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Corporate Social Responsibility and the Performance of Non-finance Firms in Nigeria

Henry Osahon Osazevbaru[*], Vincent Ivwighrevero Oruwevwiruohwo Odiri, Garba Hassan Yahaya

Department of Business Administration, Faculty of the Social Sciences, Delta State University, Abraka, Nigeria

Email address:
henryosas@yahoo.com (H. O. Osazevbaru), Osazevbaruho@delsu.edu.ng (H. O. Osazevbaru), vincentodiri@yahoo.com (V. I. O. Odiri), zaraconcept01@gmail.com (G. H. Yahaya)

[*]Corresponding author

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Abstract: This study assessed the effect of corporate social responsibility on organizational performance by means of expo-facto research design. Secondary data of seventy-five (75) listed non-finance firms were obtained for the period 2010-2019. Corporate social responsibility (CSR) variants of local community disclosure, social donations and gifting, employees training disclosure, and health and safety disclosure, and performance proxies of gross profit margin, profit before tax margin, return on equity, and earnings before tax margin were obtained from the annual reports and accounts of the listed non-finance firms. The yearly panel data obtained was analyzed using both descriptive and inferential statistics. The fixed and random effects result indicated that while corporate social responsibility significantly affects gross profit margin, profit before tax margin and earnings before tax margin, insignificant effect was found for the return on equity. Given the findings of the study, it was recommended among others that firms should gear efforts toward providing sustained and enhanced social responsibility activities in the areas of employees' health and safety, community development projects, customers' complaints, and social donations and gifting in order to attain maximum performance as well as competitive advantage. Again, firms should see CSR as a dynamic investment which promotes crucial attitudes of employees, local community and consumers, instead of simply being a cost to the firm.

Keywords: CSR Disclosure Indexes, Financial Performance, Internal Environment, Society, Stakeholders

1. Introduction

Over the years, corporate organizations have attempted to improve their performances through different means but without considering the effect of their operations on the environment, customers, and employees. However, the concerns expressed by international organizations, national and international governments, coupled with pressure from customers, competitiveness, globalization, legal regulation, among others, have compelled most corporations to pay attention to the notion of corporate social responsibility (CSR) [3, 5].

Accordingly, management of corporate entities have attempted to act in accordance with the legal, environmental, ethical and social frameworks in their operations. Conceivably, this has led to increased awareness of CSR both locally and globally. In Nigeria, CSR is no longer a choice for firms, but an obligation [4, 11]. Hence, CSR and its effect on the performance of organizations have received momentous enquiry [5, 6, 8, 9, 21, 27, 28, 31, 32, 34].

CSR theories have been anchored on ideologies that accentuate 'doing the right thing to foster a good environment and society' [20, 34]. CSR stakeholder paradigm offers the most fascinating theoretical acumen to conceptualize the term CSR as 'giving back to the society and environment what has been taken from them'. This view point is commonly held in the management literature. Freeman [15] applied a three dimensional edifice of CSR, which predominantly focus on CSR directed towards the local community (social donations and gifting and development), employees (training, health and safety) and customers (complaints and resolutions) [1, 25, 33].

Corporate organizations have been criticized for their negative attitude towards the natural environment in the areas of wasting natural resources and contributing to environmental hazards like pollution and global warming. CSR demands that firms should cautiously consider the role they play in terms of social welfare to the local community, customers and employees. While some non-finance firms in Nigeria do an excellent job of satisfying customers' needs, they do not act socially responsible in the best long-run interests of the local community (in areas of social donation and gifting disclosure), employees (health/safety and employee training disclosures), and more importantly, customer and complaints disclosure.

It has been asserted that most firms have not adequately engaged in social disclosure index [21, 32, 34]. This observation may be connected with the fact that firms conceive and yield to CSR at varying levels. For some firms, it is cumbersome to discern where their social responsibilities role start and end, while for others, CSR is very explicit. The basic question can be posed as: Is there a significant link between the practice of CSR and the performance of corporate organizations in developing economies like Nigeria? Notwithstanding the fact that prior studies abound on the nexus between CSR and organizational performance; results from a number of such studies are conflicting. Again, prior studies on the subject have attempted the discourse using primary data (questionnaire), with very insignificant number using secondary data, particularly as it concerns listed non-finance firms in Nigeria.

Consequently, in order to contribute to the literature on CSR, particularly from methodological perspective, this study investigated the relationship between CSR and organizational performance using yearly panel data of CSR disclosure indexes (local community, social donations and gifting, employee training, health and safety, and customer complaints disclosures) and performance dimensions (gross profit margin, profit before tax margin, returns on equity, and earnings before tax margin). The prominence of this study rests on its expected theoretical and empirical contributions to management literature.

