# Doctoral (PhD) Dissertation

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# THE IMPACT OF CSR DISCLOSURE ON THE FINANCIAL PERFORMANCE OF THE LISTED OIL AND GAS FIRMS IN NIGERIA, USING THE MODERATING EFFECT OF THE BOARD EQUITY OWNERSHIP

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The aim of this dissertation is to obtain a doctoral (PhD) degree in the scientific field of "Management and Business"

Written by: …… certified ……

Supervisor: Dr. ……

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## DECLARATION

I undersigned Chondough Stephanie Mbateman declare under penalty of perjury and certify with my signature that the dissertation I submitted in order to obtain a doctoral (PhD) degree is entirely my own work.

Furthermore, I declare the following:

- I examined the Code of the Károly Ihrig Doctoral School of Management and Business Administration and I acknowledge the points laid down in the code as mandatory;
- I handled the technical literature sources used in my dissertation fairly and I conformed to the provisions and stipulations related to the dissertation;
- I indicated the original source of other authors' unpublished thoughts and data in the references section in a complete and correct way in consideration of the prevailing copyright protection rules;
- No dissertation which is fully or partly identical to the present dissertation was submitted to any other university or doctoral school for the purpose of obtaining a PhD degree.

Debrecen, …….

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Chondough Stephanie Mbateman

signature

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## List of Abbreviations

| | |
|---|---|
| CSR | Corporate Social Responsibility |
| FP | Financial Performance |
| GRI | Global Reporting Initiative |
| ISO | International Organization for Standardization |
| ROA | Return on Asset |
| ROE | Return on Equity |
| ENVDIS | Environmental Disclosure |
| SOCDIS | Social Disclosure |
| ECONDIS | Economic Disclosure |
| BOWN | Board Equity Ownership |
| VIF | Variance Inflation Factor |

# INTRODUCTION

The concept of Corporate Social Responsibility (CSR) has received a great deal of interest in academic and professional spheres over the years. The modern concerns of the twenty-first century has further stressed the significance of CSR in academia and the corporate world. The growing challenges of global warming, deteriorating pollution, increased exploitation of resources, employee rights, and a healthy work environment have highlighted the importance of CSR (REVERTE, 2016). There has been a growing demand for corporations to embrace the concept of CSR, which refers to principles that a firm adheres to that are focused on economic, social, and environmental contributions that are targeted to positively impact society. CSR is based on the premise that businesses and society are inextricably linked, as a result, society expects all enterprises, regardless of size or type, to behave responsibly (IDEMUDIA, 2009). CSR disclosure entails communicating to the public, the firm's social, economic, and environmental engagement, which may be required by law or reported voluntarily (GRAY et a., 1995).

According to HOSSAIN et al. (2022), short-term gains cannot guarantee a corporate entity's success in a globally competitive market, as acknowledged by many large corporations globally. As a result, there is a need to employ long-term sustainable goals while maximizing short-term earnings, which could be accomplished through CSR initiatives. A well-planned and implemented CSR strategy can have a good impact on a developing country like Nigeria, where people no longer believe in the government to provide them with basic needs and instead hope on businesses to come to their aid (ADEGBITE and NAKAJIMA, 2011). CSR is essential in developing economies such as Nigeria because of the challenges in achieving sustainable growth due to the limited resources, inequality, and rising demands. Hence, organizations in all sectors are expected to be key players in eradicating poverty and ensuring sustainability.

Since the 1950s, when crude oil was discovered, the Nigerian economy has been primarily reliant on the oil and gas-producing firms, been the economy's backbone. This sector serves as the main revenue source for the government, accounting for more than 65 percent of national income and 88 percent of foreign exchange earnings. The oil sector’s relevance in the economy's growth and development cannot be overstated (KPMG, 2019).

According to WANG and BANSAL (2012), enhancing value for the firm and ensuring risk dispersion are largely intimated by the strategic adoption of best practices in CSR. On the contrary, investment in CSR practices can be a constraint to a firm's dedication or precipitate potential deviation from their operational norms such as cost thresholds. Furthermore, firm value and corresponding trends in share price may appreciate as a result of the socioeconomic advantages arising from transparent disclosures (FAUZI, 2008). CSR practices entail best practices that demonstrate a company's ethics and values.

Theoretically, this study draws on the Stakeholder Theory, Legitimacy Theory, and Sustainable Development Theory, through the implementation of CSR as an integrated role of oil and gas firms in Nigeria. Studies (such as FASSIN, 2012; FREEMAN et al., 2004) mentioned how significant stakeholder theory is in achieving both CSR and financial performance (FP).

Numerous studies have shown that there is no agreement on the connection between CSR and FP. (AL-MALKAWI and JAVAID, 2018; SINGH and MISRA 2021). This necessitates further investigation. This research is centered on the oil and gas sector due to its critical significance in the Nigerian economy. To begin with, the oil sector is profit-driven, and hence the management of the oil companies has a responsibility to increase earnings. Secondly, as the primary source of government revenue in Nigeria, the oil business is critical to social and economic prosperity. Also, oil and gas firms as publicly traded corporations have additional obligations to fulfill in connection with social responsibility. This study uses a sample of the listed oil and gas firms as they are the most relevant extractive sector in analyzing environmental issues, owing to the nature of their operations and their profound impact on the ecosystem. The deleterious aftermath stemming from the extractive activities of these oil firms has undeniably brought the attention of stakeholders to focus on CSR issues. Despite its numerous economic benefits, this industry is associated with numerous environmental and social challenges such as the depletion of non-renewable resources, air and water pollution, greenhouse emissions, threats to health and safety and threat to food security resulting from deforestation and contaminated land. Nigerian society demands more CSR from the oil and gas companies as compared to the rest of the industries' which emanates from the sector's far-reaching operational impact on the environment. Consequently, firms whose activities inflict minimal harm to society find themselves at liberty, largely exempt from stringent societal expectations. The majority of these companies place little emphasis on CSR or, more specifically,

environmental responsibilities. The study's objective is to comprehensively cover economic, social, and environmental disclosure. However, obtaining relevant data for non-environmentally sensitive firms poses a significant challenge. This issue is particularly prevalent in a developing country like Nigeria, where data availability remains a pressing concern. Furthermore, because stock exchange listing requires listed companies to publish CSR data in their annual reports, the researcher expected to find more data relating to the listed oil and gas firms. Additionally, the ongoing dispute between the oil firms and the host society is a cause for concern, necessitating further attention to the subject matter. The host-community relationship ensures a favourable environment for corporations to function successfully, which is essential for the survival of corporate entities (DUNAY et al. 2021). Social obligations can greatly enhance this relationship.

Furthermore, nations globally are still battling with the economic disruption caused by covid-19 pandemic, and Russia's invasion of Ukraine in 2022 has exacerbated the condition, having a significant impact on the global economy. Russia continues to be a top exporter of oil and gas globally, and at the current energy price, this generates significant revenue, which is estimated to be 400 USD million per day for natural gas and 700 USD million per day for crude oil and refined products exported to the European Union alone (WOLFF, 2022). Russian exports of oil and gas to the EU in 2019 amounted to 200 EUR billion each, approximately twice the G7 nations combined foreign exchange reserves for 2021 (PISANI-FERRY, 2022).

According to IVANOVA (2022), the prolonged conflict between Russia and Ukraine has caused the price of oil, which has been growing over the past year, to reach “an eight-year high” and will keep rising as long as the situation lasts. Similarly, JPMorgan also alert that the war could instigate oil prices to increase up to 120 USD per barrel (EGAN, 2022). The average OPEC oil price in August 2022 was 105.1 US dollars per barrel. This has increased from the 69.72 USD prices of the previous year (2021), owing to the imposed sanctions on Russia and a shortfall in energy supply (STATISTA, 2022).

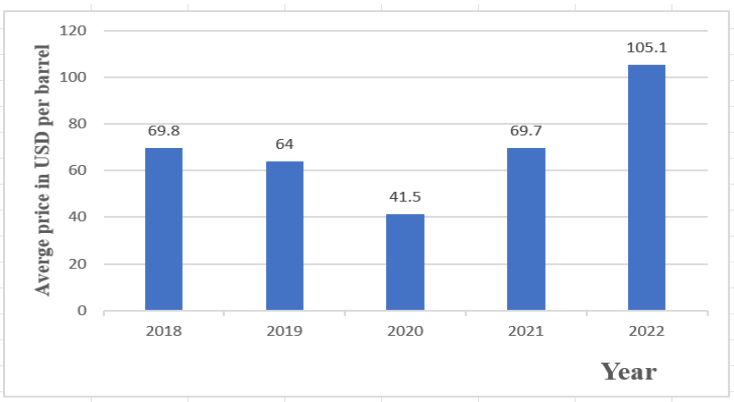



**FIGURE 1: OPEC CRUDE OIL PRICE FROM 2018 TO 2022**

*Source: Author's own construction based on Statista, (2022)*

Figure 1 illustrates OPEC oil prices in the last 5 years (2018 -2022) which shows a huge increase in 2022 to 105.1 UDS as compared to the previous 4 years 69.7 (2021), 41.5 (2020), 64 (2019) and 69.8 (2018) respectively. The 2022 ongoing war between Russia and Ukraine is more than just a problem between two countries, but it is a problem that requires worldwide attention because the effect has global consequences that affect more than just the parties involved (U.S. DEPARTMENT OF STATE, 2022). As a result, it is critical that this study concentrates on the oil and gas firms.

CSR forms part of business investment, and the connection between CSR disclosure and FP is complex, rather than a direct relationship. Not considering the moderating factors that could impact on these variables pose a limitation that could lead to inconsistency in findings (THUY et al., 2021). Thus, intermediate variables play a critical role in mediating/moderating the existing link. Several prior research has striven to show a direct correlation between CSR disclosure and FP. Additionally, due to the inconsistency in the findings on CSR and firm performance, scholars have recently advocated for a more complex link, proposing the use of intermediate variables to strengthen the existing link, by measuring both the direct and the indirect effects (AKHTARUDDIN and HARON 2010; GORDON et al. 2009; and HAFIZUDDIN-SYAH et al. 2014). Furthermore, GREWATSCH and KLEINDIENST (2017) advocated for additional research on the use of moderators in investigating the nexus between CSR and corporate FP. This research answers the call of the use of an intermediate variable. The current study aims to contribute significantly to CSR by employing a moderator to investigate the indirect correlation between the established variables. Therefore, board equity ownership (BOWN) will be utilized to moderate the

association between CSR and corporate FP in the context of the Nigerian oil-producing firms. This study will be among the few to use a moderator to further strengthen the relationship that exists between the two variables. The assumption is that the board members will act in the best interests of the organization if they own equity. The agency problem is mitigated by owning a percentage of the company's stock (BOKPIN, 2013). Equity ownership may prompt management to undertake risk-mitigating strategies to protect the firm. REN and CHANDRASEKAR (2012) discovered that board ownership had an impact on business performance. As a result, this research will use BOWN to moderate the nexus between CSR and FP.

