



Corporate Social Responsibility and Market Value Added of Listed Oil and Gas Firms in Nigeria

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ABSTRACT

This study examined the relationship between corporate social responsibility and market value added of listed oil and gas firms in Nigeria for a period of fourteen (14) years spanning from 2009 to 2022. Specifically, this study examined the relationship between occupational health and safety responsibility, emissions responsibility, employment responsibility and market value added. Panel data were used in this study, which were obtained from the annual reports and accounts of the nine (9) sampled firms. *Ex-Post Facto* research design was employed. Inferential statistics using Pearson correlation coefficient and Panel least square regression analysis were employed to test the hypotheses of the study. The results showed that there is a significant and positive relationship between occupational health and safety responsibility and market value added ($\beta_1=2.054408$; p-value = 0.0002); a significant and positive relationship between emissions responsibility and market value added ($\beta_2=0.496607$; p-value = 0.0367); a significant and positive relationship between employment responsibility and market value added ($\beta_3=0.078494$; p-value = 0.0000) of listed oil and gas firms in Nigeria at 5% level of significance respectively. The study recommended amongst others that firms should develop safety programs in order to protect the workers, reduce absences and down-time, ensuring that the workplace is more efficient and productive which will inadvertently result to value creation.

Keywords: Occupational health and safety, emission disclosure, employment responsibility, market value added

Introduction

Within the world of business, the main “responsibility” for corporations has historically been to make money and increase shareholder value. In other words, corporate financial responsibility has been the sole bottom line driving force. However, in the last decade, a movement defining broader corporate responsibilities for the environment, for local communities, for working conditions, and for ethical practices has gathered momentum and taken hold. This new driving force is known as corporate social responsibility (CSR). CSR is oftentimes also described as the corporate “triple bottom line” - the totality of the corporation’s financial, social, and environmental performance in conducting its business. Corporate Social Responsibility (CSR) is a concept which has become dominant in business reporting. Every corporation has a policy concerning CSR and produces a report annually detailing its activity Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders (Mbonu & Amahalu, 2022). Corporate social responsibility is a responsibility of for-profit and not-for-profit organizations for their impact on stakeholders, natural environment, and wider society; it focuses on accountability and transparency of corporate actions that include social, ethical, environmental, and economic efforts, which are often voluntary and placed within and outside of market and commercial transactions. The World Business Council for Sustainable Development defines corporate social responsibility as the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce, their families as well as of the local community and society at large (Ezeokafor & Amahalu, 2019).

A company in good financial health will pay its bills on time and maintain good business credit. Analysis of financial performance metrics such as market value added can be used to identify internal investment opportunities, like automating repetitive processes to increase productivity, and can help maintain positive cash flow. Market value added (MVA) is the amount of wealth that a company is able to create for its stakeholders since its foundation. It is the difference between the current market value of the company’s stock and the initial capital that was invested in the company by both bondholders and stockholders. Presently, it is obvious that most corporate citizens or organization are not living up to expectation of their duties in the host communities. These contributed immensely to environmental degradation of the region, the air, water and land pollution, destruction of natural habitations and waste disposal system that are harmful and destructive to the host community. Lack of corporation to tackle the problem and reduce the effects of drilling activities on the environment and raise the standard of living of the people in the host communities became a source of concern to the youth of the region. Again, there is lack of infrastructures and social amenities in the host communities of Niger Delta region by the federal government and the oil companies operating in the region. There is also the problem of value redistribution: to strike a balance to create shared economic and social benefits as control over value-added benefits can lead to inequalities and social problems, leading to the erosion of social value for all stakeholders. Recent academic contributions show a renewed debate about the relationship between CSR and performance, with strongly contrasting views which is still lacking a universally accepted consensus. For instance, Amahalu and Okudo (2023) found a positive relationship between CSR and performance. On the contrary, Guan, Yao and

Zhang (2023) showed the evidence of a negative relationship, while, Li, Wang, Sun, Shen and Lin (2023) found no significant relationship. The absence of consensus between these authors led to a gap in literature which this study tends to fill, hence, the need for this study.

Objectives of the Study

The main objective of this study is to ascertain the relationship between corporate social responsibility and market value added of listed Oil and Gas Firms in Nigeria.

