



Corporate Social Responsibility and Profitability: Evidence from Listed Oil and Gas Companies in Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: <https://doi.org/10.9734/ajebe/2026/v26i52280>

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://pr.sdiarticle5.com/review-history/158038>

Original Research Article

Received: 01/03/2026

Published: 20/05/2026

Abstract

Background: Corporate social responsibility costs influence profitability in Nigeria's oil and gas sector, where environmental, social, and financial pressures create a complex balance between stakeholder expectations and firm performance.

Aims: This study examined corporate social responsibility (CSR) and profitability of listed oil and gas companies in Nigeria. Key profitability indicators such as net profit margin (NPM), return on equity (ROE), and earnings per share (EPS) was employed, while social responsibility costs served as CSR proxy.

Study Design: Ex-post facto design was utilized as the study employs secondary data that cannot be tampered with.

Methodology: The study's population consists of eight (8) oil and gas firms listed on the Nigerian Exchange Group, while purposive sampling technique was adopted to select a sample size of seven (7) oil and gas

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companies. The study gathered secondary data from seven listed oil and gas companies in Nigeria between 2014 and 2023. The data was gathered from the firms' yearly financial statements. The study employed descriptive statistics and regression analysis.

Results: The findings revealed that social responsibility cost has insignificant effect on NPM and ROE ($\beta = -0.325002, -0.011794, p = 0.6988, 0.9565 > 0.05$), while social responsibility cost was found to positively and significantly affects EPS of listed oil and gas companies in Nigeria ($\beta = 8.012202, p = 0.0445 < 0.05$).

Conclusion: The study concludes that although CSR may not directly improve profit margins or returns on equity, it is however important for long-term profitability and financial performance. As a result, the management and board of directors of oil and gas companies should create a balance between making money and being socially responsible, as this would improve the firms' profit margin and return on equity on the long run.

Keywords: Corporate social responsibility; earnings per share; net profit margin; profitability; return on equity.

1. Introduction

The significant of profitability in Nigerian oil and gas sector cannot be overemphasized, because the sector requires lot of funds to operate, has major environmental issues to deal with, and is expected to meet the expectations of the firms' stakeholders, such as investors, communities, and government. However, oil and gas sector are expected to maintain balance between social activities and financial performance (Cheng et al., 2021). As asserted by Iloma & Chukwu (2023), profitability is an important factor that determines the going-concern of a business because it provides the company the fund needed to invest, reward its owners, and ensures the firm remains sustainable over time.

Profitability is a major sign of how well a business is performing and whether it can survive in the long run. It shows how much money a company makes from its operations compared to the amount it spends on resources. Profitability reflects how well a company is managing its resources, how competitive it is, and how effectively its managers are doing their jobs. In business settings, profitability is viewed as a key measure as it shows whether a company's decisions, such as investing in social responsibility, results to adequate financial benefits (Bolarinwa et al., 2021).

In modern business world, corporate social responsibility is no longer just about providing funds to charities as a form of donation. It has become a crucial part of how a firm plans and run its business operation. Several companies around the world now understand that being socially responsible assists them manage their daily operations and maintain a good reputation (Khan et al., 2022). Corporate social responsibility includes various actions taken by companies so as to be responsible towards the people where the business is located, the economy, as well as the business internal and external environment. These actions can include managing the environment, treating workers fairly, supporting education and healthcare, and assisting local communities (Ali et al., 2017). Companies that include corporate social responsibility in their plans often find that they gain more loyalty from customers, better satisfaction from people who use their products, and more trust from investors.

Corporate social responsibility in Nigeria, is vital because the country faces many problems associated with environment, social and economy. Nigeria's oil and gas industry serves as a major source of income and as well contributes a lot to the country's economy. However, their operation has also caused serious environmental damage, particularly in the Niger Delta region (Shah & Khan, 2019). For instance, spillage of oil, gas flaring, and not adequately involving local communities have negatively affected a company's reputation. This has made communities, groups, and government officials push for oil companies to do real corporate social responsibility work (Idemudia, 2014).

Okorie & Olatunde (2019) posited that corporate social responsibility efforts often include building schools, hospitals, roads, and offering scholarships, jobs, and health services. These actions help meet moral and legal duties, but they are also used to improve the company's image and get permission to operate. However, there have been a debate about the costs associated with corporate social responsibility. For instance, Oginni and Omojowo (2016) opined that corporate social responsibility can improve long-term profits by creating good will and avoiding conflicts. Others disagreed and opined that investing in such big investments might not yield a positive return on the long run.

Nevertheless, the connection between corporate social responsibility and profitability in Nigeria's oil and gas industry has proved to be stronger as a result of the high expectations from local communities, regulators, and global groups. This is as a result of the fact that oil companies are pushed to get involve in a lot of corporate social responsibility so as to keep their social license to effectively operate. Though these activities cost a lot, they can help avoid problems like community trouble, protests, or damage to facilities (Udo & Ekpoattai, 2025). As posited by Bello & Eze (2016), corporate social responsibility can affect profitability directly and/or indirectly. Directly, the costs of corporate social responsibility can lower short-term profits by adding to expenses. Indirectly, corporate social responsibility might boost long-term profits by improving relationships with people involved, lowering conflicts, and building a good reputation. Choi & Gray (2008) posited that companies that are socially responsible are more likely to attract and keep investors, workers, and customers, which in the end helps their profitability.

In the Nigerian oil and gas industry, the risks are much higher. This industry is often blamed for polluting the environment, having bad relationships with local communities, and not helping with social progress or problems that corporate social responsibility is supposed to fix. However, if there is no clear proof that corporate social responsibility helps a company make more money, businesses might spend too little to save money or too much without seeing a return on their investment (Okafor et al., 2021).