The broad objective of this study is to investigate the effect of corporate social responsibility using the disclosure indexes on organizational financial performance of listed non-finance firms in Nigeria. The specific objectives are to: (i) examine the effect of corporate social responsibility on gross profit margin. (ii) Determine the effect of corporate social responsibility on profit before tax margin. (iii) Assess the effect of corporate social responsibility on return on equity. (iv) Ascertain the effect of corporate social responsibility on earnings before tax margin. The hypothetical propositions are: (i) corporate social responsibility has no significant effect on gross profit margin. (ii) There is no significant effect of corporate social responsibility on the profit before tax margin. (iii) Corporate social responsibility has no significant effect on return on equity. (iv) There is no significant effect of corporate social responsibility on earnings before tax margin.

The outcome of this study will illuminate the unresolved questions on social responsibility and performance in Nigeria; and in adding to knowledge in the area of CSR for non-finance firms. This study is vital because it will underscore the role of CSR from the viewpoint of being an imperative driver of organizational performance. Again, it will expand researches that have been done on CSR and organizational performance and the results would facilitate a comprehension of the relationship between CSR and organizational performance.

2. Review of Related Literature

This section deals with the review of related literature, which encompassed the conceptual and theoretical frameworks, review of empirical studies as well as the gap of the study.

2.1. Conceptual Framework

2.1.1. Corporate Social Responsibility

CSR has been defined variously in the literature. To Brammer, Millington, and Rayton [7], CSR is a firm's commitment to create and enhance society and its organization by employing diverse business and social actions towards offering equal and sustainable benefits for all concerned stakeholders. Similarly, Skudiene and Auruskeviciene [36] defined CSR as a situation where a firm integrates social and environmental dynamics in their interaction with stakeholders. Mensah, *et al,* [25] and Aggarwal and Jha [1], advocated that there are three dimensions of CSR – environment (local community), society (customers*),* and organization (employees).

First, the local community dimension to CSR is exceedingly vital to the firm. However, it is often ignored except a devastating event ensues to seize the public's interest [5]. Specifically, the local community dimensions to CSR are closely related with human and labour rights. CSR towards the local community can emerge in a broad range of corporate endeavours such as adding beautiful flowers to the local gardens, innumerable educational campaigns, assisting poor people, buying medical machines for cancer centres among others. These endeavours in the view of Zapotorczny [38] are often local in nature and concentrate on issues that bother a given local community.

Second, social donations and gifting are activities a firm can engage in, aside its primary goal of engaging in activities for the welfare of the local community [34]. Such social donations and gifting encompassed both financial and non-financial aids on educational activities, health and childcare, poverty eradication among others. However, there are mixed evidence on social donations and organizational performance. Wood and Kaufman [37] opined that notwithstanding the increased social donations and gifting by corporate firms to the society, organizational performance and productivity has not increased.

Contrary to this viewpoint, Garvin, McGee, Smoyer-Tomic and Aubynn [17] found that socially responsible activities help enhance the performance of organizations. Kim [22, 23] added that socially responsible activities like social donations and gifting can assists a firm to maintain a good reputation.

Another dimension of CSR is employee training, health and safety disclosures of firms. Few studies [12, 13] have found employees' training, health and safety as CSR dimension, valuable strategic asset for the creation of relationship with employees. Singh and Misra [34] asserted that CSR geared towards employees are expected to have a significant effect on performance. In the same vein, Lee, Park and Lee, Mensah, *et al* and Chaudhary [24, 25, 8] have found this variable to also enhance employee performance.

Customers' complaint disclosure is yet another CSR dimension capable of improving organizational performance. Customers' complaint is an aftermath of customers' evaluation, discernment, and psychological response to consumption experience of an entity's services or products. In the view of Alafi and Al-Sufy [2], customers' complaint disclosure reflects a post-purchase behavior formed via a mental evaluation of the quality customers expect to receive from an entity's products and the level of quality they actually get.

2.1.2. Organizational Performance

Organizational performance is cumbersome to measure given that organizations have diverse business aspects and commonly changing goals [10]. The most discernable means of measuring organizational performance has been the key performance indicator (KPI), which usually see the performance of an organization as financial outcomes, productivity and profitability. According to Osisioma, Nzewi and Nwoye [30], organizational performance is the extent to which an entity is able to realize its goals and objectives, particularly in areas of market share, innovation, turnover, profitability, productivity and customers' satisfaction. Basically, there are two components of organizational performance – financial and non-financial [18]. However, this study focuses on the financial component of organizational performance because it can be objectively determined.

