country study in Pakistan (khan et al., 2019). The first result from model 2 is not in support of H2, which state that: board diversity has significant positive effect on financial performance. Gender, Nationality and educational diversity has no significant relationship with financial performance.

Table 5: Panel (OLS) Estimation for CSRE

$$CSRE_{i,t} = \alpha + \beta_1 FORBD_{i,t} + \beta_2 FMBD_{i,t} + \beta_3 PHDBD_{i,t} + \beta_4 ROA_{i,t} + \beta_5 LEV_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 FAGE_{i,t} + \beta_8 ASST_{i,t} + \varepsilon_{it}$$

Variables	Coefficient	Std. Er	t-value
Constant	-1.5040	2.1990	-0.6839
$FORBD_{i,t}$	-0.1210	0.0958	-1.2630
$FMBD_{i,t}$	0.7310	0.1520	4.8092
$PHDBD_{i,t}$	-0.3110	0.3280	-0.9482
$ROA_{i,t}$	0.0896	0.6830	0.1312
$FAGE_{i,t}$	0.0048	0.0081	0.5998
$LEV_{i,t}$	-0.0158	0.0291	-0.5430
$ASST_{i,t}$	0.7070	0.0994	7.1127
$SIZE_{i,t}$	-0.0159	0.0731	-0.2175
R-squared	0.653		

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Corporate Social Responsibility expenditures ($CSRE_{i,t}$); Number of female gender on the board ($FMBD_{i,t}$), number of foreigners on the board ($FORBD_{i,t}$), number of PhD holders on the board ($PHDBD_{i,t}$), financial performance using the return on asset ($ROA_{i,t}$), firms' leverage ($LEV_{i,t}$), firms' board size ($SIZE_{i,t}$), firms' age ($FAGE_{i,t}$), firm's Asset ($ASST_{i,t}$).
Source: Author (2024)

Table 6: Panel (RE) Estimation for CSRE

$$CSRE_{i,t} = \alpha + \beta_1 FORBD_{i,t} + \beta_2 FMBD_{i,t} + \beta_3 PHDBD_{i,t} + \beta_4 ROA_{i,t} + \beta_5 LEV_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 FAGE_{i,t} + \beta_8 ASST_{i,t} + \varepsilon_{it}$$

Variables	Coefficient	Std. Er	t-value
Constant	-1.1880	2.1430	-0.5544
$FORBD_{i,t}$	-0.1310	0.0955	-1.3717
$FMBD_{i,t}$	0.7350	0.1510	4.8675

$PHDBD_{i,t}$	-0.3150	0.3250	-0.9692
$ROA_{i,t}$	0.4310	0.3720	1.1586
$FAGE_{i,t}$	0.0051	0.0078	0.6547
$LEV_{i,t}$	0.0195	0.0421	0.4632
$ASST_{i,t}$	0.6830	0.0969	7.0485
$SIZE_{i,t}$	0.0028	0.0741	0.0377
R-squared	0.6580		

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Corporate Social Responsibility expenditures ($CSRE_{i,t}$); Number of female gender on the board ($FMBD_{i,t}$), number of foreigners on the board ($FORBD_{i,t}$), number of PhD holders on the board ($PHDBD_{i,t}$), financial performance using the return on asset ($ROA_{i,t}$), firms' leverage ($LEV_{i,t}$), firms' board size ($SIZE_{i,t}$), firms' age ($FAGE_{i,t}$), firm's Asset ($ASST_{i,t}$).
Source: Author (2024)

The paper completes a sensitive check by measuring financial performance using return on equity (ROE). The result disclosed that female boardroom representation remains positive and significant. This result is consistent with results of studies from other developed and developing countries (Randoy et al., 2006; Adams & Ferreira, 2009; Reguera-Alvarado et al., 2015), but differs from some studies (Coyon & He, 2017; Dezso & Ross, 2012; Srinidhi et al., 2011; Yu et al., 2013). Foreign national boardroom representation is positively insignificant to ROE while it is negatively insignificant to ROA. This result is in tandem with other studies from both developed and developing countries (Darmadi 2011; Wang & FeiXie 2011), but some studies differ in findings (Lars & Randøy, 2003; Anazonwu et al., 2018). When diversity is measured in terms PhD holders represented on the boardroom, the outcome shows positive but insignificant impact on equity returns while it is negatively insignificant to return on asset. The result is consistent with a developing country study (Boadi & Osarfo 2019). The result established significant relationships between firm age, firm leverage, firm asset and financial performance. Firm's age and firm leverage is negatively significant to return on asset, while it is only firm's leverage that is negatively significant ROE. Firm asset also gave a positive significant relationship with return on asset.

Table 7: Panel (FE) Estimation for CSRE (Sensitivity)

$$CSRE_{i,t} = \alpha + \beta_1 FORBD_{i,t} + \beta_2 FMBD_{i,t} + \beta_3 PHDBD_{i,t} + \beta_4 ROE_{i,t} + \beta_5 LEV_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 FAGE_{i,t} + \beta_8 ASST_{i,t} + \varepsilon_{it}$$

Variables	**Coefficient**	**Std. Er**	**t-value**
Constant	-2.2240	2.9160	-0.7627
$FORBD_{i,t}$	0.1910	0.1190	1.6050
$FMBD_{i,t}$	0.3240	0.1680	1.9286
$PHDBD_{i,t}$	0.2890	0.3400	0.8500
$ROA_{i,t}$	0.2260	0.3570	0.6331
$FAGE_{i,t}$	0.0092	0.0115	0.7965

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$LEV_{i,t}$	-0.0079	0.0416	-0.1906
$ASST_{i,t}$	0.7480	0.1260	5.9365
$SIZE_{i,t}$	0.0276	0.0866	0.3187
R-squared	0.589		

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Corporate Social Responsibility expenditures ($CSRE_{i,t}$); Number of female gender on the board ($FMBD_{i,t}$), number of foreigners on the board ($FORBD_{i,t}$), number of PhD holders on the board ($PHDBD_{i,t}$), financial performance using the return on asset ($ROA_{i,t}$), firms' leverage ($LEV_{i,t}$), firms' board size ($SIZE_{i,t}$), firms' age ($FAGE_{i,t}$), firm's Asset ($ASST_{i,t}$).
Source: Author (2024)

CONCLUSIONS

The study revealed some interesting facts. First, the study shows that it is only gender diversity that has a significant positive relationship with corporate social responsibility expenditure while foreign nationality and educational diversity have no significant effect on corporate social responsibility expenditures. Second, the study revealed that increase or decrease in diversity variables have no significant effect on financial performance. Third, the study also disclosed that CSR expenditures have a positively significant to return on asset, while it is positively insignificant to return in equity. The study recommends that future studies should examine additional industries in the Nigerian context and from other developing countries. Studies in similar developing nation context might offer different results compared with the results offered by the present study due to different institutional context. Furthermore, research should explore how board processes including inquiry, decision making, and social cohesion affect performance. Studies can further explore the combined effect of other board characteristics such as age, ethnicity, and religion on CSR and financial performance. The paper offers these recommendations. First, the authorities should ensure there is more specific pronouncement that encourages social cohesion, in the Nigerian code of governance. Second, the authorities should ensure that more disclosures are made on board characteristics in annual returns. Third, the authorities should ensure there is more policy encouragement or incentives for companies embarking on corporate social responsibility activities.

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