

Climate change disclosure and financial performance of quoted oil & gas firms in Nigeria

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Abstract

Purpose: Prior research has demonstrated the critical role that climate change disclosure plays in solving global sustainability challenges connected to human existence and the long-term viability of businesses. The goal of this study is to add to the existing literature on the impact of climate change-related disclosure on the financial performance of oil and gas companies in Nigeria.

Research Methodology: The study adopted an ex post facto research design, and the final sample consisted of eight oil and gas companies listed on the NGX for the year 2012-2021. The final sample consisted of a balanced panel of 80 firm-year observations. The dependent variable was Return on Assets (ROA). Data were analyzed using a multiple regression model.

Results: The findings showed a positive relationship between CCRD and ROA, which was also confirmed to be significant at the 5% significance level.

Limitations: The model includes leverage, audit quality, and firm size, in addition to CCRD, to account for their effect on ROA. Therefore, other factors that may affect firm performance are not included in the model.

Contribution: This study addresses one of the most important but less explored issues of environmental research in one of the largest economies in SSA. The data collected from the content analysis are original and provide important evidence of the impact of CCRD on firm performance. These findings encourage oil and gas companies to reduce their carbon emissions and disclose their carbon management activities.

Keywords: *Climate Change, Greenhouse Gas (GHG), Climate Change Related Disclosure (CCRD), Return on Assets (ROA)*

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1. Introduction

Climate change has taken center stage on the global agenda as a phenomenal challenge that poses threats to human survival (Lee et al., 2024). Climate change refers to long-term shifts in weather patterns and global temperatures resulting from human activities, specifically the emissions of greenhouse gases. The primary cause of climate change is the burning of fossil fuels such as coal, oil, and gas, which release carbon dioxide (CO₂) into the atmosphere. It has become a significant global issue owing to its impact on ecosystems, economies, and human health (Ratul, Nayma, & Rahman, 2023). The direct impact of climate change on a company, its consumers, and social causes has made it a vital concern (Ratul et al., 2023). Therefore, several governmental, non-governmental, and regional organizations are concerned about climate change. It has been incorporated into SDG 13 of the UN's Sustainable Development Goals (SDG) worldwide. The SDG provides recommendations for mitigating the harmful effects of climate change. The usage of fossil fuels, such as coal, has been shown to contribute to global CO₂ emissions (Dagar et al., 2022; X. Wang, Khurshid, Qayyum, & Calin, 2022). Also commonly

referred to as global warming or greenhouse gas (GHG) emissions, the trend has seen a dramatic rise (Afrin, Sehreen, Polas, & Sharin, 2020) from the millennium to date (see Figure 1).

