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Effect of Corporate Social Responsibility (CSR) on the Profitability of Deposit Money Banks (DMBS) in Nigeria

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ABSTRACT

This study examined the effects of corporate social responsibility on the profitability of deposit money banks in Nigeria. Specifically, the study focused on the effects of employee training cost, environmental cost, community development cost and donation on the profitability of deposit money banks in Nigeria. The study adopted expo-facto research design. The data set for this study were mainly secondary data, sourced from the published financial reports of the sampled deposit money banks and this stems from the interest of the researcher to cover the period of the global financial and economic crises and the period of domestic economic recession that affected every sector of the economy. The data comprised annual time series spanning from 2013 through 2022. The research employs only quantitative method of data analysis. Considering the outcome variable that is dichotomous, panel data regression analysis which includes fixed effect estimation and random effect estimation was considered appropriate to test the formulated hypotheses. Before the hypotheses were tested, it was discovered that employee training cost has a negative but significant effect on the profitability measured with return on asset of deposit money banks in Nigeria to the tune of -35.10018 ($p=0.045<0.05$). Also, it was revealed that environmental cost has a positive but insignificant effect on the return on asset of deposit money banks in Nigeria to the tune of 1.634773($p=0.924>0.05$). Furthermore, it was revealed that community development cost had a negative insignificant effect on the performance measured with return on asset of deposit money banks in Nigeria to the tune of -12.90311($p=0.347>0.05$). Finally, donation had a negative but significant effect on profitability of deposit money banks in Nigeria to the tune of -12.00056($p=0.000<0.05$). Based on the reported findings, it was established that there is a statistically significant effect of corporate social responsibility on profitability of deposit money banks in Nigeria. Hence, it was recommended that management of deposit money banks should ensure compliance with the guidelines of environment cost reporting as this portrays good image of their firms.

Keywords: Community Development, Return On Asset, Employee Training, Donation

Introduction

Corporate Social Responsibility (CSR) has emerged as a dominant theme in management and financial literature, it is not applied widely and is usually associated with philanthropy. Profits of businesses are reinvested into the business, to ensure business growth and expansion. According to Adebayo (2022), the society dictates the growth and survival of the business activities in the global competitive market. In respect of these responsibilities from the society to the business organizations, business organizations reciprocate the aforementioned functionalities. This is simply referred to as social responsibility. According to Mustaruddin, Norhayah and Rusnah (2020), CSR is the voluntary responsibilities of corporate entity to the society to ensure continuous existence or sustainability in the business world. Every organization be it public or private, profit or nonprofit oriented, service or product oriented, small or large business entity, has specific responsibility that must not be denied for mutual relationship to exist between the organization and its society.

Basically, return on assets (ROA) is a financial performance measure for every organization. Lee, Chang and Lee (2022) explained return on asset as a financial ratio that reveals the rate of profit a company earns in relation to its overall resources. It is an indicator of how profitable an organization is relative to its total assets. Famiyeh (2022) asserted that return on asset is commonly known as net income divided by total assets. Net income is derived from the income statement of a corporation. Thus, it is the profit after tax. Total assets of corporations are obtainable from the balance sheet which include cash equivalent items such as inventories, receivables, capital equipment as depreciated, land, and the intellectual property's value such as patents. The performance of organizations is a function of many explanatory variables, part of which is corporate social responsibility (CSR).

Profit maximization has been the sole motive of individuals who are into business activities today, hence, business activities serve as the instrument used to improve the standard of living of the people. Also, business contributes significantly to the growth and progress of an economy. With the various kinds of business activities, identified human wants are produced for satisfaction though, at a profit. At the same time, charges, duties of different kinds are extracted from business ventures in form of taxes to satisfy infrastructural need of the society by the government. All these are made available as a result of the society where the business is situated. The profitability of banks in Nigeria has received significant attention from researchers, especially in accounting management. The reason for this is not farfetched as the profitability has implications for the banks' health and long-term survival. Ibrahim (2023), viewed profitability as the effective and efficient utilization of resources by an organization for the accomplishment of its objectives, resulting in the increase in sales market share, share price, profitability, cash flows and earnings and meeting with the various stakeholders' expectations. Ali (2021) opined that there are several profitability measures which include Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS), etc. In the context of this study, return on asset shall be focused on to measure the profitability of banks in Nigeria.

