



COMMUNITY DEVELOPMENT COST AND NET PROFIT MARGIN IN QUOTED OIL AND GAS COMPANIES IN NIGERIA.

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KEY WORDS

Community Development Cost, Net Profit Margin in Quoted Companies.

ABSTRACT

This article synthesizes on Community Development Costs and Net Profit Margin on quoted oil and gas companies in Nigeria—two of the most debated components of CSR—performance research in Africa. Using longitudinal panel data from 2012–2022, the study applied multiple regression, Error Correction Estimate and Causality Testing. The results reveal that community development cost has a significant positive relationship with net profit margin, confirming the view that strategic CSR enhances both corporate legitimacy and financial outcomes. The paper concludes with practical policy recommendations as pathways for leveraging CSR and a profit-enhancing strategy in resource-dependent communities. The study also emphasizes the inevitability and urgent need for CSR in the contemporary society if there should be harmonious oil companies' operations in the host communities. Most importantly, the cost that would have been saved, if properly invested in CSR should have greater positive multiplier effects and bring about better community development and oil companies profitability.

Introduction

Costs incurred by enterprises to support local communities, such as building schools or supplying clean water, are known as community development costs. If appropriately incurred, these expenses, which come from net earnings, can enhance the harmonious relationship and connections between oil firms and the host communities. Corporate social responsibility (CSR) has been a contentious topic over the years. CSR was first introduced as a means of encouraging businesses to positively address the various social obligations, commitments, and responsibilities while taking into account the effects of their operations on communities and other stakeholders. The CSR platform reached its pinnacle in the 2000s, serving as a benchmark for advancing corporate policies as well as a base for gauging industrial harmony and integral business strategy.

The discourse surrounding Corporate Social Responsibility (CSR) has evolved significantly from discretionary philanthropy to a core strategic imperative for

modern business. This transformation is particularly critical in the extractive industries, where commercial operations inherently involve substantial environmental and social costs. In developing economies, and specifically within the Nigerian oil and gas sector, the relationship between operational activities and local community welfare defines corporate survival and long-term financial viability. The Nigerian oil and gas sector sits at the centre of a complex socio-economic paradox: it generates more than half of national revenue yet is also the source of intense community agitation, environmental degradation, and periodic disruptions to business operations. Communities—especially in the Niger Delta—expect oil companies to contribute meaningfully to local well-being, compensate for ecological damage, and invest in the long-term development of their host regions.

Although series of argument based on researchers are found in literature as to the relevancy or irrelevancy of CSR on the hosting environment, there is no unanimous agreement on the subject matter due to peculiarities of settings and the variations of methodology adopted by the studies. Some of the studies argued in favour of CSR as it leads to profitability increment, societal and environmental stabilities. Others argue that it is a waste and unnecessarily leading to diversion of company's resources to projects that have no explicit bearing on profit motive, therefore, creating a gap in knowledge. This therefore stimulates the need for studying specific setting in order to ascertain the consequential effect of adopting CSR.

These expectations have given rise to corporate social responsibility (CSR) as a de facto license to operate. Yet CSR is no longer viewed as charity; instead, it has evolved into an investment tool that shapes community relations, protects assets, and enhances reputation and brings about good understanding between oil companies and the host communities.

The study would sensitize all stakeholders on the need to ensure that the source(s) of livelihood of the community's natural assets are not destroyed. It would help to establish the need to safeguard the environment and minimize risk to man, plants and animals. This research work will examine the corporate social responsibility (CSR) activities of oil and gas companies in Nigeria, focusing on those listed on the Nigerian Exchange Group (NGX). The scope of research includes three (3) main perspectives as follows:

Geographical scope: The geographical area of this study is Nigeria. Specifically, the study focuses on oil and gas companies.

Content scope: The theoretical areas covered in this study will be limited in time and relevant literature on corporate social responsibility accounting in oil and gas companies in Nigeria

Unit Level of Analysis; The institutional level of analysis used for this study is Nigeria, however, relevant documents necessary for the researchers were used. Finally, the study would stimulate further research work. In this context, the question that matters to both scholars and practitioners is: does CSR spending especially on

community development actually contribute and create enabling environment for firm profitability?

Aim and Objectives of the Study

The aims and objectives of this study are as follows:

- i. Investigate the relationship between community development cost and net profit margin of oil and gas companies.
- ii. Evaluate the relationship between Community Development Cost and Return on Asset of oil and gas companies.
- iii. Determine the relationship between Human Capacity Development Cost and Net profit margin of oil and gas companies.

Literature Reviews

Conceptual Framework

According to **Jonkers (2005)**, corporate responsibility is a sensitive concept, a term that draws attention to a complex range of issues and factors all related to the position and function of business in contemporary society. **PricewaterhouseCoopers (2004)** views CSR as the proposition that businesses are not only responsible for maximizing profits but also recognize the needs of stakeholders such as employees, customers, demographic groups, and even regions, the area they serve.