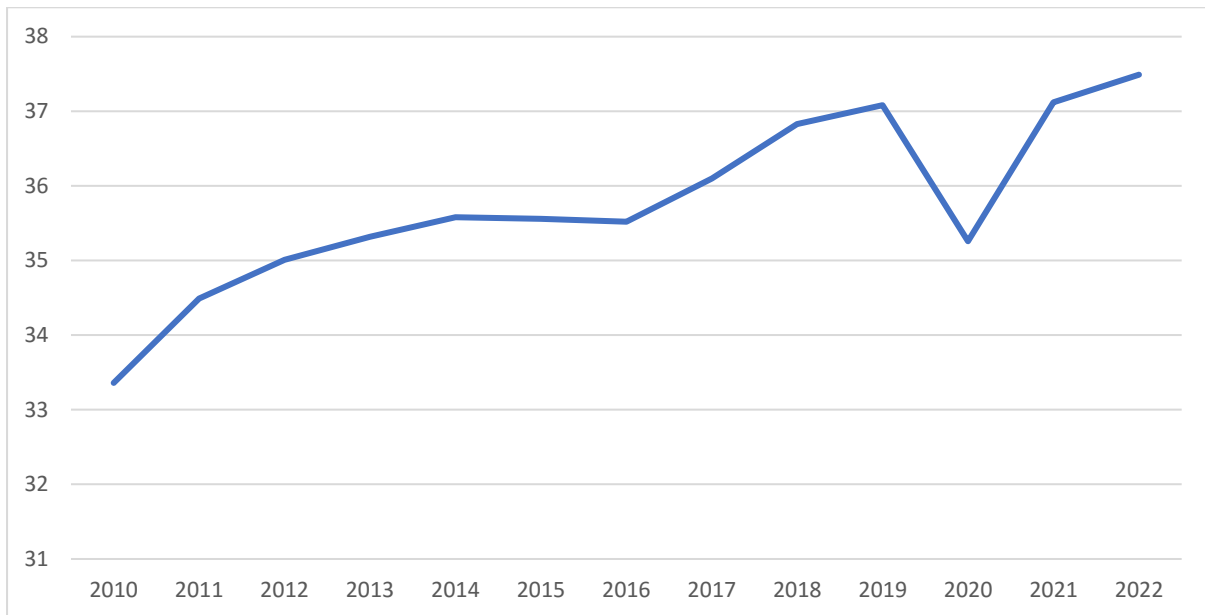


Figure 1: Annual carbon dioxide (CO₂) (in billion metric tons)
Source: Statista (2023)

The United States, Australia, Haiti, and several other industrialised countries have recently experienced climate-related crises (Hamidov et al., 2018; Zhang, Qi, Lin, Pan, & Sharp, 2022). Likewise, developing and underdeveloped nations such as Mozambique and Malawi have also experienced this scourge (Jiang, Liu, & Deng, 2022). This has triggered international agencies (such as the UN, UNICEF, and IEA) to take monumental steps to fight this frightening phenomenon worldwide. Varied effects, such as loss of biodiversity, harsh weather, rising sea levels, and other negative effects of climate change on the environment and people, are only a few examples. In addition, it negatively threatens humanity (Zhang et al., 2022). According to projections from the United Nations (UN), coal accounted for almost 40% of the world's CO₂ emissions as of 2021 with 15.3 billion metric tonnes, whilst natural gas is anticipated to have contributed 7.5 billion metric tonnes (UNFCC, 2022). According to the World Meteorological Organization (WMO), the average worldwide temperature in 2020 was predicted to be 14.9 °C (WMO, 2021). These factors have come together to demonstrate recent, hitherto unrecognized effects of GHG or global warming, which result in extreme weather events or climatic calamities (Jiang et al., 2022).

According to Liu, Wang, Zhang, Li, and Kong (2019), the Intergovernmental Panel on Climate Change (IPCC) recognised GHG as being pivotal to escalating global warming during the 4th global climate summit held in South Korea. Conventional financial accounting systems typically do not completely reflect the advantages and costs of managing the environment. In other words, companies frequently maintain inadequate records of their environmental expenses. This has led to developments such as environmental accounting (Okafor, Okaro, & Egbunike, 2013), triple-bottom-line accounting (Ekwueme, Egbunike, & Onyali, 2013), social accounting, and GHG accounting (Jiang et al., 2022) among several other developments. The goal is to provide company managers (decision makers) with relevant information for tracking environmental costs and to control and minimize them. Lu, Zhu, and Zhang (2021) investigated the impact of carbon disclosure on financial performance using data from Fortune 500 companies. As a result, whereas carbon reporting can significantly improve financial performance across non-carbon-intensive sectors, it cannot significantly improve financial performance across carbon-intensive industry sectors in the current reporting period. Kirikkaleli and Oyebanji (2022) discovered evidence using empirical data from Bolivia that a lack of acknowledgement of consumption-based CO₂ emissions regarding imports and exports would result in a distorted view of the global drivers

of emissions triggers. Consequently, initiatives designed to reduce GHG emissions would be less effective (Kirikkaleli & Oyebanji, 2022). However, this line of research has not been sufficiently investigated in the context of developing countries.

According to Hsiang (2010) and Dell, Jones, and Olken (2014), countries with tropical and subtropical climates are more adversely affected by rising temperatures. However, it has been shown that the influence persists in both wealthy and developing nations, as well as in and beyond the agricultural sector (Burke, Hsiang, & Miguel, 2015). In the Nigerian context, this was also confirmed by Tukur, Shehu, Mammadi, and Sulaiman (2019) citing relevant studies conducted in the Niger Delta region.