Furthermore, most early research focused on the accounting-based measures of FP. However, this study will utilize both "accounting and market-based measures" as proxies for FP measurement. Accounting-based measures capture the historic aspects of a firm's economic overall performance which can be subject to managerial manipulations (MCGUIRE et. al, 1986; ARAS et. al, 2010). Market-based measures go beyond historical performance to include future overall performance; consequently, they are less vulnerable to management manipulation. (ARAS et al., 2010). Additionally, Global Reporting Initiatives (GRI) cover three major dimensions of CSR, (Social, Economic, and Environmental), but most existing studies have omitted the economic aspect of CSR, concentrating mostly on the social dimension, followed by the environmental CSR (ALSHEHHI et al., 2018). Existing research has investigated the social and environmental dimensions of CSR disclosure, however, not much is done on the economic dimension of CSR (NGUYEN et al., 2022). Economic responsibility encompasses a variety of activities, including anti-competitive practices, investment in infrastructure, and preference for local suppliers, among others (GRI, 2002; Nguyen et al. 2022). It is critical to understand which components of CSR favorably impact FP in order to allocate corporate resources effectively and efficiently while closely monitoring of the less efficient aspects if any. This study will be among the few to cover all three dimensions of CSR disclosure, investigating economic disclosure as well.

This study aims to add to the existing literature in a variety of ways. First, to examine the three dimensions of CSR and to analyze how different categories of CSR influence corporate FP, using both "accounting and market-based measures". Secondly, the link between CSR and FP will be examined using a moderator. Finally, it presents empirical evidence in the context of a developing economy.

Figure 2 below details the conceptual framework for this study showing all the variables that are employed in conducting the research.

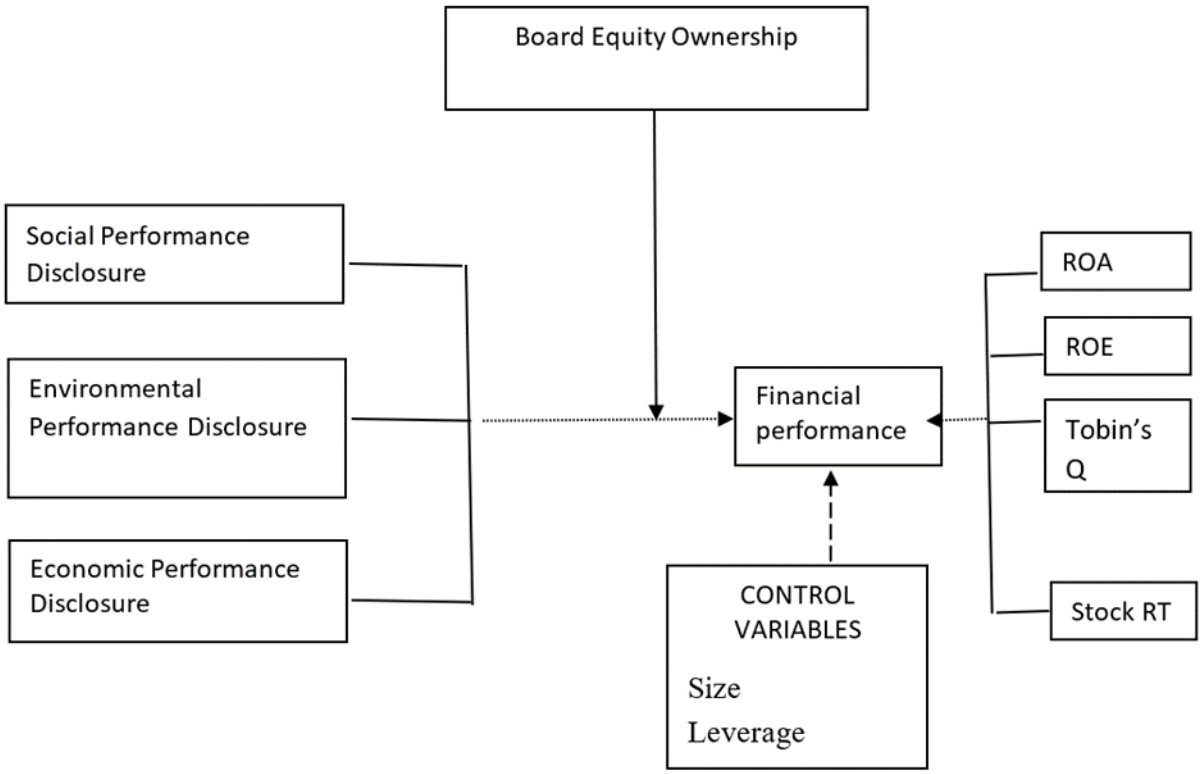



**FIGURE 2: CONCEPTUAL FRAMEWORK**

*Source: Author's own construction (2020)*

### 1.1. Research Questions

Given the research problem, the research questions listed below are intended to guide this investigation:

i. What is the effect of social performance disclosure on the FP of Nigeria's oil and gas firms?
ii. What is the effect of environmental performance disclosure on the FP of the oil and gas firms in Nigeria?
iii. What is the effect of economic performance disclosure on the FP of the oil and gas firms in Nigeria?
iv. Does board equity ownership moderate the connection between CSR and the FP of Nigeria's oil and gas firms?
v. To what extent does the board equity ownership moderate the relationship between social performance disclosure and the FP of Nigeria's oil and gas firms?

vi. To what extent does the board equity ownership moderate the relationship between the environmental performance disclosure and the FP of Nigeria's oil and gas firms?

vii. To what extent does the board equity ownership moderate the relationship between economic performance disclosure and the FP of Nigeria's oil and gas firms?

### 1.2. Research Objectives

Firstly, this study will examine the direct impact of CSR on corporate FP. Secondly, the indirect link will be investigated using the moderating effect of board equity ownership on the relationship that exists between CSR and the performance of the Nigerian oil and gas firms. Specifically, this research sought to:

i. Examine the effect of social performance disclosure on the FP of Nigerian oil and gas firms.

ii. Examine the effect of environmental performance disclosure on FP of the Nigerian oil and gas firms.

iii. Examine the effect of economic disclosure on the FP of Nigerian oil and gas firms.

iv. Examine the extent to which board equity ownership moderates the relationship between social performance disclosure and FP.

v. Examine the extent to which board equity ownership moderates the connection between environmental performance disclosure and FP.

vi. Examine how board equity ownership moderates the nexus between economic performance disclosure and FP.

### 1.3. Research Hypotheses

In line with the research questions and objectives, the following hypotheses are developed to investigate the direct and the indirect association of CSR on corporate FP (Proxied by ROA, ROE, Stock returns and Tobin's Q) where board equity ownership is the moderator. The research assumption will be established by either accepting or rejecting the formulated hypotheses:

- **H1a:** Social disclosure significantly affects the ROA of the examined oil and gas firms.
- **H1b:** Environmental disclosure significantly affects the ROA of the examined oil and gas firms.
- **H1c:** Economic disclosure significantly affects the ROA of the examined oil and gas firms.

- **H2a:** Board equity ownership significantly moderates the correlation between social disclosure and the ROA of the examined oil and gas.
- **H2b:** Board equity ownership significantly moderates the connection between environmental disclosure and the ROA of the examined oil and gas firms.
- **H2c:** Board equity ownership significantly moderates the nexus between economic disclosure and the ROA of the examined oil and gas firms.
- **H3a:** Social disclosure significantly affects the ROE of the examined oil and gas firms.
- **H3b:** Environmental disclosure significantly affects the ROE of examined oil and gas firms.
- **H3c**: Economic disclosure significantly affects the ROE of the examined oil and gas firms.
- **H4a:** Board equity ownership significantly moderates the correlation between social disclosure and the ROE of the examined oil and gas firms.
- **H4b:** Board equity ownership significantly moderates the connection between environmental disclosure and the ROE of the examined oil and gas firms.
- **H4c:** Board equity ownership significantly moderates the nexus between economic disclosure and the ROE of the examined oil and gas firms.
- **H5a:** Social disclosure significantly affects the stock returns of the examined oil and gas firms.
- **H5b:** Environmental disclosure significantly affects the stock returns of the examined oil and gas firms.
- **H5c:** Economic disclosure significantly affects the stock returns of the examined oil and gas firms.
- **H6a:** Board equity ownership significantly moderates the correlation between social disclosure and the stock returns of the examined oil and gas firms.
- **H6b:** Board equity ownership significantly moderates the connection between environmental disclosure and the stock returns of the examined oil and gas firms.

- **H6c:** Board equity ownership significantly moderates the nexus between economic disclosure and the stock returns of the examined oil and gas firms.

- **H7a:** Social disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H7b:** Environmental disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H7c:** Economic disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H8a:** Board equity ownership significantly moderates the correlation between social disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H8b:** Board equity ownership significantly moderates the connection between environmental disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H8c:** Board equity ownership significantly moderates the nexus between economic disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

# 2. LITERATURE REVIEW

Chapter 2 consists of a review of relevant literature; the country's background, the concept of CSR, the empirical research on the link between CSR and corporate FP, and the study's theoretical framework.

## 2.1. Nigeria

### *2.1.1. COUNTRY BACKGROUND*

Nigeria is a former British colony, a country located in west Africa and bordered by Benin Republic, Chad, Cameroon and Niger. It is the most populated African country and the 7th most populated nation, with a population of over 200 million people and with a total land area is 910,770 Km2 (WORLDOMETER, 2021; WORLD BANK, 2020a). Nigeria comprises of 36 states, with the federal capital territory (Abuja) inclusive, which serves as the capital city of Nigeria, as shown in figure 2 below. Nigeria has about 500 diverse ethnic groups, Ibos, Hausa/Fulanis, and Yorubas being the most prominent.

The federal republic of Nigeria practices a presidential system of government, in which the executive power is vested in a president-elect who serves as the head of state, elected for a four-year term with the possibility of running for re-election (maximum of 8 years).

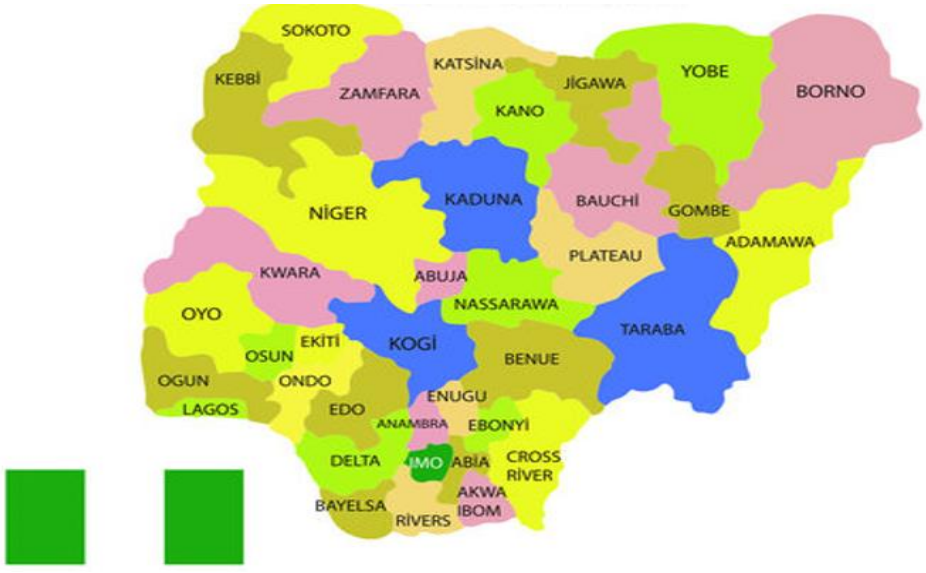



**FIGURE 3: MAP OF NIGERIA**

*Source: Adobe Stock (2022)*

***Economy***

Nigeria has the largest economy in Africa and the world's 28th-largest economy in terms of nominal GDP (IMF WORLD ECONOMIC OUTLOOK, 2021). The country's GDP in 2020 was at 432.294 billion USD, with a GDP per capita (USD) of 2,396.0. USD (WORLD BANK, 2020b). Nigeria has a mixed economy that is driven by both public and private entities. The country is significantly reliant on petroleum revenue which is about 80% of government revenue and 90% of foreign exchange earnings. The oil and gas industry continues to be a dominant sector and a major source of government revenue. Thus, Nigeria is now vulnerable to economic instability brought on by the whims of global oil markets (ANYAEHIE and AREJI, 2015). However, the economy was predominately based on agriculture until crude oil was discovered, which has shifted the focus of the federal government and has resulted in heavy reliance on the oil sector, resulting in decades of neglect of other sectors.