The specific objectives were to:

- i. Evaluate the relationship between occupational health and safety responsibility and market value added of listed oil and gas firms in Nigeria
- ii. Determine the relationship between emissions responsibility and market value added of listed oil and gas firms in Nigeria.
- iii. Assess the relationship between employment responsibility and market value added of listed oil and gas firms in Nigeria

Research Hypotheses

The following null hypotheses were tested at 5% level of significance in this study:

Ho₁: There is no significant relationship between occupational health and safety responsibility and market value added of listed oil and gas firms in Nigeria

Ho₂: There is no significant relationship between emissions responsibility and market value added of listed oil and gas firms in Nigeria

Ho₃: There is no significant relationship between employment responsibility and market value added of listed oil and gas firms in Nigeria.

Conceptual Review

Corporate Social Responsibility

Corporate Social Responsibility represents the commitment of a business enterprise to society, economy, and the environment that sustains its activities. Corporate Social Responsibility (CSR) is the responsibility an organization has for the impact of its operations on the society and the environment in which it operates. This responsibility could be identified through transparent and ethical behavior that contributes to sustainable development in areas such as health, human capital development, economic empowerment, recognition of the welfare of various stakeholders, and the development of social infrastructure (Ekweozor, Ogbodo & Amahalu, 2022).

Occupational Health and Safety Responsibility

Occupational health and safety (OHS) are fundamental principles to guide policies for promotion, action and management. These general protection measures include guarding of machinery, medical examination of young workers or limiting the weight of loads to be transported by a single worker (Santos-jaen & serrano-madrid, 2021). Occupational safety and health (OSH) means protection of specific branches of economic activity, such as mining, the building industry, commerce and dock work. Protection against specific risks (ionizing radiation, benzene, asbestos); prevention of occupational cancer; control of air pollution, noise and vibration in the working environment; measures to ensure safety in the use of chemicals, including the prevention of major industrial accidents are inclusive in Occupational health and safety

Emissions Responsibility

Emission is the production and discharge of something, especially gas or radiation. An emission is anything that is been released out into the open. But more often it refers to gases being released into the air, like greenhouse gasses or emissions from power plants and factories. An emission of something such as gas or vapor is the release of it into the atmosphere. Greenhouse gas emission is the emission into the earth's atmosphere of any of various gases, especially, carbon dioxide, that contribute to the greenhouse effect. Earth's greenhouse gases trap heat in the atmosphere and warm the planet. The main gases responsible for the greenhouse effect include carbon dioxide, methane, nitrous oxide, and water vapor (which all occur naturally), and fluorinated gases (which are synthetic) (Ezeokafor & Amahalu, 2019).

Employment Responsibility

Employment responsibility means the act of an employee taking reasonable care not to put other people, such as colleagues and members of the public, at risk by what they do or don't do in the course of their work. An employee has a duty of care to other people when they are carrying out their duties. They must always ensure that they work in a safe manner in the way that they have been trained. The employer should provide procedures and processes for employees to follow. The employee must cooperate with the employer in ensuring that they follow all workplace procedures and not deviate from them (Ibida, Jane-Frances & Emeka-Nwokeji, 2019).

Market Value Added

Market value added (MVA) is the amount of wealth that a company is able to create for its stakeholders since its foundation. It is the difference between the current market value of the company's stock and the initial capital that was invested in the company by both bondholders and stockholders. Market value added is the difference between the current value of the company on the market and the initial contributions made by its investors. Market value added is a metric used to measure wealth. Essentially, it is used to determine exactly how much value the firm has accumulated over time (Onyeka & Ndubuisi, 2022).

Corporate Social Responsibility and Market Value Added

In an environment where consumers are becoming more discerning in where businesses are in the obligation to adopt a mode of management more participatory and take into account the concerns of a multitude of stakeholders. In effect the shareholder model, proclaimed the maximisation of shareholder value, considered that the ultimate purpose of any profit-making organisation is to ensure the interests of the introducers of financial resources. The emergence of the concept of sustainable development, which is part of a participatory approach to all components of the socio-economic environment, has only exacerbated the expectations with regard to a social responsibility of the firm (Okudo & Ndubuisi, 2021).