In the literature, financial performance as a component of organizational performance has been measured using indicators like returns on investment, returns on asset, returns on equity, gross profit margin, profit before tax margin, returns on sales, earnings before tax margin among others. In a meta-analysis, Orlitzky, Schmidt and Rynes [29] found a significant and positive relationship between CSR and organizational performance. Firms that engage in CSR activities are more probable to enjoy the resulting benefits from CSR, as opposed to firms that do not engage in CSR activities. Hence, there is strong theoretical and empirical evidence to assess the link between CSR and organizational performance.

2.1.3. Earnings Per Share

In this study, earnings per share (eps) was employed as a control variable. Eps is a dynamic control measure that can be used in CSR and organizational performance research given that it assesses shareholders earnings in relation to the dispersion in their beliefs concerning the operations of the firm [18]. The operation of the firm implies how the firm is able to meet up with its financial and non-financial obligations as they fall due in a given period.

2.2. Theoretical Framework

The theoretical framework for this study is the stakeholders' theory which was originally proposed by Freeman in 1984. Stakeholders' theory is a rudimentary paradigm to CSR, given that the drive of CSR is aimed at satisfying the utmost needs of stakeholders that are connected to a firm. The stakeholders' theory affirms that management must satisfy a range of interested parties that are linked to the operations and or outcome of the firm.

The stakeholders' theory sees the range of interested parties to include employees, consumers, suppliers, local community, government and the organization itself as influencers of firm outcomes. According to Nasieku, Togun and Olubunmi [26], there are several parties with dissimilar needs within the society to whom a firm may have some responsibility which must be gratified. Consequently, firms hold some level of responsibility to the several interested parties, which can be financial (performance or profits), environmental (planet) or social (people) in nature. The relevance of stakeholders' theory to this current study is that firms can attain improved performance by becoming socially responsible.

2.3. Empirical Review

Singh and Misra [34] evaluated the nexus between CSR and the performance of European multinational firms via questionnaire administered to three hundred and forty (340) respondents. A two-stage approach was employed to analyze the data obtained in the field survey. The hierarchical regression result showed that CSR when fully implemented towards external stakeholders affect the performance of firms. More so, this effect has been found to diverge due to firms' reputation. Powei [32] explored the connection between CSR activities and the performance of international oil firms in the Niger Delta region of Nigeria. Data were obtained via a quantitative survey research instrument from a sample of two hundred and seventy (270) respondents residing in the host communities in the Niger Delta region. The multiple regression results showed that CSR positively and significantly affects international oil companies' performance.

Bana et al [5] examined the effect of CSR on organizational performance by means of questionnaires administered to five hundred (500) employees of telecommunication firms in Jordan. The structural equation modelling results revealed that internal CSR positively and significantly affects non-financial and financial performance of firms. Also, external CSR positively and significantly affect only non-financial performance while external CSR negatively and insignificantly affect financial performance of firms.

Irabora [21] assessed the impact of CSR on organizational performance via questionnaire administered to three hundred and twelve (312) employees of Guinness Nigeria Plc., Benin City. Data obtained were analyzed using correlation and regression and findings revealed a positive and significant link between CSR and organizational performance. Also, Odunsi et al [27] studied the impact of CSR on organizational performance using a total of fifteen (15) firms in the banking, service, and manufacturing sectors in Nigeria. Questionnaire was the major instrument of data collection and data obtained were analysed by means of both descriptive and inferential statistics. Results revealed that CSR contributes significantly to the profit generation, market share and image of the firm.

Chebet and Muturi [9] investigated the relationship between CSR and the performance of organization using questionnaire administered to 132 employees of two sugar factories in Kenya's Western region - Chemelil and Sony Sugar. The multiple regression result revealed that CSR significantly and positively affects the performance of the Sugar firms in Kenya. Similarly, Okwemba et al [28] examined the effects of CSR on bank performance in Kenya using questionnaire administered to fifty (50) bank customers, management, and employees. The regression result suggests that CSR has a positive and significant effect on bank performance. Also, the mediating variable of government policy had a significant and positive effect on bank performance in Kenya.

Skare and Goja [35] examined the nexus between CSR and firm financial performance using questionnaire and found that firms that are involved in CSR enjoy improved financial performance than firms that are not socially responsible. In the same vein, [16] examined the effects of CSR on business performance using questionnaire. The regression results indicated that CSR influence customers' perceptions and business performance. [14] carried out an investigation on the link between CSR and firms' competitive advantage using questionnaire. The study found a strong association between CSR, competitive advantage and corporate strategy.