World over, Deposit Money Banks (DMBs) are the largest financial institutions with branches and subsidiaries everywhere. The banking industry plays a vital role as channel through which economic and financial resources flow into the economy. It's therefore imperative to continually evaluate their performance status with a view to ensuring that banks remain sound, stable and safe in order to continually support sustainable economic growth and development. The banking sector is indispensable to the growth and development of every nation. They ensure resources mobilization and play a pivotal role in the allocation process. Agbo, Jugu and Okwoli (2022) submitted that firms in the banking sector are the main source of financial revolution and efficiency in the economy. This, therefore, informs that poor profitability of banks would grossly affect economic development of a nation.

CSR concerns corporate strategy, operations and governance structure that create environmental and social values in addition to maximizing enterprise value for the benefit of its shareholders by monitoring and ensuring compliance with the spirit of social justice, ethical standards and international norms. Zubair, Aishath and Namuwonge (2023) asserted that business firms are under increasing pressure to give money to charities, protect the environment and help solve social problems in their communities- in other words, to behave in socially responsible ways. They further explained that a socially responsible consumer would, therefore, avoid buying products from companies that harm society and actively seek out products from companies that help society. The components of CSR cost incurred in every business organization include employee training cost, environmental cost, community development cost and donations. The conventional expectation is that the citizens in that society and the beneficiaries of such projects will patronize their products so that such companies can continue to support the society. Based on this background, this study was established to examine the effect of corporate social responsibility on the profitability of deposit money banks in Nigeria.

Statement of the Problem

Primarily, the business motive of deposit money banks in Nigeria is to make profit and maximize shareholders wealth (Kokemiller, 2021). Though profitability of business organization is sacrosanct, but it is a well known fact that no business organization exist in isolation. The existence of any deposit money bank in the society is a factor of both the shareholders as well as other stakeholders and as result of this, deposit money banks are expected to contribute positively to the growth of the society or the host community apart from satisfying shareholders (Odetayo, Adeyemi & Sajuyigde, 2023).

Many corporate businesses in Nigeria are increasingly becoming aware of the need for spending on corporate social responsibility (CSR) in their immediate host communities and even beyond. Not only has it been made a policy option by businesses but there has also been competition among firms in the same industry about who will spend most (Kingsley, 2021). But the CSR activities are financed from the profit of the businesses. Consequently, it is not clear whether such expenditure portend problems for the banks in Nigeria or a boost towards the enhancement of financial performance of the banks.

The competition for and consumption of scarce resources in the global markets put great pressures on companies to achieve desirable ends beyond maximizing shareholder value. These pressures arise from the increased demands of external stakeholders that hold companies accountable for social and environmental issues. Some companies respond positively to increased stakeholder interest in corporate social responsibility (CSR). Others see a tension between value maximization proposition of the firms and CSR because they become concerned about the legitimacy of corporate involvement in social affairs and the possibility of misappropriating and misallocating scarce resources (Oshiole, Elamah & Amahalu, 2020).

Empirically, several studies have been carried out in relation to corporate social responsibility and profitability of firms in Nigeria. Akinyomi, (2022), examined corporate social responsibility practices in the Nigerian manufacturing sector; Ademosu, (2022), evaluated corporate social responsibility using the Nigeria banking system as a case study; Ibrahim and Garba, (2020), studied corporate social responsibility and financial performance in the Nigerian construction industry; while Adriana and Simon, (2022) examined corporate social responsibility and financial performance relationship, reviewing measurement approaches. Okegbe and Egbunike (2021), examined corporate social responsibility and financial performance of selected quoted companies in Nigeria. Though, this research work is similar to Okegbe and Egbunike (2021) work, it differs in terms of coverage, variables and method of data analysis.

Even though, most of these studies focused more on the manufacturing sector in Nigeria, only very few like Ademosu, (2022) focused on the banking sector. Also, based on the materials available at the disposal of the researcher, none of the studies mirrors the current happenings between the corporate social responsibility and profitability of deposit money banks in Nigeria using time series data spanning from 2013 to 2022. Also, it was observed that none of the studies reviewed captured corporate social responsibility with employee training cost, environmental cost, community development cost and donation. To bridge the identified gaps, this study is established to examine the effects of corporate social responsibility on the profitability of deposit money banks in Nigeria.