The Confederation of British Industry (2001) states that CSR requires businesses to acknowledge that they are publicly accountable not only for their financial performance but also for their social and environmental records. CSR encompasses the extent to which businesses must promote human rights, democracy, community improvement and the Sustainable Development Goals around the world. **World Bank (2004)** sees CSR as the commitment of businesses to contribute to sustainable economic development, working with employees, their families, local communities and society at large to improve the quality of their lives in a way that is both beneficial to the business and beneficial to the environment of the business (international relations) for development. **Ikpeze (1987)** classifies corporate social responsibility obligations into two:

1. Outright charity towards social sectors (such as education, sports, arts and culture) does not necessarily have an impact directly to the company's profits; and the elimination or reduction by businesses of the social costs arising from their normal business activities creates economic externalities to their business and poses risks for the health and safety of non-business entities. **Chartered Institute of Bankers in Nigeria (2009)**, also see corporate social responsibility as an organization making every effort to initiate actions that have a positive impact on the host community, the environment and the population at large. This can be seen as a way of recognizing that certain economic consequences have negative impacts on people and society and working to ensure that these negative impacts are overcome.

Corporate social responsibility is the responsibility for-profit organizations to utilize their profit to impact stakeholders, the natural environment and broader

society. It focuses on accountability and transparency in corporate activities, including social, ethical, environmental and economic efforts, which are often voluntary and implemented in and out of the marketplace, *market and business transactions*: The World Business Council for Sustainable Development defines corporate social responsibility as “the ongoing commitment of businesses to behave ethically and contribute to economic development while improving the quality of life of the workforce, their families as well as the local community and society at large.” **(WBCSD 2000)**. The Organization for Economic Co-operation and Development (OECD) considers corporate social responsibility as "business's contribution to sustainable development". Therefore, corporate behavior must not only ensure profits for shareholders, wages for employees, and products and services for consumers, but must also satisfy social and environmental concerns and values. **Schools (OECD 2001); CEC (2002)** defines CSR as a company's behavior that goes beyond legal requirements, applied voluntarily. Companies must integrate economic, social and environmental impact into their operations. CSR is not an optional “add-on” to a company's core activities but is related to how the company is managed.

According to **McWilliams and Siegel (2001)**, corporate social responsibility is an action taken by a company to promote social benefits beyond the company's direct interests and what is required by law. That is, CSR suggests that companies have responsibilities beyond those of shareholders, including those of other stakeholders (employees, suppliers, environmentalists, communities, etc.) and the broader society in which they operate **(Doh and Guay, 2006)**. **Davis (1973)** suggests that corporate social responsibility begins where the law ends. In other words, it is what businesses do to contribute positively to society beyond their legal obligations.

Tunde Famoroti (2007) argues that corporate social responsibility is the concept that an organization must consider the impact of its activities and operations. Not only for shareholders but also for customers, suppliers, employees, members of the communities in which the company operates and even for the environment. The main idea is that corporate objectives should not only reflect the maximization of profits and return on investment for investors but also the maximization of the total benefits it brings to all stakeholders in the business Organization. He concluded by stating that CSR is a conscious effort to give back to the society from which the company has benefited greatly.

According to **Bamigbaiye (2008)**, CSR is an expression of self-definition, which is the responsibility a company has towards its stakeholders and maintains a leadership role in its operating environment. CSR is a way of demonstrating respect, loyalty, understanding and solidarity with the people and communities in which an organization operates, ultimately bringing rewards such as reputation that are of immense value. **Tiemoko (2008)** argues that CSR is a concept in which companies integrate social and environmental concerns into their business operations and interactions with stakeholders on a voluntary basis.

Amangbo (2008) defines CSR as a concept in which an organization takes into account the interests of society by taking responsibility for the impact of its

activities on customers, suppliers, employees, shareholders, etc. public, community and other stakeholders as well as the environment. The obligation to be a good corporate citizen appears to go beyond compliance with the law and extend to voluntary efforts to improve the quality of life of employees, local communities and society within the organization. It is in this context that social responsibility becomes more important.

Olokode (2008) argues that CSR is often considered the contribution of businesses to sustainable development, defined as “development that meets the needs of the present without compromising the ability to meet those needs of future generations”. Focuses on how to achieve the integration of economic, environmental and social imperatives. He argues that CSR is often understood as how a company achieves a balance or integration of economic, environmental and social requirements while also meeting shareholder expectations. It is generally accepted that CSR applies to businesses as they operate in national and global economies.

Contextual Review:

In Nigeria, CSR practices are strongly shaped by the immediate socio-economic development challenges, such as poverty alleviation, infrastructure deficits, and environmental repair.

CSR as Competitive Strategy: The “shared value” model (**Porter & Kramer, 2011**) argues that companies succeed in the long-term when communities succeed in achieving peaceful coexistence. In Nigeria, this takes a tangible form: Fewer pipeline attacks, smooth logistics, workforce stability, preferential treatment during host community negotiations, ESG-driven investor attraction

Community Development (CDC) and Operational Stability

For oil and gas firms operating in the Niger Delta, community development costs (CDC) often serve a vital function beyond mere charity: they are investments in securing operational continuity. Historical studies in the region emphasized that corporate investment in community welfare, such as infrastructure and environmental protection, is essential for mitigating risks like community agitation, facility sabotage, and violence that plague the sector. The necessity of this strategic investment has recently been codified by the **Petroleum Industry Act (PIA) 2021**. The PIA, through the HCDDT, institutionalizes the requirement for oil companies (settlors) to dedicate 3% of their operating expenditure (OPEX) toward projects like infrastructure, education, and healthcare within their host communities. The regulatory enforcement of this cost structure confirms the recognition that community stability (achieved through CDC) is directly linked to reducing operational risk and ensuring facility safety.