Table 1. *Operationalisation of Variables.*

S/N	Variable(s)	Variable Definition	Measurement(s)
1.	Local community disclosure (cdis)	This refers to an entity's engagement in providing a broad range of corporate endeavours such as assisting the poor, beautifying the community among others.	Local community disclosure available in annual reports takes a value of '1' and '0' for otherwise
2	Social donations and gifting (sdgi)	This refers to an entity's contributions, which could be financial or non-financial to the welfare of a community	Social donations and gifting available in annual reports takes '1' and '0' for otherwise
3	Employees training disclosure(emyd)	This refers to an entity's engagement in training employees for effective and efficient functioning	Employees training disclosure available in annual reports takes '1' and '0' for otherwise
4	Health and safety disclosure (hsed)	This is an entity's engagement in providing health and safety measures for employees.	Health and safety disclosure available in annual reports takes '1' and '0' for otherwise
5	Customer complaints disclosure (cccd)	This is the feedback obtained by an entity concerning their products and/or services from customers	Customers complaints disclosure in annual reports with '1' and '0' for otherwise
6	Gross margin (gptm)	This refers to the gross profit of an entity divided by aggregate sales	Gross profit divided by sales
7	Profit before tax margin (pbtm)	This refers to the profit before tax of an entity divided by aggregate sales	Profit before tax divided by sales
8	Return on equity (roet)	This is the net profit after tax of an entity divided by the total equity	Profit after tax divided by total equity
9	Earnings before tax margin (ebtm)	This is the earnings before interest, taxes, depreciation and amortization of an entity divided by aggregate sales	Earnings before interest, taxes, depreciation and amortization divided by sales
10	Earnings per share (eps)	This refers to the net profit after tax of an entity divided by outstanding shares	Net profit after tax divided by outstanding shares

Source: Authors' Compilation, 2021.

3. Data and Methods

In this study, the *ex-post facto* research design was adopted since the study is concerned with already existing event (data) where the researcher can neither manipulate nor alter the data. In view of this, the study employed yearly panel data of listed non-finance firms on the Nigerian Stock Exchange (NSE) from 2010-2019. The choice of the period was based on improvements in governance and CSR disclosure indexes of Nigerian firms. The study population comprised of all listed non-finance firms on the NSE as of 31 December, 2020 totalling one hundred and sixteen (116) (NSE Factbook, 2020). The listed non-finance firms encompassed those classified as oil and gas, services, industrial, consumer, conglomerates, information and communication technology, healthcare, agriculture, natural resources and construction. However, complete data for the variables of interest were available for 75 firms and this number constituted the sample size.

The required data was obtained from the annual reports and accounts of the selected firms. The data obtained encompassed yearly panel data on CSR disclosure indexes namely: local community, social donations and gifting, employee training, health and safety, and customer complaints disclosures, organizational performance dimensions of gross profit margin, profit before tax margin, return on equity, earning before tax margin and control variable – earnings per share.

Given the dependent, independent and control variables of the study, the models to be estimated are captured by equations (1) – (4).

$$gptmit = \eta0 + \eta1cdisit + \eta2sdgiit + \eta3emydit + \eta4hsedit + \eta5cccdit + \eta6epsit + et \quad (1)$$

$$pbtmit = \eta0 + \eta1cdisit + \eta2sdgiit + \eta3emydit + \eta4hsedit + \eta5cccdit + \eta6epsit + et \quad (2)$$

$$roetit = \eta0 + \eta1cdisit + \eta2sdgiit + \eta3emydit + \eta4hsedit + \eta5cccdit + \eta6epsit + et \quad (3)$$

$$ebtmit = \eta0 + \eta1cdisit + \eta2sdgiit + \eta3emydit + \eta4hsedit + \eta5cccdit + \eta6epsit + et \quad (4)$$

Where:

gptm is gross margin; pbtm is profit before tax margin; roet is return on equity; ebtm is earnings before interest, tax, depreciation and amortization; eaps is earnings per share; cdis is local community disclosure; sdgi is social donations and gifting; emyd is employee training disclosure; *hsed* is health and safety disclosure; cccd is customer complaints disclosure; it represents firm index and time of observation respectively;

Furthermore, $\eta_{0\ldots}$ η_6 = coefficients or parameters of proposed estimates.

Apriori expectation is: η_1 - η_5 >0 which implies that a unit increase in CSR indexes will result to an increase in organizational performance dimensions.

4. Data Analysis and Results

This study employed several techniques to analyse the data namely; descriptive statistics, inferential statistics such as Variance Inflation Factor (VIF), Breuch-Pagan Cook test for Heteroskedasticity, Fixed and Random effects for panel data as well as Hausman specification test. Remarkably, the fixed and random effects regression results were employed to validate the hypotheses of the study. The Hausman specification test was conducted to ascertain the model (fixed or random effect) that is most efficient to validate the research hypotheses of the study. If the null hypothesis of the Hausman test is rejected, then the fixed effect (FE) model is more appropriate, while the acceptance of the null hypothesis makes random effect (RE) model appropriate.