Against this backdrop, the current study investigates the nexus of climate change accounting and firm performance of quoted oil and gas firms using one of the most recent classification systems developed by the Global Reporting Initiative (GRI G.4). G.4 provides firms with a unified framework for identifying and accounting for past, present, and future social and environmental costs to aid managerial decision-making, control, and transparency. Prior studies, such as Asuquo (2012), on a sample of oil and gas companies in Nigeria's Niger Delta, find a positive correlation between maintaining environmentally friendly policies and firm profitability.

The remainder of this paper is organized as follows. Section 2 develops the hypothesis after a review of the pertinent literature and consideration of the gaps found therein. This section also emphasizes the theoretical framework of this study. Section 3 provides a thorough explanation of our research methodology. The main findings of this study are presented in section 4. The ramifications of the findings and their importance to the research are also covered in this section. Section 5 concludes the paper with a summary of the main conclusions, a discussion of the shortcomings of the study, and recommendations for additional research.

2. Literature Review

2.1 Conceptual Review

2.1.1 Climate Change Disclosure

Climate change disclosure refers to the practice of publicly disclosing information about the risks and opportunities that climate change poses to a company's operations, finances, and overall business strategy (Ma et al., 2022; M. Wang, Li, Li, Shi, & Quan, 2019). This involves transparently sharing data, plans, and targets related to greenhouse gas emissions, energy consumption, and other climate-related metrics. Many national governments and businesses agree that carbon pricing can accelerate the transition to a carbon-free future (Worldbank, n.d; Zhao, Wang, & Cai, 2022). Climate change disclosure is essential for encouraging stakeholder participation and green corporate financial reports (Orajekwe & Ogbodo, 2023). Many academics have reaffirmed that climate change disclosure is a mechanism to reduce global emissions (Chang, Yang, Zheng, Wang, & Zhang, 2020; Jiang et al., 2022; Ma et al., 2022; Zhang et al., 2022). Many companies are recognizing the importance of climate change disclosure as investors, consumers, and regulators increasingly demand greater transparency and accountability (Mondal, Akter, & Polas, 2023). By disclosing climate-related risks and actions, companies can demonstrate their commitment to addressing climate change, build trust with stakeholders, and enhance their reputations. At the same time, disclosure enables investors and other stakeholders to make informed decisions and assess the long-term sustainability of businesses. Various frameworks and guidelines are available for companies to disclose climate-related information, such as the Task Force on Climate-related Financial Disclosures (TCFD) and the Global Reporting Initiative (GRI). Numerous countries in the European Union, including the UK, France, and Germany, use it extensively in various forms. Such frameworks encourage firms to provide comprehensive and consistent disclosures that cover not only environmental impacts, but also governance, strategy, and risk management.

2.1.2 Corporate Performance

Achieving sustainable corporate performance is the goal of any organization because only through performance are organisations able to develop and advance (Gavrea, Ilies, & Stegorean, 2011). Corporate performance is a vague idea, and academics frequently concur that no single definition

applies to all situations. According to Fauzi, Svensson, and Rahman (2010), corporate performance refers to an organization's capacity to achieve its objectives by effectively and efficiently using its resources. In this study, corporate financial performance is the focus. According to Endri et al. (2021a), financial performance (FP) is a company's financial position for a specific period. FP is often measured using factors such as liquidity, leverage, and activity ratios to show the state of a corporation (Endri et al., 2021b). In this study, corporate financial performance is measured using ROA as a profitability indicator.

As noted in various studies, the disclosure of CO₂ emissions has a positive and significant impact on a company's success. There is evidence that a company can avoid the value penalties imposed by financial markets based on the amount of carbon pollution and failure to provide carbon pollution statistics by disclosing carbon credits (Saka & Oshika, 2014). The benefits of increased environmental reporting at an acceptable level and quality include the promotion of company openness, the reduction of asymmetric information, and the facilitation of stronger economic decision-making under conditions of more confidence and trust, including both enterprises and investors (Benlemlih, Shaukat, Qiu, & Trojanowski, 2018).