Also, the findings on this study produced mixed outcomes, thereby leading to conflicting findings. The different outcomes make it hard for company leaders, investors, and government officials to decide what to do. For instance, some studies say that corporate social responsibility helps companies do better by making customers happy, employees more motivated, and relationships with people who have an interest in the company stronger, thereby enhancing profitability, as identified in studies conducted by Ohaka & Ogaluzor (2018); Ikechukwu et al. (2019); Iloma & Chukwu (2023); Dattijo et al. (2024); and Abdulsalam et al. (2024). But other studies suggest that corporate social responsibility activities can cost a lot of money and lower the value for shareholders as well as firms' profitability in the short run as shown in the studies conducted by Ogala et al. (2021); Bariweni (2024); Ogunbiyi-Davies et al. (2024); and Ajibola et al. (2025). Because of this, this study looks into the lack of clear research on how corporate social responsibility costs affect profitability in Nigerian oil and gas companies. In addition, several studies on the subject matter employs one measurement for profitability which in turn ay affects the robustness of the studies. This study however, fills this gap by using three (3) proxies (net profit margin, return on equity and earnings per share) to measure profitability so as to enhance the study's robustness.

However, by conceptualizing profitability as a dependent variable, this study acknowledges that corporate social responsibility activities, when proxied by social responsibility costs, may either enhance or diminish profitability. The assumption is that corporate social responsibility has financial implications, whether through increased expenses, reputational benefits, improved stakeholder relationships, or market advantages, that may improve firm's profitability. Therefore, understanding profitability as a dependent construct allows the study to test whether social responsibility costs positively or negatively influence profitability in the Nigerian listed oil and gas firms. As a result, this study therefore examined how corporate social responsibility affects profitability of oil and gas companies listed on the Nigerian Exchange Group, thereby focusing specifically on the following objectives:

- i. to examine the effect of social responsibility costs on net profit margin of listed oil and gas companies in Nigeria.
- ii. to identify how social responsibility costs affect return on equity of listed oil and gas companies in Nigeria.
- iii. to determine the effect of social responsibility costs on earnings per share of listed oil and gas companies in Nigeria.

2. Literature Review and Hypotheses Development

2.1 Conceptual Review

Profitability: Profitability is a major sign of how well a business is performing and whether it can survive in the long run. It shows how much money a company makes from its operations compared to the amount it spends on resources. Profitability reflects how well a company is managing its resources, how competitive it is, and how

effectively its managers are doing their jobs. In business settings, profitability is viewed as a key measure as it shows whether a company's decisions, such as investing in social responsibility, results to adequate financial benefits (Bolarinwa et al., 2021).

Iloma and Chukwu (2023) asserted that profitability is an important factor that determines the going-concern of a business because it provides the company the fund needed to invest, reward its owners, and ensures the firm remains sustainable over time. Ofori-Addo, (2021) also posited that profitability can be viewed in two main ways, which involves: at the company level and the industry level. At the company level, it shows how well a business uses its assets, money, and resources to make money. At the industry level, profitability shows how much the entire sector contributes to the economy through taxes, employment, and foreign earnings. However, recent study asserted that profitability is a way to measure how confident investors are and how they decide to put their money in a company. Companies with higher profits usually have higher stock prices and find it easier to get money from investors.

Profitability of Nigerian oil and gas industry is influenced by several factors, including global oil prices, the rules and regulations in place, how well a company gets along with the local communities, and the environmental challenges they face. This is as a result of the fact that changes in international oil prices directly affect how much profit oil and gas companies make. In addition, cost associated with environmental issues like gas flaring or oil spillage can reduce profits. So, understanding profitability in this sector isn't possible without looking at the social, economic, and environmental factors around it (Bello & Eze, 2016). To measure profitability, this study employed net profit margin, return on equity and earnings per share.

Net Profit Margin: Net profit margin is a common financial measure that shows the percentage of a company's net income compared to its total sales. It helps to show how well a company turns its sales into actual profit after covering all costs, such as operating expenses, taxes, interest, and other special charges. It is a clear sign of how efficiently a company is managing its finances because it shows how much profit comes from each sale.

In the Nigerian oil and gas sector, net profit margin is an important factor the firms should always look out for, this is because of the high costs linked to finding and producing oil and gas, as well as managing environmental issues. A firm a lower profit margin implies that the company is facing inefficiencies, high costs, or problems with regulations, while on the hand, a firm with a higher net profit margin connotes that the company is effectively controlling its costs and keeping its sales strong, while (Ibida & Emeka-Nwokeji, 2019).

Return on Equity: Return on equity is another important way to measure how profitable a company is. It shows the ratio of a company's net income to its shareholders' equity, which tells us how well the company is using the money investors have given it to make profits. Return on equity shows the financial return that shareholders get from their investment in the company. This serves as an important factor that is being considered by investors as it shows how well management is doing at increasing the value of their investment (Astriana et al., 2023).

Return on equity of in the oil and gas sector serves as a key measure of profitability because these companies need a lot of money for things like exploring for oil, drilling, and refining, which could be gotten from shareholders contributions. Listed oil gas companies in Nigeria are therefore expected to give good returns to shareholders even though they face challenges from a changing and uncertain environment. As a result, companies with higher return on equity are usually seen as more efficient and more attractive to investors, which helps them get more money from investors (Hussain et al., 2020).

From a corporate social responsibility point of view, return on equity is also important because how a company handles its social responsibility activities can either improve or undermine shareholder returns. For instance, Bolarinwa et al. (2021) suggest that spending on socially responsible activities that improve relationships with stakeholders and reduce conflicts can enhance long-term return on equity by making the business more stable. However, Itoya et al. (2022) pointed out that if these social responsibility costs are not well-managed, they can lower a firm's net income thereby leading to reduction of return on equity.