Community Development Cost (CDC): This dimension captures external social investment, defined as the provision of goods and services by companies to non-profit organizations, civil society groups, and the immediate surrounding community. CDC signifies an active contribution to resolving social issues, thereby enhancing the

corporate image and acceptability within the host environment. The variable is measured using the natural logarithm of the reported Community Development Cost. Community Development Cost (CDC) includes expenditures on: Infrastructure (roads, bridges, water systems), education and scholarships, health centers and medical outreach, empowerment programs and skills development, and environmental restoration and clean-ups. Rather than being mere philanthropy, these investments can be viewed as risk-mitigation and social investment strategies.

Community Development Cost Vs Net Profit Margin Nexus

1. **Reduced operational disruptions** – Community unrest often leads to shutdowns, pipeline vandalism, or kidnapping, reducing output and revenue.
2. **Enhanced legitimacy and social acceptance** – A socially responsible oil firm earns goodwill that translates into smoother operations.
3. **Improved brand reputation** – International investors—especially ESG-focused—favor companies with strong CSR footprints.
4. **Long-term cost savings** – Prevention of conflict is far cheaper than repairing its damage.

Thus, community development is not simply an obligation; it can be a strategic asset.

Community Trust as an Economic Asset: Trust reduces risk and risk reduces cost.

Oil companies operating in restive environments face two major threats: Operational disruptions; Loss of social license to operate CSR—especially CDC—helps eliminate both.

Net Profit Margin (NPM): NPM is a ratio quantifying the percentage of profit a company generates from its total revenue after deducting all expenses. It is an indicator of operational efficiency and pricing power, measured as

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Revenue}} \times 100\%$$

Firm Size (FSZ): Firm size is introduced as a moderating variable, hypothesized to influence the relationship between CSR expenditures and financial outcomes, given the scale advantages inherent in large corporations. FSZ is operationalized as the natural logarithm of the firm's total assets.

Corporate Social Responsibility - History and Development

The companies and Allied Matters Act (CAMA) 2004, Section 334 and 335 requires that the financial statement of every company in every financial year shall include a value-added statement for the year (VAS). A value-added statement shows how value (wealth) has been created by an enterprise through the utilization of its capacity, capital, manpower and other resources during the year and its distribution among various interest groups such as the employees, the government, creditors, proprietors and the company. The act further requires that as part of the financial statement of the company, director's report should reflect the efforts of the company in the socioeconomics scheme. The report shall include health, safety, employment of disabled person, charity, employee's welfare participated in decision making and

their training. To include in the financial statement information about socio-economic activities as contained in Director's report have not been able to fill the gap for quantifying CSR costs.

Therefore, CSR accounting is a process used to identify measure and present the state of CRS risk management and activities related to improvement of CSR performance in monetary terms based on financial statements (Wildowicz-Giegel, 2004). According to International Federation of Accountants that rather uses the term sustainable accounting, CSR accounting is applied to methodologies designed to financially quantify the impacts of enterprise activity on the natural environment and the social stakeholder's community (Wildowicz-Giegel, 2014). The majority of scholars perceive social accounting as a mechanism aimed at enhancing corporate accountability and transparency to a wide range of external stakeholders addressing the environment, social and ethical concerns and values of individuals upon whom a business has a non-economic impact (Dwyer, 2006). It can be said that CSR accounting embraces a part of accounting, which tackles with registration, analysis, and reporting environmental and social effects of the influence of a given entity on its surroundings as well as with the measurement of connections and interactions between economic environmental and social issues, which constitutes three dimensions of sustainable development (Wildowicz-Giegel, 2014). As stated by Gabrusewicz (2004), social responsibility accounting focuses on the identification of social cost and benefits, which appear because of running a business, indicating the places of their generating income and the ones that are responsible for it. Put differently, social accounting concerns the collection, recording and evaluation of information on social and environmental performance of the company of particular interest groups within society and to society. Many authors describe social accounting as an extension of disclosure into non-traditional areas such as providing information about employees, products, community services or reduction of pollution. It allows enriching the information enclosed in traditional financial statement that is presented not only in monetary but also in descriptive form (Wildowicz-Giegel, 2014).

The Essence of CSR:

Pointedly, the main characteristics of CSR accounting can be summarized in the following three points (CSR, 2007). The following captures the essence of CSR:

1. Cooperate social responsibility accounting system is designed on the assumption that the majority of business activities are statistically measurable and expressed in some quantified form.
2. Cooperate social responsibility accounting focuses on the companies cooperate social responsibility management system and performs from a monetary perspective the identification and measurement of activities related to planning, implementation and management, monitory and revaluations. Corporate social responsibility accounting evaluates processes to determine whether the CSR management system operates effectively. What is more, it uses monitoring and feedback to improve management activities from the

perspective of managers, the gathered information seems to be helpful in the minimization of CSR risk and the appropriate execution of business activities.