The country is rich in oil and gas among other natural resources. Despite having abundant resources and potential wealth, most of the country's population lives in poverty due to a variety of factors including inequality, corruption, a lack of infrastructure provision, insecurity, lack of job opportunities, poor governance, political instability, ethnic and religious conflict, among others. The country is still confronted with numerous challenges that continue to hinder development. There is a need to reduce the over-reliance on the oil sector by diversifying into other sectors, addressing the issues with insufficient infrastructure, building effective institutions, as well as addressing corruption and governance issues in general. The disruption posed by covid-19 pandemic has greatly affected the Nigerian economy and the world at large. The country entered a recession in 2020 resulting from lower oil prices caused by fallen global oil demand and containment efforts to stop the spread of COVID–19. This is evident in the decrease in the country’s GDP from 2019 to 2020 as presented in figure 4.

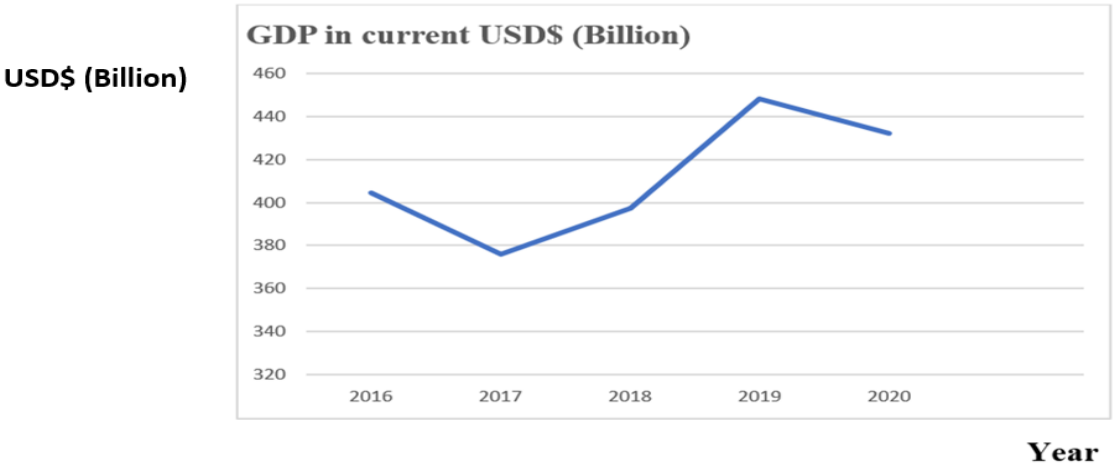



**FIGURE 4: 5-YEAR GDP (NIGERIA)**

*Source: World Bank (2020b)*

The Nigerian economic sector entails three major sectors: The agricultural sector, the industrial sector and the service sector. As illustrated in figure 5 below, the service sector contributes the most to the nation's GDP (53%), followed by the agricultural sector (25%) and the industrial sector (22%) respectively.

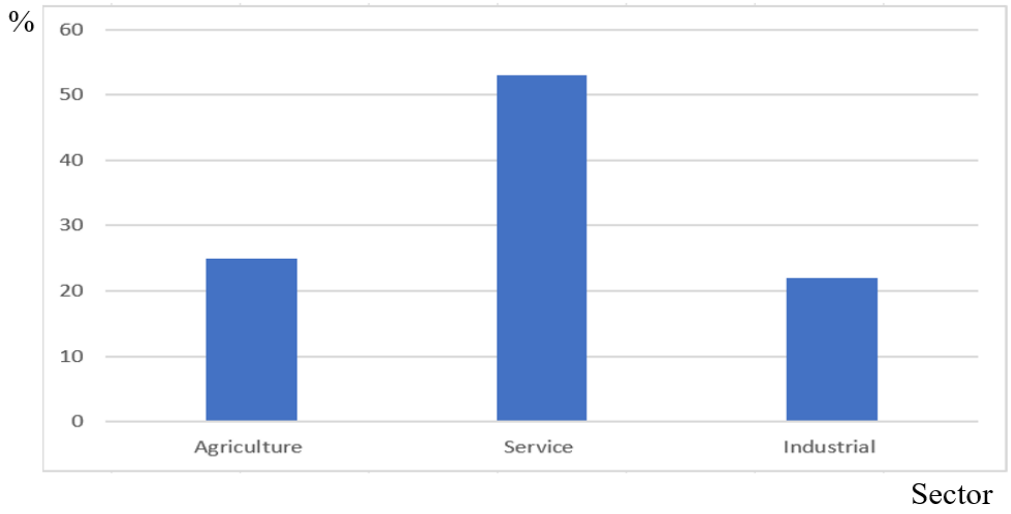



**FIGURE 5: ECONOMIC SECTOR'S GDP CONTRIBUTION IN PERCENTAGE (NIGERIA, 2021)**

*Source: (WORLD BANK, 2021; NATIONAL BUREAU OF STATISTIC, 2021)*

***Agricultural Sector***

Nigeria leads in a variety of agricultural products, including palm oil, cocoa beans, and sorghum. Approximately 70% of households are actively involved in farming. The agricultural sector has been a significant economic sector, generating 26% of the nation's GDP. The sector has contributed

greatly to creating employment opportunities. Employment in the agricultural sector accounts for 35 percent of overall employment (WORLD BANK, 2019). Figure 6 depicts the four segments of the agricultural sector, which is dominated by crop production. Crop production accounts for 87.6% of the total sector's output. Livestock, fishing, and forestry account for 8.1%, 3.2%, and 1.1% respectively.

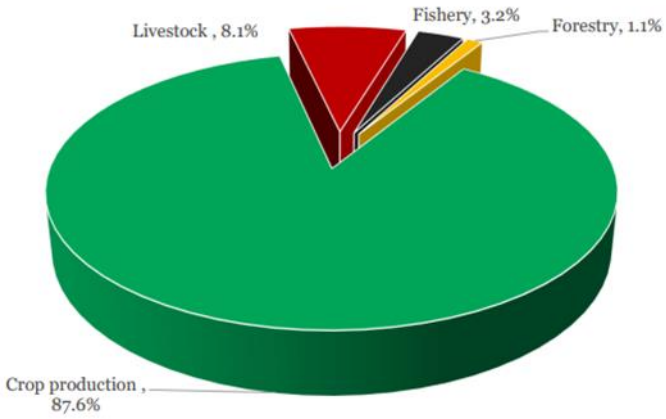



**FIGURE 6: SEGMENTS OF THE NIGERIAN AGRICULTURAL SECTOR**

*Source: PWC (2020)*

Despite accounting for a sizable share of economic activity in Nigeria, agriculture has a negligibly little impact on export and government revenues. Nigeria has 82 million hectares of arable land, but only 34 million of those have been cultivated, therefore, the country has a tremendous potential for agriculture (PWC, 2017). Despite its economic importance, the agricultural sector is confronted with several issues that have an adverse impact on productivity. These include "poor land tenure system, low level of irrigation farming, climate change, land degradation, low technology, high production cost, limited financing, high post-harvest losses and poor access to markets" (FAO, 2021). These hurdles have hampered production, restricting the sector's input to the economy, and causing food insufficiency which has resulted in an increase in food importation (FAO, 2021).

In the last 5 years, the country experienced a trade deficit as agricultural imports exceeded export to a large extent. In 2019, the sector experienced a deficit of ₦689.7 billion (1. 9 billion USD) (PWC, 2020).

***Industrial Sector***

Nigeria engages in a wide range of industrial operations due to the abundance of natural resources, low cost of labor, and huge market size, being the most populated country in Africa. The industrial

sector contributes an average of 22 percent to GDP. The main operations of the sector are oil & gas, manufacturing (food processing, tobacco, textile, motor vehicles and brewing), and construction (NIGERIAN INVESTMENT PROMOTION COMMISSION, 2022). Nigeria, like most developing countries, views industrialization as critical to achieving rapid socioeconomic progress. This is due to the perceived positive relationship between industrialization and socioeconomic growth, as evidenced by the high living standard established in Western industrialized countries (ADEGBITE, 2021). Despite the availability of resources and governments' efforts to attain optimum industrialization, the country's achievements have been rather limited. Nigeria's industrial sector has not yet achieved its expected impact on the economy. In terms of employment, this sector still represents a small portion of the total employment by economic activity. As stated by the WORLD BANK (2019), the industrial sector only accounts for 12 percent of the overall workforce. Manufacturing in Nigeria faces numerous obstacles, majorly poor power supply. Others include poor infrastructure, insufficient funding and skilled labor shortage, excessive bureaucracy, and poor channels of distribution.

***Service Sector***

The service sector represents the fastest-growing sector globally, making a significant contribution to the GDP and accounting for a substantial portion of total employment in most nations (KHANNA et al, 2016). It is Nigeria’s largest sector, accounting for 53 percent of the total employment (WORLD BANK, 2019), and 53 percent of the country's GDP in 2021. This sector comprises of different sub-sectors ranging from "trade, information and communication, financial and insurance, professional, scientific and technical services, tourism, entertainment, and real estate" (NIGERIAN INVESTMENT PROMOTION COMMISSION, 2022). The largest of the sub-sectors are trade (16%) and information and communication (12%). In terms of trade (Wholesale & Retail Services), Nigeria is the as eighth most attractive market to invest in for retailers in Sub-Saharan Africa and twenty-seventh worldwide, due to a large consumer base and a rising middle class (NIGERIAN INVESTMENT PROMOTION COMMISSION, 2022). In Africa, the country has the fastest growing and largest telecom sector. The information, communications, and technology (ICT) sector offer lucrative investment opportunities with a massive population of over 200 million. Nigeria has one of the most open service economies in Africa, and the services sector has remained robust despite difficult economic conditions. The sector's strength has been based on its consumer-facing character, which has allowed it to expand

into a considerable economic force. Growth in the sector has driven economic diversification, aided by government programs and increasing private investment.