Despite the long history of CSR discipline, up to date, it remains to be debatable and immature in some areas. For instance, one area that is debatable and one of the central focus given is determining the relationship between CSR and financial performance. Some studies show a positive correlation between CSR initiatives and financial performance (Amahalu & Okudo, 2023; Yunusa, Jerry & Ayuba, 2023). On the other hand, Awadzie, Garr, Attah-Botchwey, Sarpong and & Marfo (2023) found negative correlation between CSR and financial performance. Lastly, Li, Fu, Han and Liang (2023) found no correlation between CSR and financial performance.

Theoretical Review

Stakeholder Theory

The stakeholder theory is a notion of organizational management and business ethics that focuses on issues of morals and values in managing an organisation. It was originally proposed and elaborated by Freeman (1984). Stakeholder theory focuses on the relationship between group of individuals who can affect or be affected by the achievement of the organizations' objectives. Stakeholder theory refers to the ethical concept that addresses the outcome of business decisions, trends, profits and its collective impact on all stakeholders, including the shareholders, employees, financiers, government, customers, suppliers and so on. Stakeholder theory demands constant and determined engagement from business leaders. Applying the principles of stakeholder theory can help lead your business to a more engaged workforce and improved returns on corporate social responsibility programs. Stakeholder theory is based on the assumption that businesses can only be considered successful when they deliver value to the majority of their stakeholders. That means that profit alone cannot be considered the only measure of business success but some of the common stakeholders of a business: Some of the benefits of applying stakeholder theory in an organization include higher productivity through employee satisfaction, improved retention/referrals from happy customers, increased investment from happy financiers, improved talent acquisition from a positive image in the community.

Empirical Review

Kabir and Chowdhury (2022) examined 30 listed banks in Bangladesh from the years 2006 through 2018, with particular emphasis on methodology that attempted to validate the corporate social responsibility (CSR) and corporate financial performance (CFP) relationship. In addition to examining the bidirectional causality between CSR and financial returns using Panel Vector Autoregression, the study examined the factor determinants of CSR. The study found that better CFP leads to more CSR expenditure, but CSR expenditure does not necessarily influence CFP. Moreover, net income, total deposits, return on asset, and previous year's CSR have a significant positive relationship with CSR whereas firm age has a significant negative relationship.

Santos-Jaen and Serrano-Madrid (2021) examined the relationship between corporate social responsibility and firms' financial performance in Spain from 2016-2020. Multiple regression analysis was conducted to depict the relationships. The research found that competitive advantage significantly mediated the indirect impact of perceived CSR and disclosure on firms' financial performance.

Oshiole, Elamah and Amahalu (2020) ascertained the effect of environmental cost disclosure on profitability of oil and gas firms listed on Nigeria Stock Exchange between 2010 and 2019. Eleven (11) listed oil and gas firms were purposively sampled. The proxies for environmental cost disclosure include waste management cost disclosure, employee health and safety cost disclosure and environmental remediation cost, while net profit margin was employed as profitability measure. Content analysis was employed while Pearson Correlation Coefficient and Panel Least Square (PLS) Regression analysis via STATA 13 statistical software were used to test the hypotheses of the study. The result of this study showed that waste management cost disclosure, employee health and safety cost disclosure and environmental remediation cost disclosure have a significant positive effect on net profit margin at 5% level of significance respectively.

Methodology

Ex-post facto research design was adopted in the study. The Nigerian Exchange (NGX) Group oil and gas index comprises nine listed oil marketing and production companies as at 31st December, 2022 – Ardova Plc, Conoil, Eterna, Japaul Gold and Venture, MRS Oil Nigeria, Oando, Seplat Energy, Total Nigeria and Capital Oil.. The nine (9) listed oil and gas firms constituted the sample size of this study. This study relied solely on secondary data that were extracted from the annual reports and statements of account of the sampled oil and gas firms companies for a period of fourteen (14) years period covering from 2009 – 2022. Content analysis was used to extract CSR information from the annual reports. Based on global reporting initiative (GRI), activities was segregated into four categories, (community, environment, workplace & diverse) covering inventory of 32 items (see Appendix A).