The descriptive statistics in Table 2 revealed that the mean (average) return on equity (roet*)* is 109.03 with the maximum value 69,701.13 and a minimum value of –1,964.34. The mean for earnings before tax margin (ebtm) is 29.36 while gross profit margin (gptm) and profit before tax margin (pbtm) respectively have mean value of 27.88 and -11.92. The standard deviation values for roet, ebtm, gptm and pbtm show wide dispersion form the mean implying that the firms under study have volatile operating environment. The data series for performance dimensions (*roet, ebtm, gptm pbtm*) generally displayed non-zero skewness. Specifically, roet *and ebtm* are positively skewed while *gptm and pbtm* are negatively skewed. More so, all the organizational performance dimensions have a non-normal distribution as indicated by the kurtosis values which are greater than the benchmark value of three [19].

Table 2. *Summary of Descriptive Statistics.*

Variables	Mean	Std. Dev.	Min Value	Max. Value	Kurtosis	Skewness	Obs.
roet	109.03	2579.0	-1964.34	69701.13	710.99	26.39	750
ebtm	29.36	381.68	-627.71	8640.23	410.65	19.65	750
gptm	27.88	30.07	-306.70	100	36.08	-4.17	750
pbtm	-11.92	428.62	-6852.38	5655.46	173.14	-1.92	750
cdis	0.54	0.49	0	1	1.02	-0.16	750
sdgi	0.81	0.39	0	1	3.55	-1.59	750
emyd	0.98	0.13	0	1	51.59	-7.11	750
hsed	0.97	0.16	0	1	35.52	-5.87	750
cccd	0.20	0.40	0	1	3.18	1.47	750
eps	1.79	5.60	-20.23	57.63	37.89	4.89	750

Source: Authors' Computation, 2021.

Furthermore, the descriptive results of the independent and control variables showed that the average local community disclosure (cdis), social donation and gifting (sdgi)*,* employee training disclosure (emyd), health and safety disclosure (hsed)*,* customer complaints disclosure (cccd)*,* and earnings per share (eps) are 0.54, 0.81, 0.98, 0.97, 0.20, and 1.79 respectively. The highest score of one (1) and minimum score of zero (0), are for the CSR indexes since CSR information are disclosed using dummies while the maximum value for *eps* is 57.63 and minimum value is -20.23. Again, all CSR indexes exhibited positive averages. Besides, the standard deviation values of all CSR indexes (cdis 0.49, sdgi 0.39; emyd 0.13; hsed 0.16 and cccd 0.40) are suggestive that some firms disclosure indexes are far from their mean values. In addition, the data series for CSR indexes exhibited negative skewness except cccd. The skewness and kurtosis values jointly suggest that the CSR indexes cannot be approximated by normal distribution.

Further insight into the characteristics of the data is presented with Pearson correlation matrix in Table 3.

Table 3. *Pearson Correlation Matrix.*

Variables	roet	ebtm	gptm	pbtm	cdis	sdgi	emyd	hsed	cccd	eps
roet	1.0000									
ebtm	0.0018	1.0000								
gptm	-0.0062	-0.0414	1.0000							
pbtm	0.0050	0.6304	0.1642	1.0000						
cdis	-0.0410	-0.0471	0.0810	0.0281	1.0000					
sdgi	-0.0684	-0.0432	0.1988	0.0879	0.2458	1.0000				
emyd	0.0067	0.0073	0.0328	-0.0047	0.1293	0.1855	1.0000			
hsed	0.0049	-0.0887	0.1421	-0.0748	0.1623	0.1318	0.8332	1.0000		
cccd	-0.0229	-0.0219	0.0524	0.0136	0.2255	0.0427	0.0688	0.0618	1.0000	
eps	-0.0130	0.0296	0.0985	0.0569	0.0544	0.1328	0.0402	0.0294	0.0891	1.0000

Source: Authors' Computation, 2021.

Table 3 shows that the correlation between CSR indexes and organizational performance dimensions have both positive and negative values. For instance, CSR indexes of cdis (-0.0410), sdgi (-0.0684), cccd (-0.0229), and organizational performance dimensions of roet are negative. On the other hand, emyd has positive correlation with roet, ebtm, and gptm with the respective values being 0.0067, 0.0073, and 0.0328. Overall, the results imply that during the period under consideration, emyd, hsed, roet, gptm, and pbtm moved together in the same direction (positive) while cdis, sdgi, roet, and ebtm moved in opposite direction (negative) as indicated in the signs attached to the Pearson correlation values. More importantly, the Pearson coefficients did not exceed the maximum benchmark of 0.8, as suggested by [19], showing absence of multicollinearity among pairs of the independent variables.