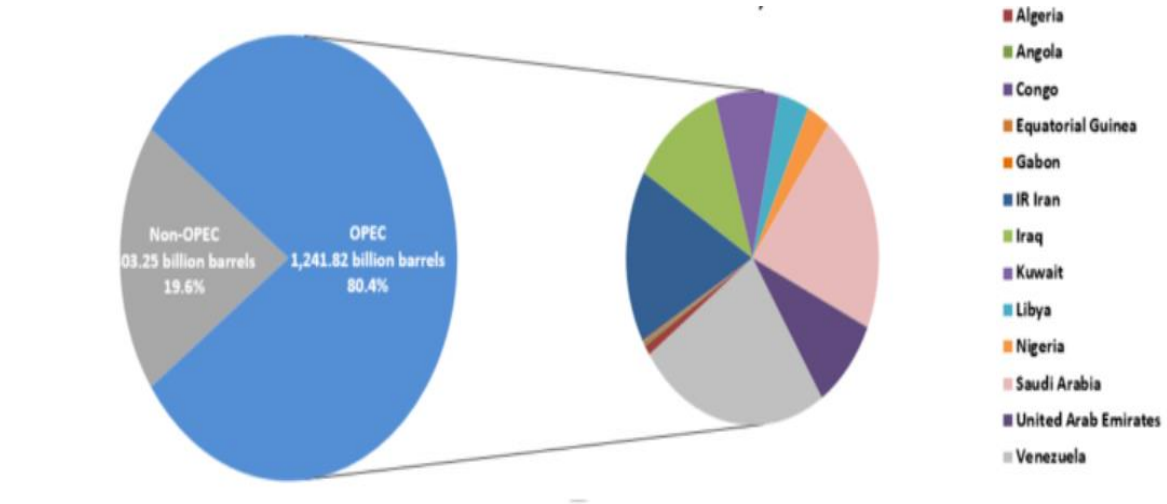
### *2.1.2. OVERVIEW OF THE OIL AND GAS OPERATIONS IN NIGERIA*

Oil was discovered in Nigeria in 1956, notably in the Niger Delta region, which has over a thousand oil wells and 159 oil fields. According to UNDP (2006); DEPARTMENT OF PETROLEUM RESOURCES (2020), there are about 7,000 kilometres of oil pipelines and 4 refineries operated by 10 oil firms listed on the Nigerian stock exchange and other foreign multinational companies (such as Chevron, Eni, ExxonMobil, Shell and Total).

The oil and gas industry remains the biggest contributor to government revenue. This industry remains vital, and without the revenue generated by the oil-producing firms, the government may be unable to execute certain public expenditures as well as survive. These expenditures include sociocultural, economic, military, environmental, legal, and political purposes (OGBONNA and EBIMOBOWEI, 2012).

As a major oil producer, Nigeria is a member of OPEC as well as other international organizations, including the United Nations, African Union, ECOWAS, and Commonwealth of Nations among others.

Figure 7 below represents the OPEC member countries and their significant contributions to global oil reserves, which total 1,241.82.80 billion barrels. OPEC member countries have contributed significantly to global oil reserves, accounting for over 80% of the world's proven oil reserves (OPEC, 2022).




OPEC proven crude oil reserves , at end 2021 (billion barrels, OPEC share)

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Venezuela | 303.47 | 24.4% | United Arab Emirates | 111.00 | 8.9% | Algeria | 12.20 | 1.0% | Equatorial Guinea | 1.10 | 0.1% |
| Saudi Arabia | 267.19 | 21.5% | Kuwait | 101.50 | 8.2% | Angola | 2.52 | 0.2% | | | |
| IR Iran | 208.60 | 16.8% | Libya | 48.36 | 3.9% | Gabon | 2.00 | 0.2% | | | |
| Iraq | 145.02 | 11.7% | Nigeria | 37.05 | 3.0% | Congo | 1.81 | 0.1% | | | |

**FIGURE 7: OPEC SHARE OF THE WORLD CRUDE OIL RESERVES (2021)**

*Source: OPEC (2022)*

Nigeria is one of the world's greatest crude oil producers, and the number one in Africa, capable of producing more than 2 million barrels per day (NNPC, 2020a). Nigeria's oil reserve is ranked first in Africa and seventh globally (NIGERIAN INVESTMENT PROMOTION COMMISSION, 2022). However, the difficulties of COVID-19 since the outbreak of the pandemic have had a severe effect on most economies, including Nigeria. The COVID-19 pandemic has disrupted many economies around the world due to preventive measures taken by governments around the world, resulting in a variety of economic shocks.

Nigeria's oil production declined to 1.14 million barrels per day in 2020 because of the COVID-19 pandemic, reducing oil demand and driving down prices. The country's daily production comprises of "dual-purpose kerosene, liquefied petroleum gas, high-quality spirit engine, diesel, and aviation turbine kerosene" (NNPC, 2020b). Nigeria, however, is yet to wholly exploit its production capability, ranking among the "top 20 countries with the lowest production per capital" (STEARS BUSINESS, 2020). Table 1 below illustrates the top oil-producing countries of the world with their respective production capacities.

**TABLE 1: TOP 20 OIL-PRODUCING COUNTRIES**

| S/N | Country | Daily average production (barrels) | Production | Production per capital (barrels) |
|---|---|---|---|---|
| **1** | United States | 11,848,710 | 329,093,110 | 0.036 |
| **2** | Russia | 10,726,410 | 143,895,551 | 0.075 |
| **3** | Saudi | 10,643,000 | 34,140,662 | 0.312 |
| **4** | Iraq | 4,465,000 | 40,412,299 | 0.110 |
| **5** | China | 3,856,700 | 1,420,062.022 | 0.003 |
| **6** | Iran | 3,553,000 | 82,820,766 | 0.043 |
| **7** | Canada | 3,526.070 | 37,279,811 | 0.095 |
| **8** | UAE | 2,986,000 | 9,682,088 | 0.308 |
| **9** | Kuwait | 2,802,000 | 4,248,974 | 0.659 |
| **10** | Brazil | 2,694,000 | 212,392,717 | 0.013 |
| **11** | Nigeria | 1,873,000 | 200,962,417 | 0.009 |
| **12** | Mexico | 1,743,510 | 132,328,036 | 0.013 |
| **13** | Kazakhstan | 1,631,390 | 18,592,970 | 0.088 |
| **14** | Norway | 1,525,060 | 5,400,916 | 0.282 |
| **15** | Venezuela | 1,511,000 | 32,779,868 | 0.046 |
| **16** | Angola | 1,445,000 | 31,787,566 | 0.045 |
| **17** | United Kingdom | 1,068,890 | 66,959,016 | 0.016 |
| **18** | Algeria | 1,063,000 | 42,679,016 | 0.025 |
| **19** | Oman | 978,600 | 5,001,875 | 0.196 |
| **20** | Azerbaijan | 712,040 | 10.014,575 | 0.071 |

*Source: Stears Business (2020)*

The government's reliance on the oil sector has harmed the host communities' environmental and socioeconomic situations. As a result, the host communities are on the receiving end of dealing with the dilemma from the industrial operations. Environmental degradation, pollution, and distortion of the ecosystem resulting from oil production continue to pose a big challenge. These issues, which can sometimes be avoided, contribute to massive climatic change which harm the environment and society.

Numerous oil spills have occurred since the discovery of crude oil, wreaking damage to the environmental and social well-being of the people. The discovery of crude oil sparked great excitement. However, the host communities became aware of the detrimental effects of the oil firms' operations in the 1970s, and the financial support granted to them proved insufficient (UDOUDOH, 2011). Numerous oil spill incidents have happened over the years, posing danger to the environment and health (THIS DAY, 2020). Over 9,300 oil spills have been reported in

Nigeria over the last decade, causing a hazard to the environment and livelihoods of the host communities (KALEJAYE, 2015). This is shown in table 2 below. Nigeria, which ranks tenth in pollution and seventh in gasoline use, continues to be one of the most polluted nations (WORLD BANK, 2019). This is an outcome of firm operations, sabotage and bunkering by the host communities.

**TABLE 2: OIL SPILLS IN NIGERIA (2011-2020)**

| Year | Number of recorded oil spills | Barrels of oil spilled |
|---|---|---|
| 2020 | 350 | 17,262.083 |
| 2019 | 728 | 42,100.039 |
| 2018 | 684 | 27,559.991 |
| 2017 | 581 | 34,195.387 |
| 2016 | 685 | 42,744.929 |
| 2015 | 920 | 47,614.258 |
| 2014 | 1514 | 78,838.561 |
| 2013 | 1665 | 32,140.157 |
| 2012 | 1121 | 40,683.212 |
| 2011 | 1059 | 73,132.011 |
| **Total** | **9307** | **436,270.63** |

*Source: Author's edition based on (NOSDRA, 2020)*

Recovery from the devastation caused by several oil spillage is far-fetched owing to the negligence of the oil companies to effect proper clean-up and the lack of environmental law enforcement on the part of the government (OLUJOBI, 2017). As a result, various crises have reoccurred in the oil region between the oil firms and the host communities (UWAKONYE et al., 2006; AARON and PATRICK, 2013). There is widespread agreement that corporate firms have failed to fulfill their social obligations, resulting in the perceived marginalization of key stakeholders and a series of clashes in the region. This has exacerbated conflicts rather than foster partnership between oil companies and host communities. Evidence suggests that CSR actions in the Nigerian oil region are aimed at resolving conflict (AARON and PATRICK, 2013).

The failure of regulators to enforce laws has fueled the violence in the oil region. Contamination of the environment has made life intolerable for most of the people who rely on farming as a source of livelihood. Losing their source of livelihood has increased unrest in the oil region. This has

resulted in oil pipeline vandalism or sabotage, as well as theft by members of the host community, resulting in more spills in the region. This is illustrated in figure 8 below.

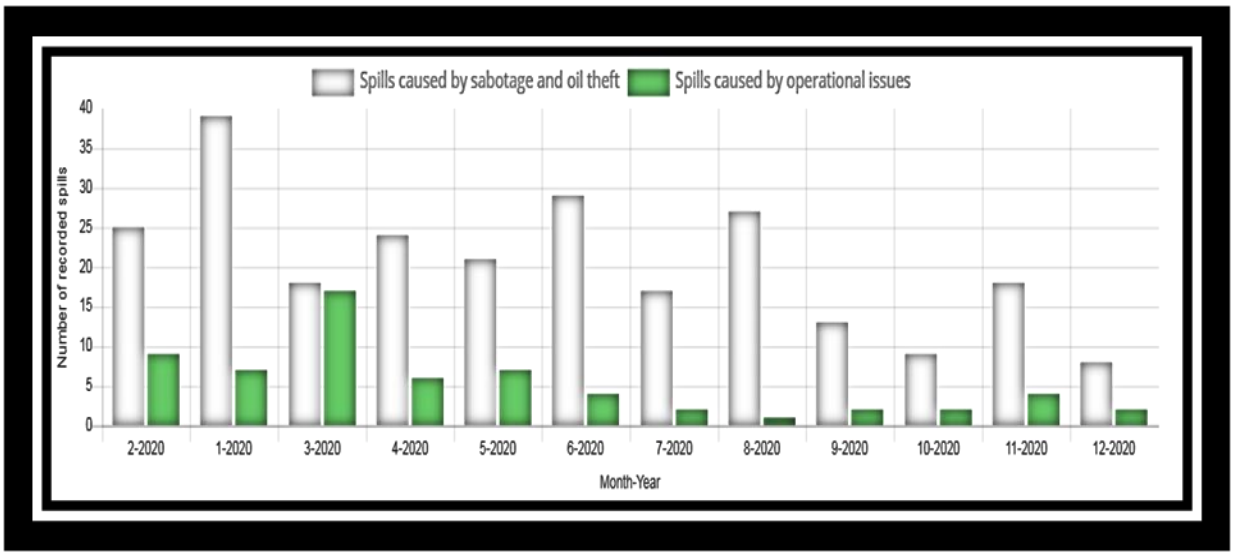



**FIGURE 8: RECORDED OIL SPILLS FROM SABOTAGE/THEFT AND OPERATIONAL ISSUES IN NIGERIA (2020)**

*Source: NOSDRA (2020)*

Over 40.9 billion USD has been lost in the last decade from sabotage and theft (BASSEY, 2019). If proper actions are taken to address the host communities' social concerns, the negative impacts could be mitigated or avoided.