Subsequently, CSR score was transformed into percentage terms by the following formula;

CSR score of a company = $\frac{\text{No of CSR items adopted by a company}}{\text{Total no of CSR items}}$

Total no of CSR items

Table 1 Variables Definition

Variable Type	Indicators	Variable Symbols	Variables Explanation
Independent Variables (Corporate Social Responsibility)			
	Occupational Health and Safety Responsibility	OHSR	$\frac{\text{No of OHSR items adopted by a company}}{\text{Total no of CSR items}}$
	Emissions Responsibility	EMRES	$\frac{\text{No of EMRES items adopted by a company}}{\text{Total no of CSR items}}$
	Employment Responsibility	EMPLR	$\frac{\text{No of EMPLR items adopted by a company}}{\text{Total no of CSR items}}$
Dependent Variable (Value Creation)			
	Market Value Added	MVA	Market Value of Stocks - Book Value of Stockholders' Equity

Model Specification

This study adapted and modified the model of Ezeokafor and Amahalu (2019):

$$ROE = \beta_0 + \beta_1 ENVR_{it} + \beta_2 SOCR_{it} + \beta_3 REMCR_{it} + \mu_{it}$$

Where:

ROA = Return on Assets

ENVR = Environmental Responsibility

SOCR = Social Responsibility

REMCR = Remediation Cost Responsibility

Consequent upon the adapted model, the following model was developed:

$$MVA_{it} = \beta_0 + \beta_1 OHSR_{it} + \beta_2 EMRES_{it} + \beta_3 EMPLR_{it} + \mu_{it}$$

Where:

MVA_{it} = Market Value Added of firm i in period t

$OHSR_{it}$ = Occupational Health and Safety Responsibility of firm i in period t

$EMRES_{it}$ = Emissions Responsibility of firm i in period t

$EMPLR_{it}$ = Employment Responsibility of firm i in period t

μ = Residual error for firm i in period t

i = Company index

t = year 2009 -2022

β_0 = constant term

β_{1i} = slopes to be estimated of firm i in period t .

Data Presentation and Analysis

Table 2: Pearson Correlation Matrix

	MVA	OHSR	EMRES	EMPLR
MVA	1.0000			
OHSR	0.3286	1.0000		
EMRES	0.2107	0.0041	1.0000	
EMPLR	0.2157	0.0860	0.2085	1.0000

Source: E-Views 10.0 output 2023

The Pearson correlation output in table 2 shows the existence of a positive relationship between OHSR (0.3286), EMRES (0.2107), EMPLR (0.2157) and MVA

Test of Hypotheses

Table 3: Panel Least Square regression analysis testing the relationship between CSR and MVA

Dependent Variable: MVA
 Method: Panel Least Squares
 Date: 09/12/23 Time: 11:32
 Sample: 2009 2022
 Periods included: 14
 Cross-sections included: 9
 Total panel (balanced) observations: 126

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.307797	0.067819	4.538504	0.0000
OHSR	2.054408	0.539175	3.810281	0.0002
EMRES	0.496607	0.235128	2.112069	0.0367
EMPLR	0.078494	0.009217	8.516070	0.0000
R-squared	0.173586	Mean dependent var		0.635714
Adjusted R-squared	0.153265	S.D. dependent var		0.178583
S.E. of regression	0.164329	Akaike info criterion		-0.742662
Sum squared resid	3.294487	Schwarz criterion		-0.652622
Log likelihood	50.78773	Hannan-Quinn criter.		-0.706082
F-statistic	18.41938	Durbin-Watson stat		1.663205
Prob(F-statistic)	0.000000			

Source: E-Views 10.0 Regression Output, 2023

Interpretation of Estimated Regression Coefficients

The relationship between CSR measures and market value added of listed oil and gas firms in Nigeria is evaluated based on the result of table 3. From table 3, OHSR with a positive co-efficient (β_1) of 2.054408 has a significant positive relationship with MVA as indicated by the t-statistic of 3.810281 and its associated probability value of 0.0002; EMRES with a positive co-efficient (β_2) of 0.496607 has a significant positive relationship with MVA as indicated by the t-statistic of 2.112069 and its associated probability value of 0.0367; EMPLR with a positive co-efficient (β_3) of 0.078494 has a significant positive relationship with MVA as indicated by the t-statistic of 8.516070 and its associated probability value of 0.0000.