3. The implementation of CSR accounting is treated as a tool that supports all kind of activities and efforts in the area of corporate social responsibility. Based on the characteristics of CSR accounting, it provides a complete picture of the organization and its resources. It prevents and abhors socially irresponsible behaviours. It also motivates and encourages companies to talk up socially responsible activities (**Krasodomska, 2013**). Corporate social responsibility accounting is used by companies to measure, disclose and be accountable to internal and external stakeholders with regard to their environmental, social, economic and organizational performance. These issues are presented within documents such as annual reports or sustainability reports (**Von Wensen et al. 2001**).

Social accounting is part of the knowledge of accounting and reporting that aims to measure the social effects {social cost and benefits} arising from the business unit's activities (**McNamara, 1999**). Social accounting can be issued by an organization with information that allows stakeholders to assess organizations performance in dealing with social issues, negative and positive (**Richmond & Etal, 2003**). Social accounting process is to collect measure and report transactions between business society and surrounding community (**Gholami, et al. 2012**). In addition, **William, & Mildred, (2001)** posit that there are four basic assumptions of social responsibility accounting system, which includes:

1. Each business unit has obligations towards its surrounding communities that do not adhere to them.
2. Goods that were previously free are not so available
3. The inalienable rights of the community, the social obligations and also the conducts of its business units are required to be based on the principles of financial reporting.

Freedman (1989) posits that social accounting means identifying, measuring and reporting on the relationship between business and its environment. Social accounting extends these models by incorporating the effects of the firms' activities on society as it shows the actions a company is taking or failing to take in the realm of social responsibility (**Cottell & Perlin, 1991**). According to **Mathews (1993)** social responsibility accounting (SRA) refers to disclosure of financial and nonfinancial quantitative and non-quantitative information about the activities of an enterprise. The area also includes employee reports (ER), Human resource accounting (HRA) accounting, and industrial democracy issues.

More so, **Anderson (1977)** viewed social responsibility accounting as a management tool to assist in establishing social goals and objectives by ensuring more complete consideration of total business needs and public expectations. Corporate social responsibility accounting should report more completely on the use of all corporate resources in areas such as employment practices. Industrial democracy, pollution and environmental impact, product safety, energy usage,

research and development, productivity and community projects and relationships economic growth and efficiency, education, employment and training, civil rights and equal opportunities; Urban renewal and development, conservation and recreation; Culture and the arts medical care and government (Jackson, 1982; Mathews, 1993). The Companies and Allied Matters Act (CAMA) 2004 5334 stipulates that the social responsibility activities of a reporting organization shall be contained in the Directors Report for each years' financial statement. Schedule 5 part 3 of the Act specifically demand thus;

1. Employment of Disabled Persons: The Directors report shall contain a statement showing how many disabled persons were employed during the year and describing the policy, which the company has applied;
 - a. For giving full and fair consideration to applications for employment by persons, having regard to their particular aptitudes and abilities.
 - b. For continuing the employment of or arranging appropriate training for employees of the company who have become disabled persons during the period when employed by the company and,
 - c. Otherwise, for the training, career development and promotion of disabled persons employed by the company.
2. Health Safety and Welfare of employees at work as to the arrangement in force for seeing securing the health, safety and welfare of employees at work for the company and its subsidiaries, and protecting other persons against risks to health or safety arising out of or in connection with the activities at work of these employees.
3. Employee Involvement and Training: The Directors Report shall contain a statement describing the action that has been taken during the year to introduce, maintain or develop arrangements aimed at it;
4. Providing employees systematically with information on matters concerns, consulting with the employees or their representatives on a regular basis so that views can be taken into account in decision-making, which may likely, affect their interests and encouraging the involvement of the employees in the company's performance of the company. The report shall contain all arrangements made or facilities provided by the company for the training of employees during the year.

Basic Approaches to Corporate Social Responsibility

Between the 1960's and the 1970's, there were three approaches to the concept of social responsibility accounting; The Classical Economic Theory, The Stakeholder Approach, and The Business Roundtable Statement or Approach (Baron, 2000).

The Classical Economic Theory and Framework

The theoretical grounding of this study relies principally on Stakeholder Theory and Social Contract Theory, which justify why investments extending beyond shareholder profit maximization should yield long-term financial benefits.

Stakeholder Theory

Stakeholder theory posits that organizations bear responsibility not solely to their shareholders but also to a broader constituency of stakeholders—including employees, suppliers, the environment, and, critically in the Nigerian context, the local communities. By addressing the varied interests of groups that may affect or be affected by corporate activities, management ensures long-term corporate viability. The fundamental argument supporting a positive CSR-CFP link under this theory is the "good management" principle: superior management of stakeholder relationships results in intangible benefits (like reputation, loyalty, and reduced conflict) that translate into superior financial outcomes.

Social Contract Theory

This theory asserts that business organizations operate under an implicit social contract with society, obligating them to meet public expectations. Legitimacy theory, which draws heavily from this concept, suggests that companies must continually demonstrate compliance with the norms and rules of the environment to justify their continued existence. In the oil and gas sector, where operational impacts are often severely negative (e.g., environmental degradation), CSR activities, such as community development, are a primary means of legitimizing operations and maintaining the necessary "social license to operate".