Earnings per Share: Earnings per share serves a measure that revealed how profitable a firm is, based on the stock market. It shows how much of the company's profit goes to each share of stock that owns by a shareholder. It serves as an important measure because it helps both potential and existing investors to decide how valuable a

company is. Earnings per share gives investors a clear way to compare how profitable different companies are, no matter how big or small they are or what kind of business they are operating (Johnson & O'Toole, 2021).

For oil and gas companies that are listed on the Nigerian Exchange Group, the significant of earnings per share cannot be overemphasized as it shows how attractive a company is to both local and foreign investors. If a company has higher earnings per share, investors are more likely to trust it and buy more of its stock, which can lead to rise in the firm's stock price. But if earnings per share goes down, it can reduce investors' trust and as well make the company less valuable to investors (Ofori-Addo, 2021).

However, earnings per share is also important when looking at how companies act responsibly towards society. As posited by Bello & Eze (2016), when companies do good things for society, like helping the community or being environmentally friendly, it can make their earnings per share go up. This is because these actions can make the company's brand grow stronger and also makes its customers more loyal, which in turn helps the company to generate more revenue through sales. However, if a company spends too much on social responsibility activities, it might lower its profits in the short term, which in turn can reduce the firm's earnings per share.

Corporate Social Responsibility: Corporate social responsibility is an important idea in business and management studies that has changed a lot over the years. Basically, it means that companies have a duty to help society in ways that go beyond just making money. Today, experts like Okafor et al. (2021) say that being socially responsible isn't just a nice thing to do, it's something companies must do, especially those in industries that affect people and the environment, like the oil and gas industry. Adebajo et al. (2023) explains that the idea of corporate social responsibility started being discussed a long time ago, in the early 1900s, when people were arguing about what role businesses should play in society. Some thought companies should only focus on making profits, while others believed they had a bigger role in helping society.

However, since the 2000s, research has shown that corporate social responsibility includes both things companies choose to do and things they are required to do, as they try to balance making money with doing good for society. For instance, an earlier study point out that today, companies work with many different groups, so they can't ignore their responsibility to society and the environment. Corporate social responsibility is now part of how companies operate, they follow rules like sustainability standards, global guidelines, and local laws. In Nigeria, corporate social responsibility has become stronger because of what the community expects, government rules, and pressure from big oil and gas companies to reduce environmental damage. To measure corporate social responsibility, this study employed costs incurred by oil and gas firms on social responsibility activities (Bolarinwa et al., 2021).

Social Responsibility Costs: Social responsibility cost measures how much money companies spend on socially responsible activities. These costs show how much a company spends on social activities involving the firm's internal and external environment, thereby improving its nearby communities, taking care of employees, and working towards sustainability. Therefore, social responsibility costs are a clear way to show how much a company cares about social responsibility.

Social responsibility cost is vital in the Nigerian oil and gas industry, as the companies often have to meet the needs of people in the communities where they operate, and these costs aren't just about giving money away; they are smart investments that help companies get permission to operate, avoid problems, and stay profitable (Adekoya et al., 2020). In addition, Bello and Eze (2016) found that companies that spend more on social responsibility usually have a better image, which helps them keep customers and gain trust from investors. However, there is still a big debate about whether being socially responsible enhances or hurts a company's profits, as Adebajo et al. (2023) was of the opinion that spending on social responsibility adds extra costs, which in turn lowers a firm's profits.

The Fig. 1 above represents the diagrammatical representation of the study's conceptual model which involves how the predictor's proxy relates with proxies of the dependent variable. From the figure, corporate social responsibility is measured by social responsibility costs, while profitability was measured with the use of net profit margin, return on equity and earnings per share.

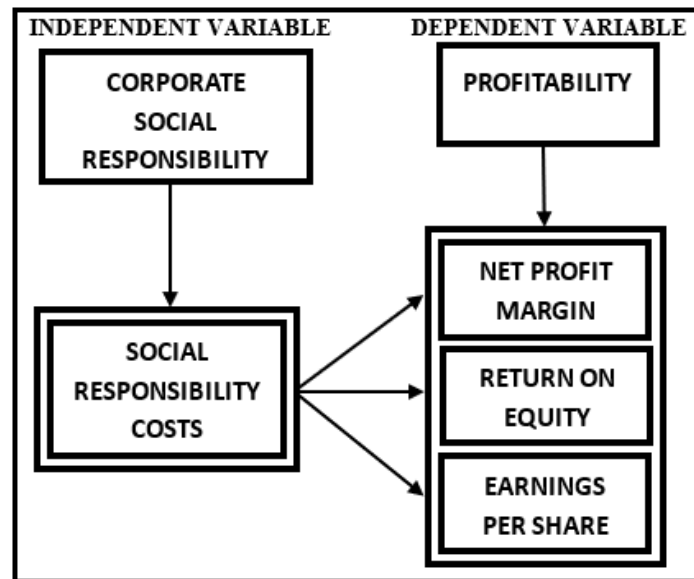


Fig. 1. Conceptual model
Source: Researchers (2026)

2.2 Theoretical Framework

Stakeholder Theory: The stakeholder theory was first introduced by Freeman in 1984. It is a management approach that looks at how a company connects with many different groups it interacts with. The main idea is that companies are not only about making money for shareholders but also about considering the needs of other important groups like workers, customers, the government, local communities, and the environment. Freeman believed that for a company to last and be successful in the long run, it must find a way to meet the needs of all these groups. So, managers are expected to create value for everyone, because if one group is ignored, it could hurt the company's future. This theory goes against the old idea that businesses only care about making profits. Instead, it says companies should also think about how they affect society and the environment (Freeman, 1984).