## 2.2. Overview of CSR

CSR remains a feasible strategy that companies can employ to improve the ecological and social well-being of the people. CSR which is dated back in the 1960s emphasizes a firm's responsibility to the society in which it operates (EPSTEIN and YOUNG, 1998). CSR has gained a lot of interest and prompted debate in the academic and professional world. Corporations are obligated to be socially responsible to mitigate the negative impact of their actions. The precise definition and scope of CSR remain vague because what constitutes CSR varies depending on the viewpoint of various stakeholders (OSTAS, 2001).

CSR has led to a strategic shift in the perception of a corporation as a value creator used to build stakeholder relationships and increase value (FREUDENREICH et al., 2019). It is rapidly being acknowledged as a credible strategy used to integrate business goals with long-term growth

(IKRAM et al., 2019). CSR is embedded in today's corporate world, particularly because of the increasing impact of globalization, which requires firms to contribute more significantly to all stakeholders rather than just shareholders (ABBAS, 2020). CSR is inextricably linked to the pursuit of effective customer relationships and the goal of fostering trust and loyalty (SKOWRON-GRABOWSKA et al., 2016). According to YOON et al. (2018), CSR plays a vital part in strengthening a firm's "sustainable growth" strategy. Thus, it is defined as a "comprehensive set of policies, practices, and programs that are integrated into business operations, supply chains, and decision-making processes throughout the company and usually include issues related to business ethics, community investment, environmental concern, governance, human rights, the marketplace, as well as the workplace" (HALIL, 2016:3). Firms that are socially responsible act ethically and promote collaboration, even in the absence of legal backing (CAVUSGIL et al., 2017; CSAPÓNÉ et al., 2015). CSR is defined by MCWILLIAMS and SIEGEL (2000) as the discharge of responsibilities beyond those imposed by “markets or laws”. CSR modifies corporate processes such that a firm's societal impact is maximized while minimizing risks and costs (CSAPÓNÉ et al., 2016). As stated by FREEMAN et al. (2020), a company is considered a system whose performance is determined by how well it interacts with its stakeholders. As posited by CARROLL (1991), CSR is perceived as a means by which companies strike a plethora deal of harmony and collaborations with companies’ top executives with the view to integrate information transparency bothering on the environment in their reporting framework as part of their statutory contributions and recourse to legacy. If companies can successfully attract investors by disclosing evidence of their CSR activities to the satisfaction and expectations of stakeholders, it could improve financial performance (PHAM and TRAN, 2020).

While some scholars argue that CSR is primarily a “western phenomenon”, current studies show that CSR is also emerging in developing countries (PISANI et al., 2017). Stakeholders are more likely to favour firms that are sustainable with the implementation of CSR policies, practice good governance, adhering to transparency in decision-making (SANTIS et al, 2016). Trade liberalization and globalization have made many corporations embrace the idea of implementing CSR practices to earn acceptability and recognition. CSR has been implemented as a business strategy by the majority of the international oil corporations operating (AKANKALI and ABOWEI, 2010).

It is argued that "if businesses behave in a socially responsible manner, CSR will effectively contribute to sustainable development" (CHONDOUGH, 2021:11). Commitment to corporate social responsibility can drive the process of ensuring sustainability (HAHN, 2013; BERKHOUT, 2005; HILSON, 2012). Hence, the "importance of CSR in ensuring a sustainable livelihood of the vulnerable in Nigeria and other developing countries cannot be overstated" (CHONDOUGH, 2021:11).

### 2.3. Economic And Financial Perspective of CSR

Many businesses have realized that CSR is an important aspect of long-term financial success. Market competition makes the disclosure of CSR crucial. Prior research has suggested that a firm can "do well by doing good," implying that CSR has some long-term financial benefits (CHOI and WANG, 2009; OLITZKY et al., 2003). Thus, CSR actions may aid in differentiating a company from its competitors (FLAMMER, 2015; (WANG and BANSAL, 2012), allowing businesses to earn additional income from consumers who commend their viewpoint (FOSFURI et al., 2015). Socially responsible enterprises may motivate and motivate employees who identify with the firm's CSR initiatives to work harder or even accept lesser compensation, or even enjoy favours from the government (FLAMMER 2015; HAWN 2013; KOH et al., 2014). CSR programs can be a profitable component of corporate strategy, minimizing risks, boosting brand image, increasing staff productivity, decreasing a firm's cost of capital, and sustaining inter-relationships with diverse stakeholders that are critical to long-term success. Investing in socially responsible programs can help a company's market position by increasing profits in the long run. An environmentally conscious organization gain from improved financial performance by ensuring that its operations are less harmful to the environment (KING and LENNOX, 2001).

A strategic CSR can be market driven because it can directly affect the demand for a product or service, financial markets, and labour supply. Social and environmental inclinations transform into some form of behaviour that is significant to company profitability, qualifying CSR as a component of corporate strategy (KITZMUELLER and SHIMSHACK, 2012). Job seekers frequently prefer companies with a better public image and value systems that match with there’s (KITZMUELLER and SHIMSHACK, 2012).

## 2.4. Theoretical Background of CSR

This section presents the theoretical basis or background of the study. The selection of a theory depends on its appropriateness, application, explanatory power, and relevance to the study area, which connects the researcher to existing knowledge**.** According to FERNANDO and LAWRENCE (2014) and GRAY et al. (1995), using a single theory as a theoretical framework to explain an organization's CSR practices is insufficient. Because of the complexities of CSR practices, no commonly accepted theoretical framework exists (GRAY et al. 2010). To gain a deeper insight into the CSR concept, it is preferable to gain a meaningful understanding of more than one theory (DEEGAN et. al, 2000). Therefore, this study will build on the three commonly used theories in CSR literature: Legitimacy Theory, Stakeholder Theory, and Sustainable Development Theory.

### *2.4.1. LEGITIMACY THEORY*

Legitimacy theory, as a mechanism, assists businesses in developing, implementing, and communicating socially responsible programs that enable corporate goals to be met in a dynamic environment. The core premise of legitimacy theory is the fulfilment of the “social contract”, allowing for the actualization of objectives. The market’s instability has prompted corporations to reassess their value system and emphasize the need for legitimacy. Legitimacy theory emphasizes the continuous attempt by corporations in ensuring that they are being perceived as acting within the societal standards/norms in which they operate (DEEGAN 2009; BURLEA and POPA 2013). To maintain legitimacy, corporations must thrive to survive by ensuring that these terms are not breached. An organization cannot exist in isolation from society. The expectations of society should be taken into consideration, and not only these of the shareholders/investors. The fulfillment of these expectations ensures a company's continues existence or survival. Legitimacy theory has evolved to emphasize how management will respond to societal expectations (PATTEN, 1992). Given an increase in community awareness and concern, legitimacy theory suggests that corporations will take steps to guarantee that their actions are admissible to society (FRANCES and ANDREW 2017). As a result, firms can utilize the annual report to reinforce how the public views management's response to environmental challenges, or it can be used to redirect attention away from negative environmental issues (DEEGAN and RANKIN, 1996).

Furthermore, legitimacy theory explains the drivers of sustainability reporting (NIKOLAEVA and BICHO, 2011). As a result, a firm can legitimize its operations through the publication of sustainability reports. HOGNER (1982) suggested that corporate social disclosure is triggered by the desire for businesses to legitimize their operations. When corporate actions harm the environment, management can demonstrate its credibility through disclosure (LIU et al., 2017). Even if a firm meets societal standards, its legitimacy could be undermined by failure to make appropriate disclosures to indicate conformity (NEWSON and DEEGAN, 2002). As stated by O'DONOVAN (2002:349) "a process of legitimation may be engaged in by a company either to gain or to extend legitimacy, to maintain its level of current legitimacy, or to repair or to defend its lost or threatened legitimacy". When there is a legitimacy gap, society may revoke the organization's "contract" to operate (DEEGAN et al., 2002). Legitimacy gaps emerge when societal expectations of a firm's behavior deviate from what society views it to be.

However, it becomes challenging for companies to keep up with the ever-changing society's standards and expectations, which might obstruct the company's aims, posing a threat to the company's legitimacy. Unless strategic legitimizations are adequately implemented, these dangers can pose a significant risk to a company. Through CSR disclosure, legitimacy strategies can be employed. This theory is flawed because a firm may choose to selectively report only its positive impact on society while failing to reveal its negative societal impact. To maintain or improve legitimacy, an organization may withhold unfavorable or damaging information about its operations. Studies by CHU et. al (2013) reviewed that, most corporations only disclose neutral and positive news, even when relevant negative news exists from operations that are generally harmful to the environment. Legitimacy theory does offer very useful insights into CSR practices.

### *2.4.2. STAKEHOLDER THEORY/STAKEHOLDER ENGAGEMENT*

The association between a firm and its stakeholders is the focus of the stakeholder theory. Stakeholder theory provides a normative and significant foundation for incorporating various stakeholders in managerial decision-making processes (DONALDSON and PRESTON 1995). This theory was mostly embraced after the mid-1980s and scholars such as FREEMAN (1984) proposed most of the ideas relating to the stakeholder theory. According to FREEMAN (1984), all stakeholders tend to decide whether the utility provided by a corporation outweighs the forgone opportunities. Stakeholders refer to groups and individuals with an interest in a firm's

operations and outcomes and on whom the firm's goals can be achieved. Furthermore, stakeholders may be interested in the firm's outcome because it affects them directly or indirectly. Stakeholders have power if they control vital resources or can influence outcomes either politically, Economically or otherwise. A Customer, for example, has an economic stake since he or she buys the company's goods and services in exchange for money which is utilized by the firm in its operations. A corporation should meet the expectations of its many stakeholders rather than focusing solely on the expectations of its shareholders or owners, according to a stakeholder approach. As a result, responsibility is aimed at a broader set of stakeholders. For an organization to effectively achieve its goals/objectives, the needs of respective stakeholders must not be overlooked, and the conflicting interests that exist amongst distinct stakeholder groups must be carefully balanced.