The regression model:

$$MVA = 0.307797 + 2.054408OHSR + 0.496607EMRES + 0.078494EMPLR$$

The implication of this model is that unit increase in OHSR, EMRES and EMPLR will respectively exert 2.054408 units, 0.496607 units and 0.078494 units increase in MVA, holding other factors constant.

The adjusted R squared which examines the extent to which the predictors (OHSR, EMRES, EMPLR) explain the variations in the dependent variable (MVA) shows that the adjusted R Squared figure of 0.453265 indicates that, reliance on this model will account for 45.33% of the variations in the dependent variable (MVA), while the remaining 54.67% was accounted by other factors not included in this model. The Durbin-Watson value of 1.663205

buttressed the fact that the model does not contain auto-correlation since the value of 1.663205 is not more than 2.0 approximately, thereby, making the regression fit for prediction purpose. The analysis resulted in F- statistic of 18.41938 with corresponding p-value of 0.000000. This confirms that, the model is significantly reliable. That means one can rely on the model to predict MVA with high accuracy.

Conclusion

Since the p-value of the test = 0.000000 is less than the critical significant value of 0.05 (5%), thus H_1 is accepted and H_0 rejected. This implies that there is a significant and positive relationship between corporate social responsibility and market value added of listed oil and gas firms in Nigeria at 5% level of significance.

Findings

Based on the analysis of this study, the following findings were deduced:

1. There is a significant and positive relationship between occupational health and safety responsibility and market value added of listed oil and gas firms in Nigeria at 5% level of significance ($\beta_1=2.054408$; p-value = 0.0002).
2. There is a significant and positive relationship between emissions responsibility and market value added of listed oil and gas firms in Nigeria at 5% level of significance ($\beta_2=0.496607$; p-value = 0.0367).
3. There is a significant and positive relationship between employment responsibility and market value added of listed oil and gas firms in Nigeria at 5% level of significance ($\beta_3=0.078494$; p-value = 0.0000).

Recommendations

The following recommendations were made in line with the findings and conclusion of this study:

1. Since there is a positive relationship between occupational health and safety responsibility and market value added, firms should develop safety programs in order to protect the workers, reduce absences and down-time, ensuring that the workplace is more efficient and productive which will inadvertently result to value creation.
2. Companies should endeavour to reduce its greenhouse gas emissions in order to benefit the bottom line because efficient practices reduce operating costs, help to increase employee productivity and the creation of value.
3. Since employment responsibility plays a big role towards the smooth operation and growth of an organisation. It is important for organisation to keep on being socially responsible with regards to employment as this will increase the possibilities for creative thinking and

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Appendix A

CSR Category of Activities

<p>1. Community involvement:</p> <ul style="list-style-type: none"> - Opening up or contributing towards educational institutions. - Aid to flood/drought/disaster victims. - Construction and maintenance of roads. - Contribution for the promotion of art, culture, and sports. - Provision of drinking water facilities. - Contributing towards healthcare. - Construction of temples, community halls, parks, and so on. - Promotion of rural income generation schemes 	<p>2. Environmental Contribution:</p> <ul style="list-style-type: none"> - Certified under ISO 14000 series. - Going for land reclamation and afforestation. - Installed effluent treatment plant. - Going for rain harvesting programmes.' - Recycling of pollutants and wastes. - Engaged in eco-friendly products/ process. - Efficiency in paper using. - Power saving/energy conservation
<p>3. Workplace:</p> <ul style="list-style-type: none"> - Providing better working environment to the employees. - Retirement fund benefit plans, i.e., gratuity, provident fund. - Proper safety measures for accident-prone activities. - Frequent training/development programmes for employees. - Spending for the welfare of employees. - Providing medical facilities to employees. - Profit sharing/share ownership programmes for employees. - Women Harassment at workplace. 	<p>4. Diverse:</p> <ul style="list-style-type: none"> - Redress of grievance of workers/shareholders/ employees. - No child labor in employment. - Different training programs for empowerment of youth. - Welfare activities for SC/ST/ and disabled persons. - Providing agriculture guidance/schemes. - Financial inclusion schemes. - Setting of orphanage home. - Better customer service/customer guidance/after sale service.

Source: GRI G4 Sustainability Reporting Guidelines, 2023