Scholars who supported the theory asserted that it fits with how companies are expected to act responsibly these days, for instance, an earlier study found that companies that take stakeholder concerns into account through social responsibility practices tend to have better reputations and make more money. A recent study also contributed that when oil and gas companies in Nigeria engage with stakeholders, it helps them be seen as legitimate and leads to better financial results. However, some scholars critique the theory. They think the theory asks too much of companies because it wants them to satisfy many different and sometimes conflicting interests. For instance, Okafor et al. (2021) asserted that focusing too much on all stakeholders can make it hard for managers to make clear decisions about the company's direction. Hussain et al. (2020) also added that putting too much effort to please all stakeholders can increase costs and negatively affect a firm's shareholders' wealth, especially in industries like oil and gas that need a lot of resources.

This study is framed on the stakeholder theory because it connects directly with both corporate social responsibility and profitability. For instance, in the Nigerian oil and gas industry, where there are many problems like community conflicts, environmental damage, and government rules, the stakeholder theory assists in explaining how costs with social responsibility activities affect profitability of the firms. By using this theory, the study shows that the profitability of listed oil and gas companies depends on how well they manage their relationships with stakeholders.

2.3 Empirical Review

Ajibola et al. (2025) investigated how Nigerian listed manufacturing firms' profitability was affected by corporate social responsibility. The study used an ex post facto methodology. The chosen companies' yearly

financial reports and accounts from 2014 to 2023, a ten-year span, provided secondary data. Regression analysis, correlations, and descriptive statistics were used to examine the collected data. The findings demonstrated that whereas social responsibility expenses significantly affect Nigerian listed manufacturing companies' return on assets, they have no appreciable effect on their net profit margin.

Dattijo et al. (2024) investigated the impact of corporate social responsibility on Nigerian oil and gas enterprises' financial performance from 2018 to 2023. The sample included five of the ten listed oil and gas businesses on the Nigeria Exchange Group in December 2023. Secondary information from the Nigeria Exchange Group was used. Ordinary Least Squares regression analysis was performed. The findings indicated that corporate social responsibility expenditure and disclosure had a favorable and significant influence on these firms' net profit margins and return on assets.

Ogunbiyi-Davies et al. (2024) investigated how Nigerian oil and gas companies listed between 2011 and 2022 fared financially in relation to corporate social responsibility (CSR). The research focused on eleven oil and gas companies listed on the Nigerian Exchange Group (NGX). The data utilized in the study came from these firms' annual reports. Panel regression and a Hausman test were employed in the analysis. Financial performance was somewhat impacted negatively by CSR initiatives, according to the regression analysis.

Bariweni (2024) investigated the relationship between publicly traded oil and gas firms' financial success and corporate social responsibility. Using an ex post facto approach, the study collected data from nine oil and gas businesses over the course of eleven years, from 2010 to 2020. In addition to other methods like Pearson correlation and the Hausman test, panel least squares regression was employed for analysis. The findings showed a non-significant negative correlation with return on assets but a negative and significant correlation between staff training activities and return on equity. While there was a non-significant negative link with return on assets, there was a large positive correlation between environmental compliance efforts and return on equity. Community development initiatives showed a non-significant positive link with return on assets and a non-significant negative correlation with return on equity.

Abdulsalam et al. (2024) looked at the connection between Nigeria's oil and gas industry's financial performance and corporate social responsibility investment. The research had a positivist stance and using quantitative methods. Pooled least squares panel regression and data from the sustainability and annual reports of listed oil and gas companies from 2013 to 2023 were used in the study. The findings demonstrated that financial indicators including return on assets, return on equity, net assets, and net profit margin are positively impacted by CSR activities like contributions, education initiatives, and empowerment projects.

Iloma and Chukwu (2023) looked into how corporate social responsibility activities affected Nigerian oil companies' profitability. They looked into the connection between employee benefits and community development costs (CDC) and these businesses' financial performance. A regression approach that takes heteroscedasticity and autocorrelation into consideration was used to examine data gathered from thirteen oil and gas firms during a 21-year period (1998 to 2018). The results demonstrated that profitability was significantly improved by community development costs. Financial performance was similarly positively impacted by employee perks.

Ikechukwu et al. (2019) investigated the impact of CSR on the financial viability of Nigerian oil and gas firms that are publicly traded. Using an ex-post facto research approach, they collected data from oil and gas businesses' annual reports and financial statements as well as information from the Nigeria Stock Exchange factbook for the years 2009 through 2020. The findings demonstrated that, at the 0.05 level of significance, corporate social responsibility significantly improves these firms' net profit margin and return on assets.

Ogala et al. (2021) investigated how Nigerian oil and gas companies' return on assets was impacted by CSR reporting. High spending for corporate social responsibility was thought to have a detrimental impact on returns. Ten oil and gas businesses were chosen as a sample, and information was gathered from their accounts and annual reports. Content analysis and ex-post facto research approach were utilized in the study. The results showed that, albeit not significantly, return on assets is negatively affected by corporate social responsibility reporting.

Ohaka and Ogaluzor (2018) investigated the impact of contributions and corporate social responsibility accounting on the financial performance of Nigerian oil and gas firms. All of the nation's oil and gas

corporations participated in the cross-sectional survey approach utilized in the study. The study collected data and used partial correlation and basic regression analysis to examine it. According to their research, contributions significantly affect the selected firms' net profit margin and return on equity.

Due to lack of agreement in the findings from the previous empirical studies, the underlisted hypotheses were formulated in line with the study's objectives:

- H01:** Social responsibility costs have no significant effect on net profit margin of listed oil and gas companies in Nigeria.
- H02:** Social responsibility costs do not significantly affect return on equity of listed oil and gas companies in Nigeria.
- H03:** Social responsibility costs have no significant effect on earnings per share of listed oil and gas companies in Nigeria.