2.2 Theoretical Framework

Stakeholder theory (ST) is a concept in business management and ethics that suggests that companies should consider the interests and needs of all stakeholders rather than solely focusing on maximizing shareholder value. This theory was developed by Edward R. Freeman in 1984. Stakeholders include shareholders, employees, customers, suppliers, communities, and other groups that are affected by or have an impact on a company's activities. This theory argues that businesses should operate in a way that considers the diverse perspectives and concerns of different stakeholders. This means recognizing that stakeholders have varying needs and expectations and that their well-being and satisfaction are important for the long-term success of the company. By actively engaging with stakeholders, companies can build stronger relationships, enhance trust, and create value for all the parties involved.

The ST suggests that companies should actively listen to stakeholders, incorporate their feedback into decision-making processes, and consider their interests when setting goals and developing strategies. This promotes the idea that a company's responsibility goes beyond generating profits and includes ethical considerations, social impact, and environmental sustainability. In recent years, ST has gained traction as businesses and society increasingly recognize the importance of responsible and sustainable practices. Many organizations now prioritize stakeholder engagement and consider it to be a fundamental part of corporate governance and corporate social responsibility efforts.

2.3 Conceptual Framework & Hypothesis Development

Carbon emissions are one of the most important indicators of a company's environmental performance. Therefore, the correlation between carbon emissions and financial success has increased recently (Khatib et al., 2023). Studies have shown that CCRD affects enterprise value, with authors arriving at varying conclusions from various perspectives (Khatib et al., 2023). For instance, Lu et al. (2021) examine the effects of CCRD on financial performance Lu et al. (2021) using information from a sample of Fortune 500 corporations. As a result, whereas CCRD can greatly enhance financial performance across sectors that do not use much carbon, it cannot significantly improve financial performance across sectors in the current reporting period. The strength of CCRD disclosure has a positive impact on the sustainability of development in growing organizations; however, the quality of CCRD in maturing and declining enterprises has a significant negative impact (Cui, Dai, Wang, & Zhao, 2022). Given the significant positive correlation between voluntary disclosure of climate change information in organizations under the management of qualified individuals, it appears that effective managers encourage the sharing of qualitative information to assess fundamental company values (Lee, 2022).

Prior research by Doh, Howton, Howton, and Siegel (2010) and Delmas, Etzion, and Nairn-Birch (2013), among others, indicates that investors frequently undervalue companies with a high carbon footprint. The relationship between corporate financial performance (CFP) and environmental performance (EP) can also be impacted by indirect regulatory expenses. In light of these findings, it can

be said that CCRD and fiscally required policies mitigate the negative consequences of GHG emissions, global warming, and environmental changes, which have attracted increased attention (Khurshid, Qayyum, Calin, Saleem, & Nazir, 2022; X. Wang et al., 2022). Firms may pay attention to investors by proactively disclosing information about carbon emission standards (Khatib et al., 2023). This aims to make businesses more responsible for the GHG they produce (c2es, 2015; Ionescu, 2019). According to Guo and Huang's study from 2021 (Guo & Huang, 2021), there is increasing empirical support for the use of carbon tax policies because of the marginal environmental harm caused by the productive activities of heavy CO₂ emitters. Conclusively, CCRD accomplishes the goal of internalising harmful environmental externalities brought on by CO₂ pollution (Bashir, Ma, Shahbaz, & Jiao, 2020). It is frequently associated with unfavorable environmental products. Khurshid et al. (2022) examined the relationship between carbon tax, environmentally friendly innovations, and green policies as a strategic initiative to achieve carbon neutrality, thereby supporting the achievement of the SDG for 2030. They did this using empirical data from 2000 to 2018 across 15 European Union countries. These findings demonstrate how environmental regulations and eco-friendly inventions can lower emissions both now and in the future. However, in the short term, carbon taxes had a more noticeable impact on mitigation measures.

This leads to the following hypothesis:

H_{1A}: There is a significant positive association between GRI disclosure and the ROA of industry-sensitive firms in Nigeria.