Objectives of the study

The broad objective of the study was to examine the effect of corporate social responsibility on the profitability of deposit money banks in Nigeria. The specific objectives were to:

i. investigate the effect of employee training cost on the profitability of deposit money banks in Nigeria;

ii. examine the effect of environmental cost on the profitability of deposit money banks in Nigeria;

iii. determine the effect of community development cost on the profitability of deposit money banks in Nigeria; and

iv. ascertain the effect of donation on the profitability of deposit money banks in Nigeria.

Research Questions

Based on the above statement of the problem, the following research questions were raised for the study:

i. What is the effect of employee training cost on the profitability of deposit money banks in Nigeria?

ii. What is the effect of environmental cost on the profitability of deposit money banks in Nigeria?

iii. What is the effect of community development cost on the profitability of deposit money banks in Nigeria?

iv. What is the effect of donation on the profitability of deposit money banks in Nigeria?

Research Hypothesis

In line with the objectives of the study, the following hypotheses were formulated and stated in their null forms:

H_{O1}: Employee training cost has no significant effect on the profitability of deposit money banks in Nigeria;

H_{O2}: Environmental cost has no significant effect on the profitability of deposit money banks in Nigeria;

H_{O3}: Community development cost has no significant effect on the profitability of deposit money banks in Nigeria;

H_{O4}: Donation has no significant effect on the profitability of deposit money banks in Nigeria;

Empirical Review

Developed Countries

Hanna (2020) investigated the influence of CSR on financial performance of firms in Germany and United State of America (USA). The study used panel regression analysis method, and revealed that CSR influences firm performance and that the significance differs between Germany and the US.

Adeneye and Ahmed (2020) empirically examined corporate social responsibility and company performance. Regression and correlation analysis were used to analyze the data for the 500 companies. The result revealed significant relationship between CSR and MBV and ROCE while there is no significant relationship between CSR and company size.

Fabac, Calopa and Sestanj-Peric (2021) used simple regression analysis model to analyze relationship between corporate social responsibility and financial performance in Croatia. The research considers 10 companies listed in Croatian stock exchange between the periods of 2022-2023. The result shows that there is no significant correlation between CSR and firm financial indicators (ROE and ROA) of Croatian companies included in CROBEX10 share index.

Najeb and Awni (2021) examined the relationship between corporate social responsibility (CSR) and company's performance (CP) in Jordanian Companies. Panel data regression analysis was used. The results indicate that there is a negative relationship between CSR, accounting and market-based company performance (ROA, ROS, P/R, and EPS), thus the Hausman test results reject the null-hypothesis. But, for ROE, ROCE, and P/V as the measures for company's performance are a positive since results of the Hausman test is insignificant. This means the most statistically significant results does not statistically validate their result.

Galant and Cadez (2022), examined the relationship between corporate social responsibility (CSR) and corporate financial performance a review of measurement approaches. Content analyses, questionnaire-based surveys and one-dimensional measures were used. CSR measurement approach is without drawbacks. In addition to approach specific drawbacks, two problems inherent in most approaches were researcher subjectivity and selection bias that may influence the nature of CSR–CFP relationship detected in empirical literature. Finally, potential pathways to remedy these drawbacks were suggested.

Ashraf, Bushra and Rabia (2022), investigated the effect of corporate social responsibility (CSR) on financial performance of banks in various Asian countries with 220 companies. The study used correlation and regression. Their study revealed that Corporate Social Responsibility (CSR) shows positive and significant impact on financial performance of banks.

Sang, Chune and Jason (2023), carried out study on the relationship between Corporate Social Responsibility and financial performance. Correlation and regression were adopted to analyze the data, the result shown that the CSR performance has a partial positive correlation with profitability and firm value. The results also revealed positive relationship between growth rate of total assets, corporate soundness and social contribution. While both social soundness and social contribution revealed appositive correlation with Tobin's Q, the measurement of corporate value.