The corporate society is made up of different individuals and groups namely: "shareholders, employees, customers, government, suppliers, creditors, and host communities" (AVCI et al., 2015; BERLAN, 2016). Stakeholders are those with the ability to impact the firm's objectives (WHEELEN et al., 2018), which could be categorized under "external and internal stakeholders" (CARROLL, 1989). Stakeholder theory promotes fairness, implying that greater value and attention be given to stakeholders that play a vital role in contributing to the organization's goals. "Stakeholder Theory evolves from an organization's reliance on internal and external factors that influence their ability to meet their objectives" (CHONDOUGH, 2020:7). This theory is founded primarily on ethical considerations, which means that a firm's actions concerning its stakeholders are judged using acceptable social norms and conduct.

***The ethical perspective of stakeholder theory***

The ethical standpoint of stakeholder theory asserts that, regardless of stakeholder power dynamics, all stakeholders have equal rights to be treated fairly by a corporation (DEEGAN, 2009). An ethical stance necessitates that all stakeholders be considered, rather than focusing primarily on a privileged or powerful stakeholder group. Under the ethical approach, an organization is not considered a tool for maximizing shareholder profit, but rather one that meets all stakeholders' expectations. However, with the continuous conflicting interests, management finds it difficult to treat all stakeholders equitably. HASNAS (1998:32) urged that when stakeholders have conflicting interests, the company should aim to attain the optimal balance among them.

***The managerial perspective of stakeholder theory***

This perspective of the stakeholder theory proposes that managers strive to fulfill the needs of stakeholders who control the firm's vital resources (FERNANDO and LAWRENCE, 2014). Management is committed to meeting the expectations of those stakeholders who provide the firm with more critical resources. From a managerial standpoint, a corporation is expected to pay more attention to its economically powerful stakeholders rather than all stakeholders, as is the case from an ethical standpoint. Companies engage in a variety of activities to satisfy the various stakeholders, including giving to charities, adopting energy-saving measures, and providing employees with fair wages and benefits. Managing various stakeholder expectations can be challenging because stakeholder interests differ. Cost-cutting strategies to increase shareholder dividends, for example, may conflict with the interests of other stakeholders. Understanding the concerns and abilities of each stakeholder requires a stakeholder analysis. This evaluation will assist management in identifying and distinguishing secondary stakeholders from primary stakeholders with greater influence over corporate activities. From a managerial perspective, secondary stakeholders may not be given priority because the main criterion for decision-making is typically economic.

### *2.4.3. SUSTAINABLE DEVELOPMENT THEORY*

Sustainable Development Theory was developed in 1987 by Aras and Crowther. Sustainable development theory promotes the integration of social, economic, and environmental concerns in all social spheres. This theory emphasizes the significant link that exists between an organization and its environment. According to MAPLES (2005), sustainable development entails innovation and the ability to conserve the ecosystem for current and future generations. Sustainability is a key determinant of a firm's long-term performance. According to scholars such as HAWKIN (1993), corporate operations can hurt the environment, and thus organizations should play critical roles in resolving sustainability issues. Firms are believed to have an impact on income distribution, particularly in connection to labour remuneration, which serves people with their basic needs; thus, business operations are directly linked to sustainable development through wealth creation. Furthermore, even profit-driven organizations must make a significant commitment to attaining sustainable growth and development (SAZ-GIL, et al. 2020). Organization have now been urged to play key role in ensuring ecological sustainability. According to HOPKINS (2007),

governments and other institutions have failed to address societal issues. Therefore, there are high expectations for private sector to promote development (BLOWFIELD, 2012). This theory has given rise to new models such as the Triple Bottom Line and Sustainable Development Model (ELKINGTON, 1997; ARAS and CROWTHER, 2009).

The term "triple bottom line," coined by (ELKINGTON, 1997), refers to a notion that consists of three basic dimensions that are closely linked to one another. These are commonly known as the 3 Ps (profit, people, and planet). The triple bottom line concept holds that a firm's ultimate success is assessed through financial, social, and environmental performance. This is based on the notion that a firm's performance should be assessed in relation to all stakeholders, rather than just those with whom it has direct connections (employees, suppliers, and consumers) (HUBBARD, 2006). As an accounting framework, the triple bottom line evolved as a new tool to be utilized by corporations in measuring overall organizational performance. The triple bottom line expresses the broadening of the environmental agenda by incorporating economic and social concerns (ELKINGTON, 1997). The term also represents the practical framework of sustainability (ROGERS and HUDSON, 2011).

***The economic dimension of the Triple Bottom Line:*** This is centered on various key financial measures of the company's performance. Such metrics include ROA, ROE, Market Share, Gross Profit Margin, Leverage, Inventory Turnover, Total Asset Turnover, and Net Sales. The economic perspective of the triple bottom line is centered on the impact of the firm's business activities on the economy (ELKINGTON, 1997). This connects the firm's growth to economic growth and its contributions to support the economy. A firm's economic duty is critical for carrying out other tasks that are required to be executed during business operations. According to JEON and AN (2019), economic dimensions encompass a wide range of business aspects, including strategic performance, competitive advantage, sustainable growth and development, and economic performance. Thus, it centers on the economic value created by the firm in a way that benefits it and fosters its ability to support future generations (ALHADDI, 2015).

***The environmental dimension of the Triple Bottom Line****:* focuses on the firm's ecological impact (JAMALI, 2006). As businesses operate, they have a sense of duty to ensure a safe and friendly environment for members of the host community, by embracing green technology (DOGL and HOLTBRÜGGE, 2014). Environmental metrics are indicators of a firm's impact on natural

resources as well as its long-term sustainability (SLAPER and HALL, 2011). The overall goal should be to design and implement projects that are sustainable for all stakeholders while also maintaining a competitive edge. The environmental perspective of the triple bottom line refers to actions that do not jeopardize the ecological resources for future generations by making efficient use of these available recourses. This guarantees that enterprises function in an environmentally friendly manner.

***The social dimension of the Triple Bottom Line:*** Firms are also expected to conform to societal standards, even if such responsibilities lack legal backing. It covers a company's societal contributions, such as donations, employee well-being and investment in employee growth and development, education and training, career retention, and community development projects. The triple bottom line from a social dimension pertains to conducting fair business practices that are beneficial to labor, human capital, and to society (ELKINGTON, 1997; GOEL, 2010). Business operations must be managed following stakeholder needs, which ought to be aligned with the firm's value (İYIGÜN, 2015). Figure 9 below illustrates the 3 basic pillars of sustainability.

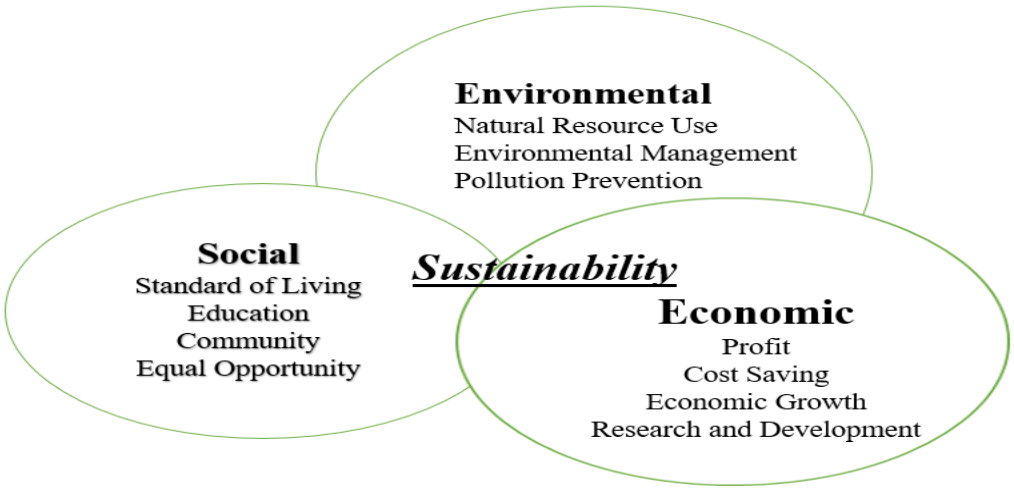



**FIGURE 9: THREE DIMENSIONS OF SUSTAINABILITY**

*Source: Author's computation base on ŻAK, (2015).*

One major shortfall of the triple bottom line framework is the challenges with measuring metrics on most social and environmental sustainability (EPSTEIN and BUHOVAC, 2010).

## 2.5. Instruments of CSR

CSR instruments are critical in giving direction and benchmarks for sustainable performance and hence support effective CSR promotion. These instruments define guidelines that businesses can employ to incorporate CSR values into their corporate strategy and everyday operations (EUROPEAN COMMISSION, 2004). Most companies are eager to implement codes that go beyond national legal regulations. A code of conduct is a formal declaration of values that covers a variety of issues, including labor and human rights, health and safety concerns, and environmental-related standards. Companies adopt or develop a code of conduct for a variety of reasons. This could be used as:

- An internal management tool to outline the moral principles that a company upholds.
- To educate customers about the standards they adhere to when producing the products and services they sell.
- To avoid criticism, by maintaining or improving the brand image, particularly for firms that conduct business with nations whose record regarding human rights is not impressive.
- To strengthen the bond between partners.
- A direct response to pressure from diverse stakeholders.
- To encourage responsible behavior by promoting good governance and legal compliance.

The usefulness of a code of conduct is determined by its credibility and transparency. To what extent are internal and external parties aware of the existence of such codes of conduct, and how seriously do they treat them? How does the company communicate information about its code of conduct? What is the breadth, coverage, level of enforcement, and assessment methods involved? These determine the evaluability of a code of conduct. There must be a clear method of implementation, monitoring and verification.

Several international agreements addressing environmental, social, and governance concerns are among the most notable CSR instruments. Among these international instruments are;

*OECD Guidelines*: The OECD amended its guidelines for Multinational Enterprises in June 2000. The guidelines create non-binding guidelines and standards for ethical business behavior to promote good governance, and economic, environmental, and social growth. These standards are also created to ensure that MNEs conduct businesses in line with the respective countries policies.

It addresses a wide range of issues, including disclosure, human rights, the environment, anti-bribery measures, and consumer interests. These principles have been adopted by all 30 OECD member countries as well as 9 non-OECD countries.

*UN Framework for Business and Human Rights:* The UN Human Rights Council accepted the Guiding Principles on Business and Human Rights on June 16, 2011, establishing a global norm for preventing and mitigating the risk of adverse human rights impacts to regulate corporate entities. The Guiding Principles apply to states and corporations, and execution should be non-discriminatory (ILO, 2012). This has been developed to regulate the operations of multinational enterprises, since they often strain their economic power mainly in developing countries.

*International Labor Organization (ILO):* ILO is a United Nations specialized agency formed in 1919 to promote social justice, and human and labor rights (ILO, 2012). The ILO plays a vital role in promoting CSR as labor standards and social concerns remain a critical component of CSR. The ILO aims to "promote and realize standards and fundamental principles and rights at work; to create greater opportunities for women and men to secure decent employment and income; to enhance the coverage and effectiveness of social protection for all; to strengthen tripartism and social dialogue" (ILO, 2012:3).