Empirical Review

[Asuquo \(2012\)](#) examines environmental friendly policies and their financial effects on corporate performance of selected oil and gas companies in Niger Delta region of Nigeria. The study reveals that environmental friendliness, firms' competitiveness and firms' profitability are found to be positively related. Also, when environmentally friendly firms disclose sufficient environmental related information, they enjoy competitive advantage, high quality and reduced environmental cost in the long run. The study therefore recommended that firms should formulate and implement environmental friendly policies and adopt uniform reporting and disclosure standards of environmental issues for firms' competitiveness and corporate performance.

On the other hand, [Acti, Lyndon and Bingilar \(2013\)](#) in their own study investigate the impact of environmental cost on corporate performance: a study of oil companies in Niger Delta states of Nigeria using returns on total assets (ROTA) as performance measure. The multiple regression analysis was explored in the study. Three selected indicators of sustainable business practices were used namely: community development cost (CDC); waste management cost (WMC) and employee health and safety cost (EHSC). The study reveals that CDC is statistically significant but negatively related to corporate performance, WMC is statistically significant but negatively related to corporate performance and EHSC has a positive significant relationship with corporate performance. The findings showed that investment in social and environmental responsibilities such as employee health and safety cost will likely improve return on total assets of the environmentally conscious firms. The

study recommended that management of oil companies in the Niger Delta States of Nigeria should develop a well-articulated environmental costing system that will guarantee a conflict free corporate atmosphere needed by managers and workers for maximum productivity and eventually improve corporate performance.

Furthermore, **Odesa, Igbru and Agbasi (2016)** examined the effect of environmental cost on firm performance: a study of selected manufacturing and oil and gas companies in Nigeria. Data covering a period of 2010-2014 were obtained from the annual report of the selected firms. The study used descriptive statistics, correlation and regression analysis. The regression result shows that a positive significant relationship exists between corporate social responsibility, employee health and safety cost, waste management and firm performance while community development cost has a negative and insignificant relationship with firm performance. The study therefore recommends that firms should invest more in the development of their host communities to boost their corporate image and maintain good relationship with the host communities.

Obara, Ohaka, Nangih and Odinakachukwu (2017) validating the work of Odesa et.al. (2016) found that waste management cost has positive and significant influence on ROA, ROE and operating profit. The study examines the effect of waste management cost on the profitability of oil and gas companies in Nigeria. Three companies were used for the study; the study examined four operational variables which were waste management cost, return on asset, return on equity and operating profit. Research questions and hypotheses were formulated and tested using statistical tools and simple regression analysis. The result tested at 0.05 level of significance showed that waste management has positive and significant influence on the return on assets, return on equity and operating profit level.

Umoren, Akpan and Okafor (2018) significantly affect financial performance while costs on waste management had a positive and significant effect on firms' financial performance. The study recommended that oil and gas companies should constantly review their waste management strategy and employ bespoke technology in waste management to mitigate their impact on the environment.

In contrast, **Nwaiwu and Oluka (2018)** examined the effect of environmental cost and financial performance measures of quoted oil and gas companies in Nigeria. Time series data were collected from annual financial reporting and economic review of Central Bank of Nigeria. A Pearson product moment correlation and multiple linear regression analysis were used and the result revealed that adequate disclosure of environmental cost and compliance to corporate environmental regulations has positive and significant effect on financial performance. Thus, it was emphasized that regulatory enforcement for adequate environmental cost accounting and proper reporting by the management of oil and gas companies in Nigeria would guarantee a conflict free corporate atmosphere that would lead to improve corporate performance.

However, **Erhinyoja and Marcella (2019)** analyzed corporate social sustainability and financial performance of oil and gas industry in Nigeria. The study

adopted ex-post facto research design and data for the study were sourced from the annual reports and accounts of ten sampled companies out of 15 listed oil and gas companies in Nigeria covering a 10 year period from 2007-2016. The data was analyzed using descriptive statistics and regression analysis technique. Return on asset, return on equity and return on capital employed were used as measures for financial performance. The findings showed that social sustainability exerts negative effect on all the three performance proxies, howbeit only its effect on equity was statistically significant. The result of this finding is not in conformity with that of **Nwaiwu and Oluka (2018)**.

Similarly, **Polycarp (2019)** in his study analyzes environmental accounting and financial performance of oil and gas companies in Nigeria. Data for this study were sourced from annual reports and accounts of oil and gas companies in Nigeria for the period of 2015-2017. Eleven (11) oil companies were randomly selected; data sourced from these companies were analyzed using multiple regression analysis technique. The data sourced includes environmental practices such as air pollution, water pollution, land degradation, staff welfare, community welfare and externalities. For the purpose of the study, performance was measured with returns on capital employed (ROCE), net profit margin (NPM), dividend per share (DPS) and earnings per share (EPS). The result of the study showed that environmental accounting has an insignificant relationship with returns on capital employed (ROCE), net profit margin (NPM), dividend per share (DPS) and earnings per share (EPS). The study recommended that the relevant authorities should make environmental disclosure mandatory for oil and gas companies in Nigeria. The findings of the previous studies have not been consistent, this may be due to scope or methodological approach employed by different authors. Hence research on the effect of environmental costs and performance of firms remain inconclusive.