Nurdiono et al. (2023) examined the effects of disclosed CSR information on the market performance of Indonesian companies. Fifteen trade companies listed on the Indonesia Stock Exchange are observed from 2021 to 2023. CSR information is derived from annual reports and financial statements. The study adopted Pearson correlation and multiple regression analysis model. It was revealed that CSR affects Stock Return (SR), Debt Equity Ratio (DER), and Return on Equity (ROE). Also, that CSR disclosure had a positive but non-significant effect on SR and that it has a negative but non-significant effect on corporate market performance. In addition, it has a positive and significant effect on DER and ROE.

Williams (2020) determined whether the management decisions of social or environmental CSR investments for U.S.-based service and manufacturing SMEs are effective as represented by financial performance in their respective business sectors. From a sample of 50 U.S.-based SME firms, the perceptions of owner/managers on the extent of social CSR, environmental CSR, and financial performance were assessed via survey questionnaire and analyzed employing ANOVA, *t* statistic, and multiple regression analyses. The results showed significantly higher financial performance for service SMEs than for manufacturing SMEs when both were engaged in workplace and customer CSR activities. Further, combined social and environmental CSR activities suggested a negative but insignificant effect on financial performance, business sector notwithstanding.

Developing Countries

Anjali, Balasur and Yermal, (2020) studied the impact of CSR spending on the financial performance of banks measured by earnings per share, return on assets, return on equity, price to earnings ratio, and price to book value. Data of 25 banks from the year 2023-2021 was sourced from annual report of the banks and from Capitaline database. The methodology used in the study is panel data analysis. The result showed that ROE, ROA and EPS had a positive relation with CSR. CSR had negative impact on Price to earnings and price to book value.

The impact of corporate social responsibility on financial performance in South Africa is the topic empirically researched by Chetty, Naidoo and Seetharam (2020). The study employ an event study methodology for short-term while regression analysis for long-term. After analyzing the data, the results show mixed evidence of relationship between CSR and corporate financial performance. The event study methodology shows that investors rewarded as there is no significant share price movement realized for these firms.

Phoebe (2021), studied the effect of corporate social responsibility on financial performance of commercial Banks in Kenya. Data collected were analyzed using Statistical Package for Social Sciences (SPSS) Version 24 software through descriptive and inferential statistics and then presented via tables. The study found a significant positive relation between education CSR activities and financial performance, an insignificant negative relation between heath CSR activities and performance in financial terms, an insignificant but positive relation between environment CSR activities and the banks' performance in financial terms. It was concluded that CSR activities influenced the banks' performance in financial terms.

Mariya (2023) investigated the impact of determinant such as profitability, leverage, size, company visibility and foreign ownership on the level of CSR disclosure of Bulgarian listed companies. Ordinary Least Squares (OLS) regression analysis model was adopted to analyse the gathered data on a sample of 51 Bulgarian listed firms. The study revealed that profitability has a significant positive impact on the level CSR disclosure of Bulgarian listed firms. In addition, some support is found for a positive and significant relationship of debt, size and foreign ownership with CSR or its subtypes social or environmental disclosure. Contrary to expectations, the regression results do not provide support for company visibility as a determinant of CSR disclosure.

Also, Mustaruddin, Norhayah and Rusnah (2020) investigated the relationship and the impact of corporate social responsibility disclosure (CSRD) on financial performance of Malaysian Public Listed Companies (PLCs). Longitudinal data analysis with a large-sample testing was carried out and the statistical power with fixed effect and random effect model was utilized. The study revealed that the relationship between CSRD and financial performance is positive and significant and two of the CSR dimensions namely employee relations and community involvement were found to be positively related to financial performance. The results also revealed that there was limited evidence on the relationship and impact of CSRD on corporate financial performance (CFP) in the long-term.

Studies Conducted in Nigeria

Togun and Nasieku (2020) examined the impact of CSR on the performance of listed manufacturing entities in Nigeria. The correlation analysis method showed that CSR activities have a moderate positive effect on the performance of manufacturing companies.

Usman and Amran (2020) used regression model to analyses secondary data which was extracted from annual financial report of 68 companies listed on Nigeria Stock Exchange to examine the relationship between CSR disclosure and corporate financial performance. The finds show that, community involvement disclosure, products and customer disclosure and human resource disclosure enhance corporate financial performance but negative relationship between environmental disclosure and corporate financial performance which indicates that disclosure of environmental impact information could be value destroying in Nigeria.