The issue of multicollinearity is examined further by the variance inflation factor test presented in Table 4.

Table 4. *Variance Inflation Factor for Independent Variables.*

Variables	VIF	1/VIF
Emyd	3.34	0.298882
Hsed	3.32	0.301289
Cdis	1.14	0.876800
Sdgi	1.11	0.897695
Cccd	1.06	0.940780
Eaps	1.03	0.975255
Mean VIF	1.83	

Source: Author's Computation, 2021.

Table 4 shows the VIF for independent variables. The mean VIF is 1.83, which is less than the maximum benchmark value of 10.0. This indicates the absence of multicollinearity problem in the model of CSR and organizational performance. The fitness of the model is examined further by the Breusch-Pagan and Cook-Weisberg test; the result of which is presented in Table 5.

Table 5. *Breusch-Pagan and Cook-Weisberg Results of Variables.*

Ho: Constant Variance *Variables:* Fitted values of *roet, etbtm, gptm, pbtm*
Chi2(4) = 1792.31 Prob. > Chi2 = 0.0000

Source: Author's Computation, 2021.

The Breusch-Pagan/Cook-Weisberg result shows that CSR and organizational performance variables fit-well in the estimated models. This is because it is statistically significant at 0.05 level; an indication of the non-existence of heteroskedasticity problem in the model of the study.

4.1. Test of Hypotheses

In this section of the paper, the hypotheses raised to guide this study are tested using panel data modeling approach.

Hypothesis 1: Corporate social responsibility has no significant effect on gross profit margin.

This hypothesis is tested using equation (1) and result presented in Table 6.

Table 6. *Fixed and Random Effects Results for CSR and Gross Profit Margin.*

Variables	Cdis	Sdgi	Emyd	Hsed	Cccd	Eps	Constant
FIXED EFFECT							
Coefficient	1.6157	14.4534	-70.0563	68.6475	7.7065	0.3645	14.9660
t_Statistics	0.71	5.11***	-4.95***	5.78***	2.54**	1.93	1.95
Probability_	0.478	0.000	0.000	0.000	0.011	0.054	0.052
F(6, 730)=13.57; Prob.>F(0.000); R^2(within)=0.1004; R^2(between)=0.7314; R^2(overall)=0.0875							
RANDOM EFFECT							
Coefficient	0.0013	15.2346	-74.1641	72.6756	2.7497	0.3799	16.2666
z_Statistics	0.000	5.37	-5.23	6.12	1.01	2.00	2.11
Probability_	1.000	0.000	0.000	0.000	0.312	0.046	0.035
Wald chi2(6)=75.68; Prob.(0.000); R^2(within)=0.0960; R^2(between)=0.1734; R^2(overall)=0.0929							

Hausman: Prob = 0.0001; Chi2= 27.31; Note: t & z -statistics and their respective probabilities are presented; Where: *** represents significant at 1% & ** represents significant at 5%.

Source: Author's Computation, 2021

Table 6 provides the summary result obtained from both FE and RE models for CSR and gross profit margin. A careful look at the result of Hausman specification revealed that the probability value (0.0001) is significant. This implies rejection of the null hypothesis which makes the FE model appropriate.

The results of the FE model shows the beta coefficient for CSR variables to be: cdis (1.6157), sdgi (14.4534), emyd (-70.0563), hsed (68.6475), cccd (7.7065) and for the control variable, eps (0.3645). With this result, a unit increase in cdis, sdgi, hsed, cccd and eps will lead to 1.6%, 14.5%, 68.6%, 7.7% and 0.4% increase in gptm respectively. On the other hand, emyd will decrease gtpm. Besides, the idiosyncratic t-test results confirmed that CRS dimensions of sdgi, emyd, hsed and cccd are significant in explaining the variations in gross profit margin (gptm*)* while CSR dimensions of cdis and control variable eps are insignificant.

In addition, overall R^2 (coefficient of determination) in the FE model is 0.0875 implying that CSR dimensions explained about 8.75% variation in gross profit margin *(gptm)*. Furthermore, the F-statistics which tests the significance of all the variables jointly has a value of 13.57 with probability value of 0.000, suggesting that corporate social responsibility has significant effect on gross profit margin of firms.

Hypothesis 2: There is no significant effect of corporate social responsibility on profit before tax margin.

The result of the test using equation (2) is presented in Table 7.