3. Methodology

This study adopted an ex-post facto research method, which is best suited for investigating existing situations or events without changing any variables. The study population includes all eight (8) oil and gas companies listed on the Nigerian Exchange Group (NGX) as of December 2023. The study's population consists of eight (8) oil and gas firms listed on the Nigerian Exchange Group, while purposive sampling technique was adopted to select a sample size of seven (7) oil and gas companies. The decision to limit the sample to these seven firms out of the eight firms was as a result of the fact that the 8th company (ARADEL PLC) was just listed in the year 2023 and their annual reports over the studied period were not publicly available. This study used secondary data from the audited annual reports and financial statements of the chosen firms between 2014 and 2023, totaling a 10-year period. Panel regression models—a fixed effect model or a random effect model, determined by the Hausman test—were used to examine the relationship between CSR expenses and profit metrics. The study applied basic descriptive statistics to characterize the variables.

In line with the objectives of this study, the functional relationship between corporate social responsibility costs and profitability proxies is specified using a statistical model. From this model, profitability was employed as a function of corporate social responsibility proxy as stated below:

$$\begin{aligned}\text{PROF} &= f(\text{CSR}) \dots \dots \text{i} \\ \text{NPM} &= f(\text{SRC}) \dots \dots \text{ii} \\ \text{ROE} &= f(\text{SRC}) \dots \dots \text{iii} \\ \text{EPS} &= f(\text{SRC}) \dots \dots \text{iv}\end{aligned}$$

This can further be written as:

$$\begin{aligned}\text{NPM} &= \beta_0 + \beta_1 \text{SRC} + \mu \dots \dots \text{v} \\ \text{ROE} &= \beta_0 + \beta_1 \text{SRC} + \mu \dots \dots \text{vi} \\ \text{EPS} &= \beta_0 + \beta_1 \text{SRC} + \mu \dots \dots \text{vii}\end{aligned}$$

Where:

PROF = Profitability
 NPM = Net Profit Margin (Dependent variable).
 ROE = Return on Equity (Dependent variable).
 EPS = Earnings per Share (Dependent variable).
 CSR = Corporate Social Responsibility.
 SRC = Social Responsibility Cost (Independent variable).
 β_0 = Intercept
 β_1 = Coefficient of regression.
 μ = Error term.

4. Results and Discussion

The obtained data is analyzed and interpreted in this part. The Hausman test and descriptive statistics are used to support panel data regression employed in this study.

4.1 Presentation of Results

Table 1. Descriptive statistics

	SRC	EPS	NPM	ROE
Mean	4.304173	10.50714	0.325072	-0.062098
Median	4.588510	1.055000	0.013525	0.079411
Maximum	5.928496	149.3500	56.40101	8.722048
Minimum	0.000000	-79.73000	-11.57842	-10.99683
Std. Dev.	1.063495	33.80778	7.054845	1.823987
Skewness	-1.926876	2.176335	7.221653	-1.630774
Kurtosis	8.549048	10.10901	58.84701	27.14223
Jarque-Bera	133.1264	202.6608	9705.201	1730.998
Probability	0.000000	0.000000	0.000000	0.000000
Sum	301.2921	735.5000	22.75506	-4.346879
Sum Sq. Dev.	78.04044	78864.64	3434.188	229.5581
Observations	70	70	70	70

Source: Authors' Computation (2026)

Table 1 shows the basic stats for the variables. Corporate social responsibility costs have a mean of 4.30 and median of 4.59, which are close, showing a balanced or normal shape. Earnings per share has a much higher mean (10.51) compared to the median (1.06), meaning the data is skewed to the right, with some very high values pushing the average up. Net profit margin and return on equity both have low means and medians, like 0.325072, -0.06209 and 0.013525, 0.07941, showing that the returns from equity are not great overall. Earnings per share has a huge standard deviation of 33.81, showing it's very volatile. Net profit margin also has a large standard deviation of 7.05, which is unusual for a margin measure. Corporate social responsibility costs are more stable with a standard deviation of 1.06. Earnings per share and net profit margin are highly skewed to the right (2.18 and 7.22), meaning there are a few very high values. Corporate social responsibility costs and return on equity are skewed to the left, showing a few very low values. All the measures have kurtosis values higher than 3, which means they have heavy tails and extreme outliers. Net profit margin has a kurtosis of 58.85 and return on equity has 27.14, showing very heavy tails. All the metrics have p-values of 0.000, which means they all significantly differ from a normal distribution.

Model 1 (NPM):

Table 2. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.057214	1	0.8110

Source: Authors' Computation (2026)

The results of the Hausman test indicate a p-value of 0.8110 and a Chi-Sq statistic of 0.057214, both of which are more than the typical 5% significance limit. The random effects model is preferable as the null hypothesis is not rejected due to the non-low p-value. This indicates that compared to the fixed effects model, the random effects model is more effective. However, the cross-section random effects' variance is zero, which raises the possibility that the random effects aren't doing anything to improve the model.

Table 3. Regression results (Random Effect) – NPM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SRC	-0.325002	0.836261	-0.388637	0.6988
C	1.723936	3.706134	0.465157	0.6433
R-squared	0.002400	Mean dependent var		0.325072
Adjusted R-squared	-0.012270	S.D. dependent var		7.054845
S.E. of regression	7.097996	Sum squared resid		3425.945
F-statistic	0.163614	Durbin-Watson stat		2.405804
Prob(F-statistic)	0.687121			

Source: Authors' Computation (2026)

The results of the regression show that social responsibility costs have a coefficient of -0.3250 and a p-value of 0.6988 . Since the p-value is greater than the 0.05 limit, the result is not statistically significant. The random effects model indicates that SRC has a negative influence on NPM, although this effect is not statistically significant for the companies that were looked at between 2014 and 2023. The table also shows that the businesses' NPM would decrease by 0.3250 for every unit rise in the selected firms' SRC. This implies that these companies' profitability (NPM) is neither significantly increased or decreased by corporate social responsibility initiatives.