- The ILO Tripartite Declaration of Principles: The ILO adopted this code in 1977 to provide guidelines to multinational enterprises (MNEs), governments, employers, and workers to tackle issues such as employment (equal opportunities, job security), training, working conditions, and industrial relations (e.g. "wages, benefits, minimum age, health and safety, freedom of association and collective bargaining, consultation, examination of grievances, settlement of industrial disputes") ((EUROPEAN COMMISSION, 2004:11).
- The ILO Declaration on Fundamental Principles and Rights at Work: This declaration was adopted in 1998 from the World Summit for Social Development in Copenhagen in 1995 and it is applicable to all ILO members. During the Summit, world leaders confirmed the universal applicability of core workers' rights. The declaration represents a renewed commitment by Member States to honor, promote, and enforce key labor rights such as the rights of association, the eradication of forced labor, the abolition of child labor, and anti-discrimination (ILO, 2012).

Nigeria has been an ILO member since 1960 and the country has ratified the core eight ILO labor Conventions, including worker rights, discrimination, child labor, and forced labor, as outlined in the ILO's Declaration in 1998. However, women, minority ethnic groups, disabled people, and others who encounter discrimination do not have adequate legal protection. Several constraints, such as a lack of law enforcement weaken proper implementation. For example, the gender pay gap is enormous, and most women work in precarious and informal economic activities (INTERNATIONAL TRADE UNION CONFEDERATION, 2011). One of the main socioeconomic difficulties of developing countries is the lack of enforceable legal and moral frameworks to control the behavior of MNCs. Corruption, administrative inefficiency, and poor law enforcement have made implementation difficult for Nigeria and other developing countries (ABE, 2016).

Companies use a variety of management standards and frameworks to integrate social and environmental concerns, as well as stakeholder participation into company decision-making and operations. These are internal tools used by organizations to incorporate their values into daily operations. These standards are voluntary, and their success is determined by the degree of market acceptance. For example, ISO 26000 was developed with the intent to provide guidelines on social responsibility.

The oil and gas industry remains one sector with a solid claim to corporate ethics and public relations. The Nigerian oil and gas corporations are taking the lead in promoting and developing appropriate codes of conduct and practices and engaging with various stakeholders. The Nigerian oil and gas firms have individual standards fostering Corporate Sustainable Development, which all employees at all levels are expected to support, promote and conform to. These standards are oriented on good corporate governance, with the goal of achieving corporate sustainability, which promotes economic, social, and environmental responsibility. In making business decisions, the regulatory, economic, safety, occupational health, environmental, and social aspects are all taken into consideration. All company actions are carried out in accordance with the sustainability concept, with the goal of achieving long-term results for the benefit and acceptance of stakeholders. The oil companies encourage and embed a culture of safety, and treat all employees and workers fairly and equally, respecting their rights and human dignity, support employee and community development.

## 2.6. CSR Reporting/Disclosure

CSR is a dynamic concept impacted by a country's unique social, political, and cultural characteristics (ALI et al. 2017; CAMPBELL 2007). Corporate action that is permissible in one country may not be accepted in another, resulting in the non-uniformity in CSR disclosure. Stakeholders continue to pressure businesses to consider environmental and social factors as they implement their strategies and management policies. Many businesses have been required to publish sustainability reports as part of their annual business report (LEGENDRE and CODERRE, 2013). The increasing information needs of various stakeholders have necessitated the need for financial and non-financial disclosure. As a result, a structured framework and guidelines are needed to make the disclosure process easier. Engaging in CSR without making the information available to the public by disclosing would yield no gains, thus, necessitating disclosure or reporting. As stated by HOLDER-WEBB et al. (2009:499) "it is not enough for corporations to simply engage in CSR activities, but it is also important and desirable to make information about these activities available to stakeholders". Hence, the importance of non-financial information has risen dramatically in recent years. The rise in non-financial reporting can be considered as a means of promoting openness in relation to organizational actions towards issues that border on social and environmental concerns (NIELSEN AND THOMSEN, 2007).

CSR reporting refers to a company's voluntary disclosure (reporting) of its CSR activities (VISSER, 2013). CSR reporting can be thought of as a tool for businesses to respond to stakeholders who demand transparency and accountability on a regular basis. According to LANTOS (2001), public demand for managers to incorporate social issues into their strategies has increased as a result of the current social and environmental challenges. Transparency in communicating CSR strategy to stakeholders serves as a key condition for CSR reporting (DUBBINK et al., 2008; VAN RIEL, 2000).

Sustainable reporting, according to critics, is flawed because there is a lack of trust in the report's content (KNEBEL and SEELE, 2015), as it may lack accuracy, sincerity, and completeness (DOANE, 2000). As a result, standards, and frameworks such as the GRI reporting guidelines and ISO codes, among others, are being developed to promote CSR and foster long-term sustainability. Some CSR reporting frameworks are discussed below.

### *2.6.1. ESG REPORTING*

Over the past decade, the world has witnessed a remarkable surge in the focus on sustainability issues, leading to an exponential rise in the dissemination of information surrounding corporate environmental, social, and governance (ESG) practices. Society's heightened awareness of climate change, natural resource depletion, labour conditions, and corporate misconduct has sparked a demand for greater transparency and accountability. In 2005, the term ESG emerged with the launch of the groundbreaking study, "Who Cares Wins?" which sought to explore ways of integrating ESG aspects into the capital market (ALMEYDA and DARMANSYA 2019). ESG, a multifaceted concept, encompasses environmental (E), social (S), and governance (G) elements within corporate operations (LI et al., 2021, GILLAN et al., 2021). Investors have adopted ESG as a standard and strategy for evaluating corporate behaviour and predicting future financial performance. It serves as a comprehensive assessment of sustainability over time and the social impact of business operations.

The significance of ESG extends far beyond mere disclosure; it has become a vital component deeply intertwined with core corporate operations, generating organizational value. KPMG identifies two major driving forces behind the imperative for sustainability reporting. Firstly, the realization that sustainability issues have long-term implications for a firm's economic performance, and secondly, the business community's need to respond effectively to the challenges of sustainable development. Consequently, sustainability reporting has evolved as a powerful tool for businesses to communicate, fostering stronger relationships with internal and external stakeholders. In response to the growing demand for a systematic approach to ESG, global initiatives like the Global Reporting Initiative have emerged (LYDENBERG, 2014). ESG disclosure requirements are regulated differently across countries, with regulatory bodies playing critical roles in ensuring compliance.

ESG reporting encompasses the disclosure of environmental, social, and corporate governance data, shedding light on a company's ESG activities while enhancing investor transparency and inspiring other organizations to follow suit. By providing more relevant information, ESG reporting enables investors to make informed investment decisions, and better assess risks and opportunities. As environmental, social, and governance (ESG) issues increasingly shape business strategies, efforts to enhance the reliability and validity of ESG reporting have taken center stage.

The International Organization for Standardization (ISO) and the Global Reporting Initiative (GRI) have collaborated, signing a memorandum of understanding to foster cooperation in developing guidance and establishing sustainability reporting as a standard practice (VERSCHOOR, 2011). The drivers behind ESG reporting are closely intertwined with regulations, standards, legitimacy, and stakeholders (LOKUWADUGE and HEENETIGALA, 2017). A study by COLEMAN et al. (2010) emphasizes that investors now consider non-financial information, such as ESG factors, when making investment decisions, underscoring the crucial role of a firm's ESG activities. As highlighted by SUTTIPUN (2021), ESG disclosure encompasses eleven categories based on the three dimensions of environmental, social, and governance.

Environmental Dimension: Climate change looms as a paramount concern for humanity, necessitating an understanding of how a company's actions, or lack thereof, can profoundly impact the environment. Environmental indicators gauge the influence of companies on the natural environment, encompassing environmental protection, renewable and non-renewable resource utilization, as well as energy, water, waste, and greenhouse gas management (SUTTIPUN, 2021).

Social Dimension: Social indicators gauge a company's sense of responsibility towards the communities it operates within. The focus of social indicators lies in employee well-being, human rights, health and safety, and social inclusion. These indicators encompass equitable human resource management, occupational safety and health, and fostering positive community relations through responsible treatment of workers/employees, customer engagement, and social/community development.

Governance Dimension: Governance delves into the management and control mechanisms of an organization (DEAKIN, 2012). The separation of ownership and managerial roles in business activities has propelled governance into the spotlight. Governance indicators include ownership structure, such as the composition of executive and non-executive directors, the presence of independent directors, the existence of board committees, and gender diversity on the board. Board composition plays a crucial role in enhancing the quality and quantity of voluntary reporting while mitigating agency costs. This dimension encompasses good governance practices, sustainability risk management, supply chain management, and fostering innovation.

Agency theory proposes that managers as controllers, and shareholders as owners, often find themselves at odds due to conflicting interests. This inherent tension necessitates innovative

solutions, and one such remedy comes in the form of Corporate Governance (CG). With its ability to address the multifaceted challenges stemming from agency conflicts, CG emerges as a powerful tool in today's corporate landscape. Agency theory provides a foundational understanding of the dynamics between managers and shareholders. Managers, entrusted with the day-to-day operations of a firm, act as agents for the shareholders, who seek to maximize their investments. However, their distinct roles and motivations can lead to a misalignment of interests, giving rise to agency conflicts. Hence, Corporate Governance seeks to harmonize the divergent objectives of managers and shareholders. Corporate governance frameworks also advocate for increased transparency and timely disclosure of information. Shareholders and stakeholders alike benefit from comprehensive and accurate reporting, enabling them to make informed decisions. Clear communication channels between managers and shareholders, facilitated through robust reporting practices, foster a culture of accountability and openness (IQBAL et al. 2019).

One of the foremost rationales behind ESG disclosure lies in its ability to minimize information asymmetry and conflicts of interest between shareholders and corporate agents responsible for managing affairs. ESG disclosure enhances accountability, transparency, and ultimately reduces agency costs. As a voluntary reporting process, ESG disclosure makes information about corporate operations, from environmental to social and governance perspectives, accessible to stakeholders. The identification of agency conflicts within firms has propelled the field of corporate governance analysis to new heights (LOKUWADUGE and HEENETIGALA, 2017).

In conclusion, ESG reporting stands at the forefront of sustainable business practices, driving greater transparency, accountability, and investor confidence. By embracing the complexities of the environmental, social, and governance dimensions, companies can effectively navigate the challenges of the modern business landscape while contributing to a more sustainable future. Through robust ESG reporting frameworks, organizations can not only meet regulatory requirements but also foster meaningful relationships with stakeholders, promote responsible business practices, and seize opportunities for long-term growth.

### *2.6.2. GLOBAL REPORTING INITIATIVE (GRI)*

GRI was created and first published in 2000 to assist organizations to increase their accountability and in reporting on sustainability. GRI is the most relevant institution in the context of sustainable reporting, as it is the most trusted and used globally. GRI reporting encompasses an organization's

reporting in a triple bottom line approach. Over 43 countries publish sustainability reports based on the GRI sustainability guidelines (MONEVA et al., 2006). The GRI guidelines were developed "to assist reporting organizations and their stakeholders in articulating and understanding contributions of the reporting organizations to sustainable development" (GRI, 2002:1). The GRI is the most well-known framework for businesses around the world to disclose their social performance on a voluntary basis. Companies that adopt sustainability codes of conduct have used sustainability reporting as a central tool to demonstrate accountability to the world. GRI represents one of the several voluntary reporting frameworks for sustainability (BROWN et al., 2009). The guidelines concentrate on the context of corporate sustainability reports, the company's sustainability vision, sustainability objectives, and sustainable performance (ROCA and SEARCY, 2012). The GRI's goal is to improve poor reporting performance, standardize reports, and make them comparable by providing guidelines (KNEBEL and SEELE, 2015). GRI aims to create guidelines that will be accepted globally for comparable sustainability reporting.