Jibril, Dahiru, Muktar and Bello (2021), investigated the relationship between corporate social responsibility and financial performance of listed deposit money banks in Nigeria for the period of 6 years. The study adopted multiple regression technique in analyzing the data with the aid of SPSS techniques. The findings reveal that corporate social responsibility has a positive and significant impact on return on equity and return on assets as financial performance proxies of listed deposit money banks in Nigeria.

Tijani, Adeoye and Alaka (2022) investigated the effect of corporate social responsibility (CSR) on banks financial performance with reference to United Bank of Africa (UBA). The study utilizes secondary data source from annual report of the bank which spans from 1992-2023. Health issue, transportation and education proxies as CSR while return on equity as financial performance. OLS technique and granger –causality tests were conducted. The result shows that there is insignificant relationship exist between CSR and financial performance.

Zakari (2022) adopted linear correlation to analyzed secondary data obtained from published financial statement of Dangote Cement Plc in the course of his investigation to find out the relationship between corporate social responsibility investment and profitability of Dangote cement plc. revenue, profit after tax (PAT) and earning per share (EPS) were used as proxy for profitability while social investment on education and Community development projects were proxy for CSR. The research adopted correlation to analyze the data collected. The result revealed that Dangote CSR investment had positive impact on profitability performance indicators.

Ibrahim and Hamid (2023) examined corporate social responsibility and financial performance of listed non-financial services companies in Nigeria. The study utilized secondary data collected from the annual report of 23 sampled listed non-financial services companies in Nigeria out of 114, for the period of 10 years (2012-2022). Data collected were analyzed using correlation and regression (GLS Fixed effect) with the aid of Stata Version 14.0. The study revealed that CSR has significant positive impact on financial performance. The study concluded that financial performance of listed companies in Nigeria can be enhanced through engaging in socially responsible investments.

Ibrahim (2023) carried out a study titled, 'Corporate Social Responsibility Disclosure and Financial Performance of Quoted Nigerian Cement Companies'. This study utilized annual report of ten (10) years period covering (201-2022) to obtain data for the study. Pooled OLS and Random Effect (RE) Panel Estimation analysis methods were used to analyze the gathered data. The results revealed that corporate social responsibility disclosure have a significant and positive impact on the return on equity and return on capital employed. The study under review is similar to the present study but the period covered by the present study is 20 years while that of the study under review is 10 years.

Methodology

The study adopted ex-post facto research design. The population of this study covered all the Deposit Money Banks in Nigeria. Out of all the quoted Deposit Money Banks (DMBs) in Nigeria, random sampling technique was used to select 5 banks. The choice of these banks that covered First Bank of Nigeria Plc, GT Bank Plc, Zenith Bank Plc, Ecobank Plc and UBA Plc was predicated on their significant role in the Nigeria financial system and their capacity to prevent systemic collapse of the entire economy. The secondary data derived from the audited financial statements of 5 Deposit Money Banks listed on the Nigerian Stock Exchange (NSE) for ten years, spanning from 2013 to 2022 were used.

Model Specification

This study adapted one of the models used by Jibril, Dahiru, Muktar and Bello (2021) to investigate the relationship between corporate social responsibility and financial performance of listed deposit money banks in Nigeria where Return on Equity is a made a full function of Corporate Social Responsibility (CSR) and two control variables which are Firm Size (FS) and Firm Age (FA). The model is given thus:

$ROE = F(CSR\ FS\ FA)$……………………………………………………… (1)

Where:

CSR is Corporate Social Responsibility

FS = Firm Size (total Assets)

FA = Firm Age

Given the direction of this present study, the model was modified with the following adjustments:

Financial performance was measured using Return on Assets (ROA). In the same vein, while CSR, which is the main predictor variable of this study, is captured with employee training cost (ETC), environmental cost (ENC), community development cost (CDC) and donation (DON). The new models are presented thus:

$ROA_{it} = f(ETC_{it}, ENC_{it}, CDC_{it}, DON_{it}\ TE_{it})$……………………………………………… (2)

Linear equations of the model:

$ROA = \alpha_0 + \alpha_1 ETC_{it} + \alpha_2 ENC_{it} + \alpha_3 CDC_{it} + \alpha_4 DON_{it} + \varepsilon_{1t}$……………….. (3)

Where:

ROA is Return on Assets

ETC is Employee Training Cost

ENC is Environmental Cost

CDC is Community Development Cost

DON is Donation

$\alpha_{0.....\alpha 4}$, are symbols representing parameter estimates of the corresponding models.