2.4 Empirical Review

Pankratz, Bauer, and Derwall (2023) evaluated the CCRD and performance of more than 17,000 firms in 93 countries between 1995 and 2019. The empirical data were analyzed using a multiple regression procedure. The results show that businesses' sales and operating income decreased when their exposure to extremely high temperatures increased. Furthermore, we offer proof that higher heat exposure has a detrimental effect on a company's financial performance compared to analyst expectations and earnings announcement returns.

Khatib et al. (2023) examined the impact of CCRD on business performance, while considering the moderating effect of management environmental training. They used empirical data from 2016 to 2021 for 11 European nations retrieved from the Reuters Eikon database. A panel regression technique was used to analyze the data. The outcome showed that management's environmental education moderated the effect of carbon emission disclosure on firm performance.

Desai, Raval, Baser, and Desai (2022) examined the impact of CCRD on financial performance. Using Indian data for companies that provide emission statistics to the Carbon Disclosure Project (CDP) for the years 2013–2019. The data were analyzed using Heckman's regression model. The findings show a significant negative impact of CCRD on the measures of financial performance. However, they also found that businesses that care about the environment are more vulnerable to the harmful effects of emissions than businesses that do not.

Ganda (2018) evaluated the implications of a CCRD on the financial performance of firms in South Africa. The author employed CDP business data from the Republic of South Africa from 2014 to 2015. The sample comprised 63 firms from the Republic of South Africa CDP database. Data were extracted using content analysis and analyzed using panel data and partial derivative techniques. These findings indicated that CCRD has a positive relationship with ROE and ROS. Conversely, it has a negative relationship with return on investment (ROI) and market value added (MVA).

Saka and Oshika (2014) investigate the effect of CCRD on corporate value. They analyzed secondary data of CCRD and the market value of equities utilizing mandatory data submissions to the Japanese government encompassing more than 1,000 firms. They found that CCRD had a negative relationship with MVE.

3. Methodology

The ex-post facto (causal-comparative) research design was used in an effort to examine events (businesses' activities reduced to numbers) after they had already happened (reporting year). The goal of the design is to investigate a problem after it has already occurred, free from researcher intervention. All Oil & Gas companies publicly traded on the Nigerian Exchange Group (NGX) were included in the study's population from 2012 to 2021. However, due to the availability and accessibility of the data, eight firms were chosen for the study.

3.1 Sources of Data

Secondary sources provided the data for this investigation. The selected companies' annual reports and financial statements were used to extract data. Each company in the sample's yearly financial statements is the source of the data. The requirement for an external audit for all publicly traded companies on the NGX upholds the potential validity of such data. Companies are required to submit accounts that are accurate and fair portrayals of their financial situation under Part X1, Chapter One of the Companies and Allied Matters Act (CAMA), as amended.

3.2 Methods of Data Analysis

Multiple strategies were used to analyze the data. First, descriptive statistics are calculated to provide an overview. Content analysis was used to extract CCRD data from the annual financial reports of the firms. The hypotheses were tested using multiple regression techniques with the aid of E-Views software.

3.2.1 Model Specification

This section illustrates the econometric model used to assess the association between the explanatory variables and the company's ROA. The model gave the researchers the ability to explain the fundamental features and connections within the system or event they were modelling.

The model is as follows:

$$ROA_{i,t} = \alpha + \beta_1 CCRD_{i,t} + \beta_2 LEVE_{i,t} + \beta_3 AUDQ_{i,t} + \beta_4 FISZ_{i,t} + \varepsilon$$

3.2.2 Variable Definition and Measurement

The dependent variable, ROA, is measured as the ratio of PAT scaled by Total Assets; and the Independent Variable is CCRD, which is measured using content analysis comprising a total of 34 disclosures, that is, 1 if an item is disclosed and 0 otherwise. The final metric was the total number of disclosed items divided by 34. The control variables are LEVE, that is, leverage, which is the ratio of total debt to Total Assets; AUDQ, that is, audit quality, which is proxied as 1 if the audit firm belongs to the Big 4 and 0 if otherwise; and FSIZ, that is, firm size, which is proxied as the natural logarithm of total assets. Prior research guided the choice of control variables.