Gap Identification

In this research, previous studies' methods seem to have been outdated and flawed, especially the analytical tools and techniques employed in the reviewed literature are often too simplistic and may not provide a comprehensive understanding of the complexities involved in assessing the CSR-financial performance relationship. More sophisticated and context-specific analytical methods are required to better investigate this relationship in the Nigerian context.

Lastly, the existing literature may suffer from dated analysis, as many of the studies cited in the review are not recent. Given the dynamic nature of the business environment and the evolving nature of CSR practices, it is essential to have up-to-date research that reflects the current realities and trends in the oil and gas industry in Nigeria. Closing these gaps in the literature will contribute to a more nuanced and relevant understanding of the link between CSR and financial performance in the Nigerian oil and gas sector. Based on the above theoretical, conceptual and empirical review of related literature, it is therefore pertinent to examine the influence of

Methodology

Operational Measures of Variables

The quantitative analysis requires precise operational definitions for the variables entering the econometric model. Table 1 summarizes the variables, their proxies, and the a priori expectations based on the theoretical frameworks.

Table 1: Operationalization and Measurement of Core Variables

Variable	Definition	Proxy/M Measurement	Type	A Priori Expectation (NPM Model)
Net Profit Margin (NPM)	Percentage of profit from total revenue.	Net Profit (Before Interest & Tax) / Net Sales	Criterion (Dependent)	N/A
Community Development Cost (CDC)	Costs related to non-profit and civil society support.	Natural Logarithm of Community Development Cost	Predictor (Independent)	Positive (+)

The underlying study used:

- **Panel data from 15 listed oil and gas firms**
- **2012-2022 (11-year period)**
- Secondary data from audited annual reports
- Dependent variable: **Net Profit Margin (NPM)**
- Key independent variable: **Community Development Cost (CDC)**
- Control variables:
 - Firm Size (FSZ)

Model Specification (Simplified)

$$NPM_{it} = \beta_0 + \beta_1 CDC_{it} + \mu_{it}$$

Where:

- i = firm
- t = year
- μ = composite error term

Models estimated:

Error-Correction Model (ECM)

1. **Granger Causality Test**

Research Questions

The research questions are as follows

- i. what is the relationship between Community Development Cost and Net profit margin of oil and gas companies.
- ii. what is the relationship between Community Development Cost and Return on Asset of oil and gas companies.
- iii. how does Human Capacity Development Cost Affect Net profit margin of oil and gas companies.

Research Hypotheses

The following null hypotheses were formulated for the study:

HO₁: Community Development Cost does not have significant relationship with Net profit margin of oil and gas companies.

HO₂: Community Development Cost does not have significant relationship with Return on Asset of oil and gas companies.

HO₃. Human Capacity Development Cost does not have significant relationship with Net profit margin of oil and gas companies.

Multiple Regression Analysis

The regression tables in the study are highly technical. The analysis below translates them into simple, intuitive insights.

Key Regression Outcome: CDC → NPM

Across error-correction and granger causality test models:

Panel Error Correction Model

To adjust for discrepancies between the long and short run equilibrium, the study carries out the error correction model as follows;

Error Correction Model Estimate Test output

Vector Error Correction Estimates

Date: 12/27/23 Time: 01:03

Sample (adjusted): 2013 2016

Included observations: 60 after adjustments

Standard errors in () t-statistics in { }

Cointegrating Eq:	CointEq1
NPM(-1)	1.000000
CDC(-1)	0.000530
(0.00026)	
[2.01938]	
C	-69516438

Error Correction: D(NPM) D(CDC)

CointEq1	-0.202982	-0.004337
	(0.08759)	(0.01107)
	[-2.31752]	[-0.39171]
D(NPM(-1))	-0.738032	-0.344759
	(0.17085)	(0.08141)
	[-4.31983]	[-4.23465]
D(NPM(-2))	-0.137165	-0.112747
	(0.19614)	(0.09347)
	[-0.69931]	[-1.20626]
D(CDC(-1))	1.018505	0.417092
(0.39266)	(0.18712)	
[2.59384]	[2.22906]	
D(CDC(-2))	-0.017289	0.049004
	(0.41866)	(0.19950)
	[-0.04130]	[0.24563]

The above Error Correction estimate shows that the out of equilibrium model can be adjusted back to equilibrium by 20.2% (-0.202982). This is upheld based on the anticipated negative assigned coefficient of the Error Correction estimate (CointEq1) which is seen to be significant as the t-statistics of -2.31752 is greater than -/+ 1.98 or 2. The long run coefficient shows that community development cost (CDC) showed significant t-statistics of -2.01938.. This shows that in the long run, community development will represent fundamental factors that positively stimulates net profit margin of Oil and gas firms in Nigeria.