ε_t represents error term.

Method of Data Analysis

Data collected for the study were analysed in four stages. The first phase was the descriptive statistics, followed by correlation analysis, pooled regression analysis, panel data regression (fixed effect estimator and random GLS estimator) alongside with post-estimation tests such as restricted f-test, and Hausman test, heteroscedasticity Wald test, Cross-Section independence Pesaran test and autocorrelation Wooldrige test.

The fixed effect follows the form presented below:

$$Y_{it} = a_0 + \beta_1 X_{it} + ꝺi + \mu_{it}$$

$ꝺi$ is a time varying intercept that captures all the variables that affect Y_{it} that very over time but are constant cross-sectionally.

The random effect model follows the forms presented below:

$$Y_{it} = a_0 + \beta_1 X_{it} + W_{it,} W_{it} = £_{it} + \mu_{it}$$

Where $£_{it}$ measures the random deviation from the global intercept a, subscript "it" represents the combination of time and individuality. U_{it} means error term.

Post-Estimation Test

Post estimation tests were conducted in the study which included f-test of heterogeneity, Hausman test, heteroscedasticity Wald test, Cross-Section independence test and autocorrelation test. Resticted f-test of heterogeneity was post estimation test was conducted to validate if the Pool OLS restriction placed on observation of cross-sectional unit, over time is justified. Hausman test was used to confirm the most consistent and efficient estimator between the fixed effect estimation and the random effect estimation. Heteroscadasticity test was conducted to test whether the assumption of constant variance of the residual terms was valid. Cross section independence test carried out was to ascertain if there was cross sectional independence in the residual term of panel estimation, and autocorrelation test was used to confirm the correlation between successive values of the error term of the estimated static model.

Results

Table 1: Descriptive Statistics

	ROA	LETC	LENC	LCDC	LDON
Mean	17.85	15.88	15.69	15.69	15.56
Std. Dev.	29.95	0.172	0.209	0.214	0.697
Minimum	-19.52	15.4	15.2	14.94	0
Maximum	199.33	16.12	16.02	15.89	4.834

Source: Author's Computation (2024).

The results in table 1 are drawn from an analysis from 2022-2020, a period of 10 years. From table 1, the descriptive statistics depicts that the average value for ROA is 17.85, with minimum and maximum values of -19.52 and 199.33 respectively. The standard deviation of 29.95 shows that the risk is higher, as it is relatively greater than its mean figure. Also, the mean value of LETC is at 15.88 with minimum and maximum values of 15.4 and 16.12. Unlike ROA, the standard deviation (0.172) shows that its risk is lower, as it is relatively far from its mean value. Furthermore, for LENC, its mean value stands at 15.69, with minimum and maximum values of 15.2 and 16.02 respectively. Unlike ROA, its standard deviation (0.209) shows a lower risk, as it is far from the mean. Also, LCDC has an average value of 15.69, with minimum and maximum values of 14.94 and 15.89 respectively. Its standard deviation which is 0.214 depicts that the risk is low because the value is relatively far from its mean value. For DON, the mean value stood at 15.56, with minimum and maximum values of 0 and 4.834 respectively. The standard deviation (0.697) shows that its risk is relatively low because its standard deviation value is far from its mean.

Correlation Analysis

Table 2: Correlation Matrix

Var.	ROA	LETC	LENC	LCDC	LDON
ROA	1				
LETC	-0.16	1			
LENC	-0.18	0.305	1		

LCDC	-0.24	0.38	0.298	1	
LDON	-0.68	-0.072	0.019	0.14	1

Source: Author's Computation (2024).

From the result presented in table 2, there is a negative relationship between ROA, LETC, LENC, LCDC and LDON with correlation coefficient of -0.16 for LETC, -0.18 for LENC, -0.24 for LCDC and -0.68 for LDON. This indicates that the variables moved in different directions over the period covered by this study across the sampled firms. Contrarily, the result also showed that there exists a positive relationship between LETC, LENC and LCDC with the correlation coefficient of 0.705 for LENC and 0.38 for LCDC, a positive relationship between LENC and LCDC with the correlation coefficient of 0.14. The results further revealed that the relationship between LCDC and the other predictor variables are positive.