Model 2 (ROE):

Table 4. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.363855	1	0.5464

Source: Authors' Computation (2026)

The findings of the Hausman test indicate a p-value of 0.5464 and a Chi-Sq statistic of 0.363855 , both of which are greater than the usual 5% significance limit. The random effects model is favored as the p-value is not significant, thus we do not reject the null hypothesis. According to this, the random effects model is more suited for this investigation than the fixed effects model.

Table 5. Regression results (Random Effect) – ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SRC	-0.011794	0.215371	-0.054759	0.9565
C	-0.011337	0.954480	-0.011877	0.9906
R-squared	0.000047	Mean dependent var		-0.062098
Adjusted R-squared	-0.014658	S.D. dependent var		1.823987
S.E. of regression	1.837306	Sum squared resid		229.5472
F-statistic	0.003216	Durbin-Watson stat		2.052394
Prob(F-statistic)	0.954946			

Source: Authors' Computation (2026)

The preceding table shows that SRC has a negative effect on NPM, meaning that the ROE of the selected firms would also decrease by 0.011794 if SRC increased by one unit. Additionally, the p-value of 0.9565 , which is larger than 0.05 , was shown, indicating that SRC had no discernible impact on ROE. This suggests that the analyzed organizations' return on equity is not significantly impacted by their CSR initiatives.

Model 3 (EPS):

Table 6. Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.158832	1	0.6902

Source: Authors' Computation (2026)

The Chi-Sq statistic of 0.158832 and p-value of 0.6902 in the Hausman test findings are greater than the usual 5% significance limit. The random effects model is more suitable as we do not reject the null hypothesis since the p-value is not significant. When compared to the fixed effects model, the random effects model is seen to be more effective and reliable.

Table 7. Regression Results (Random Effect) – EPS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SRC	8.012202	3.912741	2.047721	0.0445
C	-23.97876	18.34119	-1.307372	0.1955
R-squared	0.058767	Mean dependent var		5.205858
Adjusted R-squared	0.044926	S.D. dependent var		30.62343

Variable	Coefficient	Std. Error	t-Statistic	Prob.
S.E. of regression	29.92764	Sum squared resid		60905.12
F-statistic	4.245681	Durbin-Watson stat		2.784128
Prob(F-statistic)	0.043179			

Source: Authors' Computation (2026)

SRC has a favorable impact on EPS (8.012202), according to the data. This also suggests that a one-unit increase in SRC would raise the chosen enterprises' EPS by 8.012202. With a p-value of 0.0445 (< 0.05), the predictor's (SRC) t-test result was also shown as 2.04772 (> 2). This suggests that at the 0.05 significant level, SRC's p-value in conjunction with EPS may be considered statistically significant.

4.2 Test of Hypotheses

H01: Social responsibility costs have no significant effect on net profit margin of listed oil and gas companies in Nigeria.

The coefficient of SRC on NPM from the random effects regression (Table 3) was found to be -0.3250 with a p-value of 0.6988, much over the 5% significant level. Therefore, the study concurred that social responsibility cost has no discernible effect on net profit margin of Nigerian listed oil and gas firms and as a result, failed to reject the null hypothesis.

H02: Social responsibility costs do not significantly affect return on equity of listed oil and gas companies in Nigeria.

The coefficient of SRC on ROE from the random effects regression (Table 5) is -0.0118 with a p-value of 0.9565, far above the 5% threshold. This explains why the study concludes that social responsibility charges have no discernible effect on return on equity of Nigerian listed oil and gas companies and fails to reject the second null hypothesis.

H03: Social responsibility costs have no significant effect on earnings per share of listed oil and gas companies in Nigeria.

The coefficient of CSR on EPS from the random effect regression (Table 7) is 8.0122 with a p-value of 0.0445, below the significance level of 0.05. Consequently, the analysis rejects the third null hypothesis and reiterates that social responsibility expenses have a substantial effect on earnings per share of Nigerian listed oil and gas firms.

4.3 Discussion of Results

According to the regression analysis on net profit margin (NPM), costs associated with social responsibility have a coefficient of -0.3250 with a p-value of 0.6988, which is not statistically significant. This suggests that Nigerian listed oil and gas companies' net profit margin is negatively impacted by CSR costs, but not significantly during the study period. This suggests that the efficiency of profit generation in relation to sales revenue is not improved by spending on corporate social responsibility. In fact, the negative sign indicates that CSR costs may lower short-term profitability, as they represent additional expenditures that do not immediately improve margins. The result aligns with the study conducted by Ogala et al. (2021), Bariweni (2024), and Ogunbiyi-Davies et al. (2024), but is inconsistent with the study conducted by Ohaka and Ogaluzor (2018), Ikechukwu et al. (2019), and Iloma & Chukwu (2023).

With a coefficient of -0.0118 and a p-value of 0.9565, the regression result for SRC on return on equity indicated a negative and statistically insignificant effect. This suggests that returns on equity for shareholders in the Nigerian oil and gas industry are not greatly impacted by social responsibility expenses during the study period. The results of Ogunbiyi-Davies et al. (2024) and Bariweni (2024) are consistent with this outcome, but those of Iloma & Chukwu (2023), Dattijo et al. (2024), and Abdulsalam et al. (2024) are in conflict.

Social responsibility cost has a coefficient of 8.0122 and a p-value of 0.0445, which is statistically significant at the 0.05 level, according to the regression findings on SRC and profits per share. This suggests that the earnings

per share of Nigerian listed oil and gas firms are positively and significantly impacted by CSR expenses during the study period. Ikechukwu et al. (2019), Iloma & Chukwu (2023), Dattijo et al. (2024), and Abdulsalam et al. (2024) all found similar results. Stakeholder theory, which contends that businesses are more likely to achieve sustainable financial performance when they attend to the requirements of their stakeholders, is also consistent with this outcome.