4. Result and discussions

Here, we examine the descriptive statistics for the relevant independent and dependent variables. Each variable was analyzed based on the mean, median, maximum, and minimum values. Table 1 presents the descriptive statistics of the study.

Table 1. Descriptive statistics of the model variables

	ROA	CCRD	LEVE	AUDQ	FISZ
Mean	0.021600	0.346691	0.716775	0.737500	17.58580
Median	0.023765	0.382353	0.684000	1.000000	17.87923
Maximum	1.762669	0.970588	2.478465	1.000000	21.11658
Minimum	-0.713574	0.000000	0.022934	0.000000	10.76109
Std. Dev.	0.235201	0.257075	0.347905	0.442769	1.874310
Skewness	4.647009	0.855851	2.420872	-1.079563	-1.130769
Kurtosis	40.14957	3.956761	12.49596	2.165456	5.117780
Jarque-Bera	4888.230	12.81771	378.7193	17.86096	31.99848
Probability	0.000000	0.001647	0.000000	0.000132	0.000000

Sum	1.728024	27.73529	57.34200	59.00000	1406.864
Sum Sq. Dev.	4.370223	5.220923	9.561993	15.48750	277.5301
Observations	80	80	80	80	80

Source: E-Views 11

Table 1 presents the descriptive statistics for the final sample. As the table shows, the mean ROA is 0.022, while the median value is 0.024. The skewness had a value of 4.647, while kurtosis had a value of 40.150. Therefore, the distribution peaks. The average CCRD value was 0.347, whereas the median value was 0.382. The skewness had a value of 0.856, while kurtosis had a value of 3.957. In general, firms have high leverage with a LEVE value of 0.717, while the median value is 0.684. The skewness had a value of 2.421, while kurtosis had a value of 12.496. The average value of AUDQ was 0.738, which suggests that up to 70% of the Oil and Gas firms in the sample engaged in the services of the Big 4. The median value was 1.000, the skewness showed a negative value of -1.080, and kurtosis had a value of 2.165. The logarithm of total assets (FSIZ) has a mean (median) of 17.586 (17.879).

Table 2. Correlation analysis for the model variables

	ROA	CCRD	LEVE	AUDQ	FISZ
ROA	1				
CCRD	0.021313	1			
LEVE	-0.14468	-0.15512	1		
AUDQ	0.066696	0.122778	-0.32342	1	
FISZ	0.06003	0.441292	0.108604	0.002922	1

Source: E-Views 11

Table 3 presents the correlation matrices for these variables. The table shows a significantly positive correlation between ROA and the test variables, CCRD, AUDQ, and FSIZ. Consistent with prior studies, ROA was positively associated with CCRD ($r=.021$) and negatively correlated with LEVE ($r=-.145$). ROA is positively associated with AUDQ ($r=.067$) and FSIZ ($r=.060$). CCRD was negatively correlated with LEVE ($r=-.155$) but positively associated with AUDQ ($r=.123$) and FSIZ ($r=.441$). LEVE negatively correlated with AUDQ ($r=-.323$) and positively correlated with FSIZ ($r=.109$). Lastly, the AUDQ was positively associated with FSIZ ($r=.003$). However, the VIFs (not shown for brevity) do not point to any issues with multicollinearity.

Table 3. Panel regression model output for the test of hypothesis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.025626	0.051396	-0.498603	0.6195
CCRD	0.041004	0.016065	2.552328	0.0127
LEVE	0.046473	0.024835	1.871275	0.0652
AUDQ	-0.010437	0.006680	-1.562513	0.1224
FISZ	0.000867	0.003450	0.251160	0.8024
Weighted Statistics				
R-squared	0.102408	Mean dependent var		0.141607
Adjusted R-squared	0.054536	S.D. dependent var		0.225603
S.E. of regression	0.191788	Sum squared resid		2.758691
F-statistic	2.139217	Durbin-Watson stat		1.502494
Prob(F-statistic)	0.084205			