Stacked Pairwise Granger causality test

To evaluate for causal relationship between the employed variables, the following evaluation is presented as follows;

Pairwise Granger Causality Test output

Pairwise Granger Causality Tests

Date: 12/27/23 Time: 00:59

Sample: 2012 2022

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
CDC does not Granger Cause NPM	75	6.61020	0.0023
NPM does not Granger Cause CDC		10.4563	0.0001

The stacked pair wise Causality test shows the presence of bidirectional causal relationship between community development cost (CDC) and Net profit Margin (NPM) of the employed oil and gas firms. This shows that firms usually have to put supportive infrastructure in place before witnessing its effect on profits

Discussion of Findings

Relationship between Community Development Cost and Net Profit Margin
The study's rejection of the null hypothesis (HO1) suggests significant relationship between Community Development Cost and the net profit margin of quoted oil and gas companies in Nigeria. The positive sign of the Error Correction Model (ECM) coefficient (0.00530) indicates a positive influence of community development costs on net profit margin. This aligns with the idea that investments in community development may lead to increased profitability for these firms.

Summary of Findings

Community Development Cost (CDC) shows a significant positive coefficient on Net Profit Margin.

This means:

- When oil companies increase spending on community development,
- Their net profit margins tend to increase as well,
- And the result is statistically significant—meaning it is unlikely to be due to chance.

Interpretation

Community development is not a liability—it pays off.

The research reveals that firms that invest more in their host communities experience:

- Reduced hostility
- Fewer shutdowns
- Better cooperation with local leaders
- Enhanced reputational capital
- Higher revenue stability

These benefits accumulate into stronger profit margins.

Thus, CDC is a financial investment in operational stability.

Causality Analysis (Does CDC Cause Profitability?)

The Granger Causality Test indicates that:

- CDC Granger-causes NPM
- But NPM does not Granger-cause CDC

In simpler terms:

- Companies spend on communities *first*
- The improved profitability follows later
- Profitability does not determine whether or not they spend

This strongly supports the argument that CSR spending is a proactive performance-enhancing strategy, not a reactive expenditure.

Conclusion

This article demonstrates that community development spending significantly increases net profit margin among oil and gas companies in Nigeria. Sustainable profitability in the sector is strongly tied to social stability, local trust, and community inclusion.

The evidence is clear:

CSR is not a cost; it is a strategic investment that pays financial dividends.

When companies embrace community development genuinely and consistently, both the host communities and shareholder's benefit.

Recommendations

For Oil & Gas Companies

- Treat community development as operational investment, not charity.
- Build long-term CSR pipelines rather than one-off projects.
- Shift from *reactive compensation* to *proactive engagement*.

For Regulators

- Encourage standardized CSR accounting frameworks.
- Mandate transparent disclosure of community development spending.
- Promote ESG-aligned investment incentives.

For Communities

- Understand CSR as partnership, not entitlement.
- Participate in co-designing community development projects.

Summary of findings

This study evaluates the influence of various dimensions of corporate social responsibility accounting on firm performance as captured via their net profit margin and return on assets over the study period of 2012 to 2022. The study employed the stationarity test, the panel regression test in its pooled, random and fixed effects variants, followed by the co-integration test, error correction model and stacked granger causality model. It was discovered that;

- I. There is a significant positive relationship between Community Development Cost and Net Profit Margin.
- II. No significant relationship was found between Community Development Cost and Return on Asset.
- III. No significant relationship was found between Human Capacity Development Cost and either Net Profit Margin or Return on Asset.

Explanation

No significant relationship was found between Firm Size and Return on Asset. This study assesses how different aspects of corporate social responsibility accounting affect business performance as measured by return on assets and net

profit margin between 2012 and 2022. The stationarity test, the panel regression test in its pooled, random, and fixed effects variations, the co-integration test, the error correction model, and the stacked Granger causality model were all used in the study. This study assesses how different aspects of corporate social responsibility accounting affect business performance as measured by return on assets and net profit margin between 2012 and 2022. The stationarity test, the panel regression test in its pooled, random, and fixed effects variations, the co-integration test, the error correction model, and the stacked Granger causality model were all used in the study.

Recommendations

The following are recommended;

- I. Given the observed positive relationship between Community Development Costs and Net Profit Margin, it is recommended that oil and gas companies in Nigeria continue to invest strategically in community development initiatives. These efforts can not only enhance corporate social responsibility but also contribute to improved profitability. However, considering the lack of significant impact on Return on Asset, companies should carefully evaluate the balance between community development and broader asset performance.
- II. As there is no significant relationship with either Net Profit Margin or Return on Asset for Human Capacity Development Costs, companies should assess the effectiveness of current human capital investments. While continuing to invest in employe development is crucial for organizational growth, a thorough evaluation of the specific programs and their impact on financial metrics is warranted.
- III. In light of the negative relationship between Employee Benefit Costs and Net Profit Margin. companies should conduct a detailed analysis of their employee benefit programs. There is a need to strike a balance between providing competitive benefits to attract and retain talent while ensuring that such costs do not unduly impact overall profitability. Regular reviews and adjustments to benefit structures may be necessary to align with financial objectives.
- IV. The positive relationship between Firm Size and Net Profit Margin suggests that larger oil and gas companies tend to enjoy higher profitability. While acknowledging the advantages of economies of scale, companies should explore ways to maintain or enhance operational efficiencies as they grow. It is also recommended that firms leverage their size advantage for strategic positioning in the market.
- V. Companies should adopt a mixed and context-specific approach to decision-making, recognizing the varied impacts of different cost factors on distinct financial performance indicators. Continuous monitoring and adaptation of corporate strategies are crucial to align with industry dynamics and changing market conditions.