Overall, the findings demonstrate that profitability measurements are impacted differently by corporate social responsibility. Corporate social responsibility costs have a negative and insignificant effect on net profit margin and return on equity, but they have a positive and significant impact on earnings per share. This suggests that although corporate social responsibility may not enhance short-term profitability or directly affect return on equity, it significantly improves shareholder value through earnings per share. These results reinforce the idea that corporate social responsibility is more of a strategic long-term investment rather than an immediate driver of profitability. In the oil and gas sector—where community relations, environmental concerns, and social responsibility are critical—corporate social responsibility activities play a vital role in building legitimacy, sustaining operations, and ensuring long-term value creation.

5. Conclusion and Recommendations

5.1 Conclusion

The results indicated that CSR costs had a negative and statistically insignificant effect on NPM, suggesting that these costs may lower short-term profitability. The negative association implies that CSR initiatives, while beneficial in the long run, can act as additional expenses that do not immediately improve profit margins.

Similarly, social responsibility costs were found to have a negative impact on ROE, indicating that they do not enhance short-term shareholder returns or equity performance. These findings suggest that the financial commitments associated with CSR activities may reduce immediate profits and weaken returns on equity in the short run.

However, social responsibility costs showed a positive and significant effect on EPS, demonstrating that CSR initiatives contribute to shareholder value by boosting corporate reputation, investor confidence, and long-term sustainability. Nigerian listed oil and gas companies that engage in socially responsible activities are more likely to create stable operating environments and achieve improved shareholder returns over time.

5.2 Recommendations

The study recommends that the board of directors of Nigerian oil and gas firms should create a balance between making money and being socially responsible. Even though engaging in social responsibility activities may be costly right now, companies should plan CSR projects that also bring extra benefits, less conflict in the community and fewer risks in business operations. All these would improve the firms' profit margin on the long run.

Management of Nigerian oil and gas companies should see corporate social responsibility as a long-term investment that assists in building and value for shareholders' value, instead of just focusing on quick wins like short-term profits or return on equity. This further connote that they should continue to embark on CSR as it tends to enhance and improve profitability on the long-run.

Management of listed oil and gas firms in Nigeria should ensure that CSR is continuously included as part of the company's plan. Instead of seeing CSR as just a separate cost, they should include it in their main business strategy. This way, they can do good for society and still improve their earnings in a sustainable manner.

6. Limitations of the Study

The study's focus is limited to seven Nigerian-listed oil and gas businesses that were used as references. The study's sample may not be totally representative of all Nigeria's oil and gas sector as of December 31, 2023, as the study overlooked Nigeria's unlisted oil and gas firms. Another major weakness of this study is that the

proxies used to measure profitability (net profit margin, return on equity and earnings per share) have their flaws and cannot guarantee perfect outcomes. Nonetheless, the limitations discovered in this study had no effect on the outcome of the study's findings. As a result of the aforementioned limitations, the study therefore suggested that further research on this study should capture both listed and unlisted oil and gas firms in Nigeria, and as well expand the study period up to year 2025.

Disclaimer (Artificial Intelligence)

Authors hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

Competing Interests

Authors have declared that no competing interests exist.

References

- Abdulsalam, T. A., Ogungbemi, S. S., & Tajudeen, R. B. (2024). Does CSR expenditure reward the financial performance of Nigerian quoted oil and gas companies: A pooled panel regression model? *Ekonomski pogledi*, 26(1), 1-39. <https://doi.org/10.5937/ep26-51141>
- Adebanjo, S., Banchani, E., & Sanusi, I. (2023). Modeling foreign direct investment returns and economic growth in Nigeria. *Journal of Mathematical Problems, Equations and Statistics*, 4(1), 107-112. DOI: <https://doi.org/10.22271/math.2023.v4.i1b.91>
- Adekoya, O. B., Enyi, P. E., Akintoye, I. R., & Adegbe, F. F. (2020). Corporate responsibility practices and reputation of listed firms in Nigeria: A structural equation modeling approach. *European Journal of Accounting, Auditing and Finance Research*, 8(4), 1-17. <https://doi.org/10.24940/theijbm/2020/v8/i4/BM2004-023>
- Ajibola, H. O., Oduwale, F. R., & Bakare, J. O. (2025). Corporate social responsibility and profitability of listed manufacturing companies in Nigeria. *RUN Journal of Management*, 2(2), 67-82. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6611879
- Ali, W., Frynas, J. G., & Mahmood, Z. (2017). Determinants of CSR disclosure in developing countries. *Journal of Business Ethics*, 152(2), 501-517. <https://doi.org/10.1002/csr.1410>
- Astriaana, D., Nurhayati, S., & Andi, F. (2023). The effect of return on equity on company value. *Islamic Financial and Accounting Review*, 2(1), 37-44. <https://doi.org/10.35905/ifar.v2i1.5366>
- Bariweni, B. (2024). The impact of corporate social responsibility on financial performance of quoted oil and gas companies in Nigeria. *International Journal of Management, Accounting and Finance*, 10(1), 93-105. <https://bwjournal.org/index.php/bsjournal/article/view/1915>
- Bello, A. O., & Eze, S. C. (2016). Corporate social responsibility: A critical review of the literature. *International Journal of Business and Management Review*, 4(10), 86-103. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3856705
- Bolarinwa, S. T., Akinlo, A. E., & Onyekwelu, U. L. (2021). Determinants of firm profitability Africa. *Global Business Review*. <https://doi.org/10.1177/09721509211046336>
- Cheng, B., Ioannou, I., & Serafeim, J. (2021). Corporate social responsibility and financial performance: A global perspective. *International Journal of Business Research*, 19(2), 89-105. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1847085
- Choi, D. Y., & Gray, E. R. (2008). Socially responsible entrepreneurs: What do they do to create and build their companies? *Business Horizons*, 51(4), 341-352. <https://doi.org/10.1016/j.bushor.2008.02.010>
- Dattijo, M. I., Ene, J., & Lateef, S. A. (2024). Corporate Social Responsibility and Financial Performance of Oil and Gas Firms in Nigeria. *International Journal of Latest Technology in Engineering, Management & Applied Science*, 13(5), 218-231. <https://doi.org/10.51583/IJLTEMAS.2024.130523>
- Freeman, A. M. (1984). The sign and size of option value. *Land Economics*, 60(1), 1-13. <https://www.jstor.org/stable/3146088?seq=1>
- Hussain R. I., Bashir S., & Hussain, S. (2020). Financial sustainability and corporate social responsibility under mediating effect of operational self-sustainability. *Front Psychology*. 11:550029. <https://doi.org/10.3389/fpsyg.2020.550029>
- Ibida, N. J. F., & Emeka-Nwokeji, N. A. (2019). Effect of corporate social responsibility (CSR) on financial performance of oil and gas companies in Nigeria. *Journal of Accounting, Business and Social Sciences*,