Table 7. *Fixed and Random Effects Results for CSR and Profit before Tax Margin.*

Variables	**Cdis**	**Sdgi**	**Emyd**	**Hsed**	**Cccd**	**Eps**	**Constant**
FIXED EFFECT							
Coefficient	25.0205	82.0438	556.4882	-637.608	25.1971	3.5364	-28.6643
t_Statistics	0.54	1.96	2.65	-3.62	0.56	1.26	-0.25
Probability_t	0.459	0.51	0.008	0.000	0.576	0.207	0.801
F(6, 730)=3.62; Prob.>F(0.0015); R^2(within)=0.0289; R^2(between)=0.0401; R^2(overall)=0.0259							
RANDOM EFFECT							
Coefficient	21.6916	82.5681	542.8066	-623.212	13.9698	3.5104	-25.7387
z_Statistics	0.65	1.98**	2.60***	-3.56***	0.33	1.24	-0.22
Probability_z	0.516	0.048	0.009	0.000	0.742	0.210	0.823
Wald chi2(6)=20.95; Prob.(0.0019); R^2(within)=0.0288; R^2(between)=0.0481; R^2(overall)=0.0262							

Hausman: Prob = 0.9602; Chi2 = 1.49. Note: t & z -statistics and their respective probabilities are presented; Where: *** represents significant at 1% & ** represents significant at 5%.
Source: Authors' Computation, 2021.

Table 7 provides the summary result obtained from both FE and RE models for CSR and profit before tax margin. The result of Hausman specification revealed that the RE model is appropriate for use as indicated by the p-value (0.9602) which is insignificant at 5% level. Thus, the RE model is interpreted.

The beta coefficients for the variables are: cdis (21.6916), sdgi (82.5681), emyd (542.8066), hsed (-623.212), cccd (13.9698) and eps (3.5104). Apart from hsed which is negative, all other variables have positive influence on the dependent variable. The statistical significance of these variables measured by the z-statistics and the associated probability values show that only sdgi, emyd, and hsed are significant. The overall R^2 is 0.0262. The joint effect of all the explanatory variables determined by the Wald chi(2) is 20.95 with probability value of 0.0019. This is significant at 1% and indicates that if the explanatory variables are taken together, they have significant effect on the explained variable. Accordingly, there is a significant effect of corporate social responsibility on the profit before tax margin of ampled firms.

Hypothesis 3: Corporate social responsibility has no significant effect on return on equity.

Using equation (3) for analysis, the outcome is presented in Table 8.

Table 8. *Fixed and Random Effects Results for CSR and Return on Equity.*

Variables	**Cdis**	**Sdgi**	**Emyd**	**Hsed**	**Cccd**	**Eps**	**Constant**
FIXED EFFECT							
Coefficient	-88.869	-460.898	660.6305	-127.788	-2.6450	-1.1814	9.5891
t_Statistics	-0.43	-1.80	0.52	-0.12	-0.01	-0.07	0.01
Probability_t	0.667	0.072	0.606	0.905	0.992	0.989	0.989
F(6, 730)=0.71; Prob.>F(0.6390); R^2(within)=0.0058; R^2(between)=0.0079; R^2(overall)=0.0057							
RANDOM EFFECT							
Coefficient	-123.751	-433.935	479.8967	-39.3273	-103.933	-1.1585	117.7785
z_Statistics	-0.61	-1.70	0.38	-0.04	-0.42	-0.07	0.17
Probability_z	0.542	0.089	0.707	0.971	0.671	0.946	0.865
Wald chi2(6)=4.49; Prob.(0.6108); R^2(within)=0.0055; R^2(between)=0.0712; R^2(overall)=0.0060							

Hausman = 0.4007; Chi(2) = 6.20.
Authors' Computation, 2021.

Table 8 shows the results obtained from both FE and RE models for CSR and return on equity. The Hausman specification result shows that the random effect model is appropriate for use as shown by the probability value (0.4007) that is higher than 0.05.

The estimates of CSR variables are: cdis (-123.751), sdgi (-433.935), emyd (479.8967), hsed (-39.3273), cccd (-103.933), and eps (-1.1585). Variables with positive values will increase roet while those with negative values will reduce roet. The z- statistics that reveal the statistical significance of the variables show that none of the variables is significant as the probability values are greater than 0.05 levels. The Wald test for the joint statistical significance of the parameter estimates is 4.49 with probability value of 0.6108 which is greater than 0.05. Clearly, the null hypothesis that corporate social responsibility has no significant effect on return on equity is sustained.

Hypothesis 4: There is no significant effect of corporate social responsibility on earnings before tax margin.