Multi-collinearity Test

Using variance inflation factors (VIF), the collinearity test was performed and the factors for each of the variables are shown in table 3.

Table 3: Using variance inflation factors

Var.	VIF	1/VIF
LETC	2.45	0.4082
LENC	1.88	0.5310
LCDC	1.58	0.6336
LDON	1.04	0.9591

Source: Author's Computation (2024).

Since all the variance factors for the predictors are less than 10, being the general standard, it connotes that there is no issue of multicollinearity.

Regression Analysis

Table 4: Fixed Effects Estimates

Series: *LETC, LENC, LCDC, LDON*

Variable	***Coefficient***	***Std Error***	***T-Test***	***Probability***
C	955.7034	235.7283	4.05	0.000
LETC	-35.10018	18.07172	2.04	0.045
LENC	1.634773	17.04887	0.10	0.924
LCDC	-12.90311	13.64003	0.95	0.347
LDON	-12.00056	1.486384	8.07	0.000

R-square=0.7256, Adjusted R-square=-0.5074, F-statistics=17.25, Prob(F-stat) =0.000

(*) connotes significance at 5% level

Source: Author's Computation (2024).

Fixed effect result presented in table 4 revealed that when the diversity of the operational activities and managerial skills across firms are considered, LETC, LCDC and LDON exert a negative effect on return on asset of firms in oil and gas sector of Nigeria. However, the negative effect is only significant for LETC and LDON to the tune of -35.10018(p=0.045<0.05) and -12.00056(p=0.000<0.05) respectively as against the insignificant effect of LCDC with the coefficient and probability values of -12.90311(p=0.347>0.05). LENC on the other hand exerts positive but insignificant effect on return on asset of deposit money banks in Nigeria, with coefficient estimate of 1.634773(p=0.924>0.05). Adjusted r-square statistics reported in table 4 showed that about 51% of the systematic variation in return on asset can be jointly explained by LETC, LENC, LCDC and LDON while the remaining 49% could be accounted for by other variables not covered by this study. The F-statistics of 17.25 along the probability value of 0.000 revealed that the model is fit.

Table 5: Random Effect Estimation

Series: *LETC, LENC, LCDC, LDON*

Variable	**Coefficient**	**Standard Error**	**Z-Test Values**	**Probability**
C	887.3606	222.2987	3.99	0.000
LETC	-31.69882	17.96388	1.76	0.078
LENC	1.131068	16.96968	0.07	0.947
LCDC	-11.72487	12.8078	0.92	0.360
LDON	-11.77619	1.379591	8.54	0.000

R-square=0.5077, Wald chi2(5)=96.94, Prob> chi2 =0.000

Source: Author's Computation (2024).

Table 5 revealed that when the error term absorbed the heterogeneity effect across the sampled deposit money banks in Nigeria and over time, LETC, LCDC and LDON have a negative effect on return on assets with their respective coefficient values of -31.69882, -11.72487 and -11.77619 respectively. However, the negative effect was only significant for LDON with the probability values of 0.000 as against the insignificant probability value of LETC and LCDC given to be 0.078 and 0.360 respectively. On the contrary, LENC has a positive but insignificant effect on return on asset across the sampled deposit money banks in Nigeria to the tune of 1.131068 ($p=0.947 > 0.05$). The adjusted R-square of 0.5077 revealed that about 51% of the systematic variation in return on assets can be jointly explained by all the explanatory variables while the remaining 49% could be accounted for by other variables not covered by this study. The Wald Chi of 96.94 along the probability value of 0.000 revealed that the model is not fit.

Table 6: Hausman Test

	Chi-square stat	Probability
Difference in coefficient not systematic	23.60	0.0003

Source: Author's Computation (2024).

Table 6 reported Chi-square statistic of 23.60 and a probability value of 0.0003. The result revealed that there is enough evidence to reject the null hypothesis that differences in coefficients of fixed effect estimation and random effect estimation is not significant. Hence, the difference in the coefficient is systematic. Therefore, the most consistent and efficient estimation is given by the fixed effect estimation as presented in Table 3.