Source: E-Views 11

The model summary showed an R-squared value of 0.102408, the coefficient of determination, which is the squared value of multiple correlation coefficients. This indicates that a 10% approx. of the dependent variable was explained by the model, while the adjusted R-squared value of 0.054536 indicated that 5% approx. of the dependent variable was explained by the model-independent variables

(CCRD, LEVE, AUDQ, and FISZ). The R-squared statistic makes it evident that more aspects potentially explain ROA in Oil & Gas firms that are not taken into account in the current study. Using the F-statistic, which tests the acceptability of the model from a statistical perspective, the null hypothesis is rejected at 10%. Therefore, the model was still statistically significant for further inferences based on the significance level in the current study.

4.1.1 Test of Hypothesis

H_{1A}: There is a significant positive association between GRI disclosure and the ROA of industry-sensitive firms in Nigeria.

Table 3 reports the results of the analyses that measure the association between CCRD and ROA of industry-sensitive firms. The regression is performed using a Pooled OLS model after specifying cross-section weights and white cross-section as the coefficient covariance method to correct for correlation across observations for a given firm. The results showed that the CCRD was positive and significant ($p < .05$). This is consistent with the prediction in H_{1A} that a higher percentage of CCRD requires an improvement in financial performance proxied using ROA. This is consistent with studies such as Khatib et al. (2023) that use empirical data from 11 European nations from 2016 to 2021 to reveal that CCRD improves firm performance. In addition, Ganda (2018), in South Africa from 2014 to 2015 on a sample of 63 firms from the CDP database, showed that CCRD has a positive relationship with ROE and ROS. This positive association may be linked to the fact that CCRD raises public awareness of climate change and provides advantages like a better competitive edge (Rehman Khan & Yu, 2021), improved environmental performance from a reduction in CO₂ emissions (Hong, Zhang, & Ding, 2018), reputational gains, and improved market performance (Hoejmose, Roehrich, & Grosvold, 2014). At the organizational level, the introduction of CCRD makes it possible for an organization to create proactive and reactive strategies to further reduce the detrimental environmental impact (Yang, Xie, Yu, & Liu, 2021).

In contrast, Desai et al. (2022) used Indian data for companies that provided emission statistics to the CDP for the years 2013 to 2019 and found a significant negative impact of CCRD on measures of financial performance. Saka and Oshika (2014) investigated the effect of CCRD on corporate value in the Japanese context of more than 1,000 firms and found that CCRD has a negative relationship with MVE.

Interestingly, the control variables showed mixed findings; for instance, LEVE had a positive effect on ROA with a coefficient of $\beta=0.046$, AUDQ had a negative effect on ROA with a coefficient of $\beta=-0.010$, and FISZ had a positive effect on ROA with a coefficient of $\beta=0.001$.

5. Conclusion

It has been stated that lowering GHG emissions globally is crucial for combating global warming. Consequently, people's desire for an environmentally friendly environment and way of life has grown recently, which has boosted their drive to stop climate change. Therefore, some national governments have initiated initiatives to motivate companies to reduce their GHG emissions. The empirical analysis of annual financial statement data by Oil & Gas firms shows that CCRD enhances FP, proxied as ROA. Thus, it can be concluded that CCRD promotes resource-conserving behavior by firms and fosters environmental conservation. Additionally, the idea pushes businesses to internalize environmental externalities. Based on this, the current study recommends the following.

Managers should enhance CCRD to enhance the financial performance of their firms, the CCRD continue to be a key incentive for businesses to create long-term environmentally friendly technological solutions to mitigate environmental harm and permanently reduce GHG emissions. Thus, technological innovation can result from a desire to switch to a more CCRD-efficient industrial system. A company's financial performance can be significantly impacted by CCRD, and investors are becoming more demanding when it comes to openness and knowledge of how these issues may affect a company's long-term prospects. Firms may spot possible hazards to their supply chain, market possibilities, and business

operations by being aware and transparent about climate-related concerns. This enables them to create plans to lessen these risks and increase their capacity for resilience.

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