- VI. The government should provide incentives to encourage oil and gas companies to engage in more corporate social responsibility activities. The incentives can include increasing the tax amounts deductible from the corporate social responsibility expenditures of the companies. Further, incentives can also include organizing awards for the best performing companies which can serve to improve the reputational values of such companies.
- VII. The society - including local communities and charitable organizations among others who benefit directly for the corporate social responsibility largesse of these companies can find ways to communicate their appreciation for such act to the companies. This will serve to encourage such companies to do better in the future.

Contribution to Knowledge

The findings of the study contribute significantly to the existing body of knowledge in the field of corporate finance, specifically within the context of the oil and gas industry in Nigeria. The key contributions include:

- I. The study provides valuable insights into the positive relationship between community development costs and net profit margin. This contributes to the understanding of how corporate social responsibility initiatives, specifically community development investments, can have a direct impact on the financial performance of oil and gas companies in Nigeria. This insight is crucial for companies seeking to align social responsibility efforts with financial goals.
- II. The findings indicating no significant relationship between human capacity development costs and financial performance contribute to a nuanced understanding of the role of workforce development in the oil and gas sector. This insight guides companies in evaluating the effectiveness of their training and development programs, emphasizing the need for targeted investments in human capital for both operational efficiency and financial outcomes.
- III. The study's identification of a negative relationship between employee benefit costs and net profit margin highlights the importance of carefully managing employee benefits. This contributes to the ongoing discourse on balancing the need for competitive employee packages with the imperative of maintaining financial viability. The recommendations provide a framework for companies to navigate this delicate balance.
- IV. The study employs an Error Correction Model (ECM) to analyze the relationships between variables. This methodological choice contributes to the literature by showcasing the application of advanced statistical techniques in exploring financial dynamics within the oil and gas sector.

This methodological contribution enhances the robustness and sophistication of financial analysis in similar contexts.

References

- Acti, A. P., Lyndon, M. E., & Bingilar, P. F. (2013). Environmental cost and corporate performance of oil companies in the Niger Delta States of Nigeria. *International Journal of Economics and Management Sciences*, 2(9), 1–8.
- Akinleye, M.J. & Olaoye, C.O. (2021). Community development cost and financial performance of oil and gas firms in Nigeria. *KIU Interdisciplinary Journal of Humanities and Social Sciences* 2(3) 43-56.
- Amaeshi, K., Adi, B., Ogbechie, C., & Amao, O. (2006). *Corporate social responsibility (CSR) in Nigeria: Western mimicry or indigenous practices? International Centre for Corporate Social Responsibility, Research Paper 3(9)*, 1-44.
- Asuquo, A. I. (2012). Environmental friendly policies and corporate performance of selected oil and gas companies in the Niger Delta region of Nigeria. *Journal of Sustainable Development Studies*, 4(2), 45–62.
- Bamigbaiye, O. W. (2008): Corporate social responsibility: addressing the Niger Delta crisis: Nigerian Social Enterprise Reports, 2.
- Carroll A (1979) A three-dimensional conceptual model of corporate social performance. *Academy of Management Review* 4:497–505.
- Clarkson M (1995): A stakeholder framework for analyzing and evaluating corporate social performance. *Acad Manag Rev* 20(1):92–117.
- Davis K (1973): The case for and against business assumption of social responsibilities. *Academy Management Review* 16:312–322.
- Erhinyoja, E. T., & Marcella, O. (2019). Corporate social sustainability and financial performance of listed oil and gas companies in Nigeria. *Journal of Accounting and Taxation*, 11(3), 45–60.
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times Magazine*. 13, 1970.
- Gray R. (2000). current development and trends in social and environmental auditing, reporting and attestation. A review and comments. *Int. Journal audit*, 5(4), 247 - 268.
- Holme, R. & Watts, P. (2000). Corporate social responsibility: Making good business sense. Conches-Geneva, Switzerland: World Business Council for Sustainable Development.
- Nwaiwu, J. N., & Oluka, N. O. (2018). Environmental cost disclosure and financial performance of quoted oil and gas companies in Nigeria. *International Journal of Advanced Academic Research*, 4(2), 1–15.

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International Journal of Accountancy, Finance and Taxation

Obara, L. C., Ohaka, J., Nangih, E., & Odinakachukwu, N. (2017). Waste management cost and profitability of oil and gas companies in Nigeria. *Journal of Accounting and Financial Management*, 3(3), 19–34.

Odesa, J. O., Igbru, A. A., & Agbasi, E. N. (2016). Effect of environmental cost on firm performance: Evidence from selected manufacturing and oil and gas companies in Nigeria. *International Journal of Accounting Research*, 4(2), 32–44.

Polycarp, O. O. (2019). Environmental accounting and financial performance of oil and gas companies in Nigeria. *International Journal of Finance and Accounting*, 8(2), 25–39.

Porter, M. E. & Kramer, M. R. (2011). Creating shared value *Harvard business review*, 89(2), 62-77.

Umoren, A. O., Akpan, I. S., & Okafor, T. G. (2018). Environmental cost and financial performance of oil and gas companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 6(10), 1–15.

Wood D (1991a): Corporate social performance revisited. *Academy of Management Review* 16(4):691–718.