Table 7: Other Diagnostic Test

Null Hypotheses	Test Method	Chi-square stat	Probability
No cross-sectional dependence	Pesaran Test	0.422	0.2315
Static panel homoscedasticity	Modified Wald Test	1.86	0.1034
No AR(1)panel autocorrelation	Breusch-Pagan LM	0.279	0.3119

Source: Author's Computation (2024).

Table 7 reports the result of the diagnostic tests. Statistically, the Chi-square stat of 0.422, 1.86 and 0.279 alongside their respective p-value of 0.2315, 0.1034 and 0.3119 suggests that there is no cross-sectional dependence for the estimated panel model, the variance around the regression line is the same for the values of the predictors and that there is no presence of auto-correlation.

Discussion of Findings

This study examined the effect of corporate social responsibility on the profitability of deposit money banks in Nigeria. The regression analysis result revealed that employee training cost has a negative but significant effect on the profitability measured with return on asset of deposit money banks in Nigeria. Out rightly, the cost incurred on training employees are incurred directly from the profits earned, thereby reducing the profitability of deposit money banks. This finding failed to support the conclusion of Amacha and Dastane (2022). This outcome failed to support the findings of Mohammed (2021), Aylin, Ozer, and Aydam (2022), Buys, Oberholzer and Andrikopoulos (2022) and Jibril, Dahiru and Muktar (2021) that a positive significant effect exists between employee training cost and return on equity of firms. However, it gave credence to the findings of Setiawan and Janet (2022), Lungu, Chirata and Dascalu (2022) and Elouidani and Zoubir (2022) that reported a negative relationship.

Also, it was revealed that environmental cost has a positive but insignificant effect on the return on asset of deposit money banks in Nigeria. This implies that, increase in environmental cost would breed an increase in return on asset of deposit money banks in Nigeria. Expectedly, firms contribute to the growth and development of their environment to derive benefit directly from the environment. The findings agreed with the conclusion of Nnamani, Onyekwelu and Ugwu (2022), Oti and Mbu-Ogar (2022), Ahmed and Zakaree and Kolawale (2021) who reported a positive relationship that environmental cost reporting has positive effect on financial performance of firms studied. However, it negated the findings of Oraka and Egbumike (2021) that reported a negative relationship.

Furthermore, it was revealed that community development cost has a negative insignificant effect on the performance measured with return on asset of deposit money banks in Nigeria. This implies that, increase in community development cost reporting would breed a fall in the return on asset of deposit money banks in Nigeria since the community development carried out by firms are extracted directly from the profits, thereby reducing the profitability of firms at the short run. This finding failed to support the findings of Sang, Chune and Jason (2023) that CDR performance has a partial positive correlation with profitability and firm value.

Finally, donation has a negative but significant effect on profitability of deposit money banks in Nigeria. This implies that, increase in donation would decrease the return on asset of deposit money banks in Nigeria. Expectedly, donations are made from the profit earned. At the short run, a decrease would be experienced in the profits made. This outcome is in tandem with the conclusion of Ajayi (2022) that donation has a negative effect on the profitability of manufacturing firms in Nigeria.

Conclusion

Several studies have been conducted on the subject matter using different organizations. However, studies revolved in the banking sector are relatively scarce and this constituted a vacuum in literature. In the same vein, none of the studies on the subject matter conducted in Nigeria captured corporate social responsibility with employee training cost, environmental cost and community development cost and donation. All these constituted the predictors of this current study. Based on the reported findings, it was established that there is a statistically significant effect of corporate social responsibility on profitability of deposit money banks in Nigeria.

Recommendations

The following recommendations are considered relevant in line with the findings made:

i. Management of deposit money banks should ensure compliance with the guidelines of environment cost reporting as this portrays good image of their firm.

ii. In view of the insignificant relationship that exists between community development cost reporting and profitability of deposit money banks, the management should channel effort on engaging in adequate community development spending and its disclosure as way of increasing stakeholders trust and showing more transparency in their operations. This could in turn lead to achieving better financial performance.

iii. Furthermore, functional and interactable corporate social responsibility should be carried out by each deposit money bank to ensure that the banks maintain their guidelines in reporting the CSR costs in their annual reports and accounts, this way stakeholders would access this information and even vouch for them as socially responsible and this could bring about more investors to the companies.

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