- 2(1), 56–73.
[http://jabss.org/upload/4686_File_EFFECT%20OF%20CORPORATE%20SOCIAL%20RESPONSIBILITY%20\(CSR\)%20ON%20FINANCIAL%20PERFORMANCE%20OF%20OIL%20AND%20GAS%20COMPANIES%20IN%20NIGERIA..pdf](http://jabss.org/upload/4686_File_EFFECT%20OF%20CORPORATE%20SOCIAL%20RESPONSIBILITY%20(CSR)%20ON%20FINANCIAL%20PERFORMANCE%20OF%20OIL%20AND%20GAS%20COMPANIES%20IN%20NIGERIA..pdf)
- Idemudia, U. (2014). Corporate social responsibility and development in Africa: Issues and possibilities. *Geography Compass*, 8(7), 421–435. <https://doi.org/10.1111/gec3.12143>
- Ikechukwu, J. U., Okolo-Obasi, E. N., & Simplice, A. (2019). Corporate social responsibility in Nigeria and rural youths in sustainable traditional industries livelihood in oil producing communities. *Journal of International Development*, 9(1), 1–29. <https://doi.org/10.2139/ssrn.3402032>
- Iloma, M., & Chukwu, G. (2023). Corporate social responsibility and profitability of listed oil firms in Nigeria. *Journal of Accounting Finance and Auditing Studies*, 9(3), 1-16. <https://doi.org/10.32602/jafas.2023.021>
- Itoya, J., Owuze, C., Akhator, P. A. & Igbokwe, I. C. (2022). Effect of Corporate Social Responsibility on Financial Performance in Nigeria. *European Scientific Journal*, 18(19), 173. <https://doi.org/10.19044/esj.2022.v18n19p173>
- Johnson, R., & O'Toole, S. (2021). Earnings per share and investor behavior. *Journal of Financial Analysis*, 16(3), 75–90. <https://doi.org/10.22495/cocv10i4c2art3>
- Khan, I., Jia, M., Lei, X., Niu, R., Khan, J., & Tong, Z. (2022). Corporate social responsibility and firm performance. *Total Quality Management and Business Excellence*, 34(1), 1–20. <https://doi.org/10.1080/14783363.2022.2092467>
- Ofori-Addo, A. (2021). Corporate social responsibility and corporate image: An assessment of Club 100 companies in Ghana. *Master of Art and Public Relations Dissertation: Ghana Institute of Journalism*. <https://repository.unimac.edu.gh/server/api/core/bitstreams/942bbea6-1204-4428-9962-47419812c4be/content>
- Ogala, I. I., Falope, F. J., & Audu, F. (2021). Effect of corporate social responsibility reporting on performance of oil and gas companies in Nigeria. *Journal of Contemporary Issues in Accounting*, 2(1), 78–88. <https://journals.unizik.edu.ng/jocia/article/view/934>
- Oginni, O. S., & Omojowo, A. D. (2016). Sustainable development and corporate social responsibility in Sub-Saharan Africa: Evidence from industries in Cameroon. *Economies*, 4(10), 1-15. <https://doi.org/10.3390/economies4020010>
- Ogunbiyi-Davies, B., Abiola, B., & Adegbe, F. F. (2024). Corporate social responsibility and financial performance of listed oil companies in Nigeria. *International Journal of Research and Innovation in Social Science*, 8(1), 703–718. <https://doi.org/10.47772/IJRISS.2024.801054>
- Ohaka, J., & Ogaluzor, O. I. (2018). Corporate social responsibility accounting and profitability in Nigerian oil firms. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 8(3), 265–277. <https://doi.org/10.6007/IJARAFMS/v8-i3/4835>
- Okafor, A., Adeleye, B. N., & Adusei, M. (2021). Corporate social responsibility and financial performance: Evidence from US Tech Firms. *Journal of Cleaner Production*, 292, Article 126078. <https://doi.org/10.1016/j.jclepro.2021.126078>
- Okorie, V. N., Olatunde, N. A. (2019). Appraisal of corporate social responsibility practices of selected medium size contracting firms in South-South, Nigerian. *UNIOSUN Journal of Engineering and Environmental Sciences*, 1(1), 65–75. <https://doi.org/10.36108/ujees/9102.10.0180>
- Shah, S. S. A., & Khan, Z. (2019). Corporate social responsibility: A pathway to sustainable competitive advantage? *International Journal of Bank Marketing*, 38(1), 159–174. <https://doi.org/10.1108/IJBM-01-2019-0037>
- Udo, E. J., & Ekpoattai, O. (2025). Social auditing and corporate social responsibility performance of listed companies in Nigeria. *International Journal of Accounting Finance and Social Science Research*, 3(6), 131–152. <https://doi.org/10.63452/IJAFSSR.2025.3610>

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Peer-review history:
 The peer review history for this paper can be accessed here:
<https://pr.sdiarticle5.com/review-history/158038>