The result of this hypothesis is presented in Table 9 using equation (4).

Table 9. *Fixed and Random Effects Results for CSR and Earnings before Tax Margin.*

Variables	Cdis	Sdgi	Emyd	Hsed	Cccd	Eaps	Constant
FIXED EFFECT							
Coefficient	-23.928	-45.6173	762.475	-711.564	-52.1097	2.6749	29.0731
t_Statistics	-0.80	-1.23	4.10	-4.56	-1.31	1.08	0.29
Probability_t	0.424	0.220	0.000	0.000	0.192	0.282	0.774
F(6, 730)=4.64; Prob.>F(0.0001); R^2(within)=0.0368; R^2(between)=0.2636; R^2(overall)=0.0326							
RANDOM EFFECT							
Coefficient	-17.9120	-49.3269	774.3551	724.8807	-32.6034	2.6023	26.6120
z_Statistics	-0.60	-1.33	4.17***	-4.66***	-0.87	1.05	0.26
Probability_z	0.546	0.193	0.000	0.000	0.384	0.295	0.794
Wald chi2(6)=26.88; Prob.(0.0002); R^2(within)=0.0363; R^2(between)=0.2268; R^2(overall)=0.0339							

Hausman: = 0.7210; Chi2 = 3.67 Note: t & z -statistics and their respective probabilities are presented; Where: *** represents significant at 1%
Source: Authors' Computation, 2021.

In Table 9, the results obtained from both FE and RE models for CSR and earnings before tax margin are shown. The Hausman test results revealed that the random effect model is suitable for use because the probability value (0.7210) is greater than the 5% level.

The coefficients of the CSR variables are: cdis (-17.9120), sdgi (-49.3269), emyd (774.3551), hsed (724.8807), cccd (-32.6034), and eps (2.6023). The result indicates that a unit increase in emyd, hsed, and eps will lead to 774.4%, 724.9%, and 2.6% increase in ebtm, while cdis, sdgi, and cccd will lead to 17.9%, 49.3%, and 32.6% decrease respectively in ebtm. The z-statistics for the statistical significance of the parameters show emyd and hsed as dimensions of CSR to be significant in explaining the variations in ebtm while others are not. The overall R^2 is 0.0339 implying that CSR dimensions explain about 3.39% variation in earnings before tax margin (ebtm). However, the joint significance of all the explanatory variables as well as the model fitness measured by the Wald Chi(2) is 26.88 with probability value of 0.0002. This indicates there is a significant effect of corporate social responsibility on earnings before tax margin.

4.2. Discussion of Findings

In this study, the influence of CSR on firm performance was determined using four proxies for performance. Apart from the model where return on equity (roet) was used to proxy performance, CSR was significantly related to the other three proxies of performance (gross profit margin, profit before tax margin, and earnings before tax margin). The result of the roet model suggests that equity holders as a group are not well-off by their firms' CSR activities. From this perspective, it does not maximize their wealth and could just be another form of financial illusion. In those models where CSR were significantly related to firm performance, internal CSR activities (emyd, hsed, and cccd) had more influence than external CSR activities (cdis and sdgi). In fact, cdis was not significant in any of the performance models. This means that firms' local community activities are yet to have the needed impact on the society. Implicitly, the firms have not done enough in the local community for them to respond accordingly, or to lead to corresponding reciprocity. Be that as it may, the general findings of this study agree with Bana et al, Odunsi et al, Irabora, Powei and Singh and Misra [5, 21, 27, 32, 34].

5. Conclusion and Recommendations

Corporate social responsibility is a type of self-regulation incorporated into a business model. Dimensions of CSR (local community, social donations and gifting, employees training, health and safety disclosures, and customer complaints disclosure) were examined to determine their influence on organizational performance (gross profit margin, profit before tax margin, return on equity, and earnings before tax margin). Investigation was done using panel data analysis of seventy-five (75) listed non-finance firms in Nigeria from 2010-2019. The results of the fixed and random effect models revealed the following: (i) that CSR have significant effect on the gross profit margin. (ii) There is a significant effect of CSR on the profit before tax margin. (iii) CSR has no significant effect on return on equity. (iv) That there is a significant effect of CSR on the earnings before tax margin of listed non-finance firms in Nigeria.

The results of our study call for some policy recommendations. Management of listed non-finance firms in Nigeria should make efforts toward providing sustained and enhanced social responsibility activities in areas of community development projects, employees' health and safety, employee training, customers' complaints, and social donations and gifting. There is earnest need for a strategic CSR practices which must be designed to meet the peculiarity of local community, employees and consumers. A strategic CSR practices by non-finance firms no doubt would significantly and positively affect shareholders returns.

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