The GRI reporting framework is founded on three core principles: transparency, inclusiveness, and auditability (MONEVA et al., 2006). Transparency, inclusiveness, and auditability serve as a foundation for the reporting process, which includes accountability, verifiability, and stakeholder engagement.

The principles outlined below serve as the foundation for GRI-based reports, allowing for a credible depiction of a company's sustainability performance (EUROPEAN COMMISSION, 2004):

- Transparency: For a report to be credible, it is crucial that there is full disclosure of all the procedures and processes employed in preparing the report.
- Inclusiveness: The reporting entity should involve its stakeholders in the preparation and improvement of reports.
- Auditability: Information reported should be gathered, documented, examined, and disclose in a fashion that allows auditors or assurance providers to vouch for its reliability.
- Completeness: The report should contain all pertinent information.

- Sustainability context: The reporting companies should strive to report their performance within the larger framework that extends beyond economic performance to environmental, and social performance.
- Relevance: The reporting entity should indicate the degree to which the reporting material is important to users.
- Accuracy: The published reports should be correct with minimum to no errors to boost users' confidence in making decisions.
- Neutrality: The information selected and presented should be free of bias, providing a fair picture of the reporting company's performance.
- Comparability: Reports should be written in such a way that they may be compared to past reports as well as reports from competitors.
- Timeliness: Timely delivery of information is crucial. The reporting firms should present information on a regular basis that fits user demands.
- Clarity: The presentation of information should be in a way that allows most users the ability to grasp it while still maintaining an appropriate amount of information.

The adoption of GRI guidelines by companies is influenced by several factors, including company size, profitability, a country's business culture, governance system, ownership structure, media exposure, and industry type (LEGENDRE and CODERRE, 2013; HO and TAYLOR, 2007; REVERTE, 2009; TAGESSON et al., 2009; BRANCO et al., 2008; ALI et al., 2017; RAHMAN et al. 2011; GRAY et al., 2001; JOSHI and GAO, 2009; MARGOLIS et al., 2007; CHAPPLE and MOON, 2005; SIMNETT et al., 2009; CAMPBELL, 2003; PATTEN, 2002; GALLEGO 2006).

GRI Economic reporting extends beyond the traditional financial reporting measures that are primarily aimed at management and shareholders. Economic information is communicated to demonstrate the economic relationships and impacts that exist between the company and its stakeholders.

Environmental reporting under the GRI is "based on consumption efficiency (materials, energy and water), influence on biodiversity and impact minimization (emissions, wastes and effluents,

products and services)" (MONEVA et al., 2006:132). Social indicators are categorized under human rights, labor, product responsibility, and society.

### *2.6.3. ISO 26000*

According to DAHLSRUD (2008), the strategies for corporate social responsibility differ greatly, and there is currently no consensus on what corporate sustainability and social responsibility entail, necessitating the creation of a single standard code. Many companies do not have strategies in place to promote sustainability and social responsibility (GALBREATH, 2009). ISO 26000 was developed in 2010 to provide guidelines on fundamental concepts and methods of social responsibilities, as well as to provide effective enabling tools that organizations can use to profound solutions to social issues in the communities in which they operate. This is intended to be applicable to all types of businesses. According to the ISO 26000 Guidance, the implementation of social responsibility by businesses strives to contribute to long-term growth (ISO, 2010). ISO 26000 can potentially guide businesses toward long-term sustainability. The sustainability of a company is largely dependent on its participation in addressing social concerns in host societies through shared value with other stakeholders that comprise them (PORTER and KRAMER, 2011). ISO 26000 presents a set of guidelines to direct a company's involvement in resolving societal challenges.

ISO 26000 is a starting point when formulating long-term sustainability strategies. It addresses a broad range of sustainability issues rather than focusing on a single area. Alliances are paramount in carrying out social actions as proposed by ISO 26000. Collaboration with other bodies demonstrates involvement and commitment, and it is a more effective instrument for achieving long-term impact in the communities than each company's efforts. As recorded in ISO 26000, businesses should acknowledge the benefits of collaborating with other organizations such as non-governmental organizations, community groups and state agencies which will facilitate the exchange of experiences and resources (ISO, 2010). Value will be created through collaboration processes in which each actor's know-how is pooled and a central node for knowledge transfer is established (Austin, 2003).

According to HERCIU (2016), ISO 26000 focuses on seven fundamental subjects, all of which will enable a company to achieve its sustainable objectives. These include governance, human right, labour, environment, corporate practices, consumer, and community.

According to LICANDRO et al. (2019), ISO 26000 has two main components that entail corporate social responsibility towards the community. These include active community participation and community development. According to a study conducted on 47 Uruguayan companies by LICANDRO et al. (2019), the application of ISO 26000 guidelines on active community participation is not dependent on the company's CSR approach, nor does it depend on managers' knowledge of the guide's contents. ISO guidelines affirm that "active participation in the community goes beyond identifying and involving stakeholders in relation to the impacts of an organization's operations; it also includes support and identification with the community" (ISO, 2010). As illustrated in figure 10, ISO 26000 proposed the active participation of corporate bodies in three dimensions.


**FIGURE 10: THREE DIMENSIONS OF ACTIVE PARTICIPATION**

*Source: ISO (2010)*

According to GARRIGA and MELÉ (2004), the advent of corporate citizenship in the 1980s as a way of interpreting the notion of CSR provided CSR a significant boost. The firm has a moral obligation to give back to society the resources it utilizes from its operation under the approach of a corporate citizen. Because of ethical behaviour through social responsibility involvement, the company's reputation is strengthened, and societal recognition is gained. According to the ISO 26000 standard, a socially responsible firm not only aims at minimizing the negative effects on society and the environment resulting from its operations, but also takes a proactive approach to solving community issues. Community development entails the institutionalization of the community, as well as the empowerment of individuals and groups (ISO, 2010).

ISO 26000 attempts to address critical issues that include the creation of jobs, educational promotion, skills acquisition for labour market insertion, and market economy participation.

The usefulness of ISO 26000 standard for organizations has been subject to criticism. While some see it as a useful guide for implementing corporate sustainability and social responsibility, others doubt its usefulness as a management tool because it may be too broad for SMEs that have insufficient resources (PERERA, 2008). According to SCHWARTZ and TILLING (2009), the generalization approach of ISO 26000 of one management standard fits all is questionable. HAHN (2013) investigated the ability of ISO 26000 in guiding companies toward achieving corporate sustainability and social responsibility. He discovered that ISO 26000 is more beneficial to SMEs that have not extensively dealt with corporate sustainability and social responsibility. Nevertheless, big corporations can utilize ISO 26000 to enhance their existing CSR.

### 2.7. CSR in Nigeria

The origins of CSR in Nigeria is traced back to practices of the Multinational corporations operating in the oil and gas region, aimed at mitigating the consequences of their extraction activities on the environment and the host communities at large. These CSR initiatives are typically ad hoc in nature and are not often sustainable (AMAESHI et al., 2006). The growth of CSR in developing countries can be attributed to globalization, the increasing number of multinational corporations, the increase in stakeholder awareness/expectations, and the emergence of pressure groups, among others (KANSAL et al., 2018).

CSR in developing nations is deeply embedded in indigenous cultural traditions of generosity, corporate ethics, and community involvement (VISSER, 2008). According to AMAESHI et al. (2006), socio-cultural factors like communalism, ethnicity, religious convictions, and generous traditions define CSR in Nigeria. Much of the contemporary approaches to CSR are supported by the values-based traditional philosophy of African humanism (VISSER, 2005) and it is mostly centered on host communities (Jamali et al., 2009). Similarly, GUSTAVSON (2011) also stressed the importance of the cultural systems in shaping how CSR is interpreted, as well as the impact of societal beliefs, value system and practices, such as religion.

CSR continues to be a philanthropic activity in Nigeria, with large corporations investing voluntarily in areas such as education, grants to small local businesses, and infrastructural investments. AMAESHI et al. (2006) contend that CSR in Nigeria is primarily intended to address the socio-economic developmental concerns of the nation. According to ŠKARE and GOLJA (2014), a socially responsible corporation contributes greatly to a nation's

economic advancement and can be viewed as a key determinant of economic growth. Social responsibility in Nigeria is used to address governance issues caused by the country's weak institutions and poor governance, as is the case in most developing nations. CSR is used to build local capacity and to intervene where the government has failed (VISSER, 2008). CSR procedures in Nigeria and other developing countries are less formal, minimum set of standards to comply to, when compared to developed nations and multinational firms that follow formal CSR guidelines in their pursuit of global prominence (VISSER, 2008). CSR initiatives in Nigeria include a wide range of areas and are designed to address the socio-economic challenges that local communities confront. CSR investment is made with the intention to better the living standards of the host population by investing in education, providing food, water, and housing, and providing opportunities for empowerment to disadvantaged empowering underprivileged members of the society.

Developing countries have weak institutions, which, along with an inefficient market system, may limit the benefits of CSR (CUI et al., 2015; WANG et al. 2016). Nigeria's political climate of corruption and bribery exacerbates issues with the business environment (AHUNWAN, 2002). These unscrupulous practices enable corporations with vast resources to easily evade complying with the limited existing CSR laws that could impose accountability (ACHUA, 2008).

CSR disclosure is influenced by a variety of internal and external forces, particularly in developing nations. These include but are not limited to environmental policies, corporate attributes such as size, leverage, and type of industry, a lack of resources, board independence, stakeholder interest/concern, regulatory pressure, a lack of legal standards, weak institutions, globalization, and market forces (ALI et al., 2022). The main drivers of CSR disclosure in developing nations are drawn towards gaining a good reputation and improving financial performance. Other considerations are to exemplify responsibility to key stakeholders, and to fascinate investors (ALI et al., 2022). For developed nations, stakeholder expectations and government regulations heavily influence CSR reporting, whereas the government and stakeholders' low expectations are largely responsible for the limited disclosure in developing economies. There is little to no public pressure to compel CSR participation (BLOWFIELD and FRYNAS, 2005; AHUNWAN, 2002; ALI et al., 2017). However, the global stakeholders including the international supply chains, the global NGOs, and the global regulatory organizations like the World Bank have an impact on

the disclosure of CSR in Nigeria and most developing nations. According to institutional theory, institutions have a large influence on how CSR is implemented and disclosed. As proposed by the institutional theory, NGOs and other institutions that are capable of setting CSR standard can establish the necessary standards that is expected of an organization (MUTHURI and GILBERT, 2011). Collaboration with local NGOs allows for detailed knowledge of the community's key needs. NGOs act as intermediaries between companies and their social work programs.

Evidence suggests that firms in developing nations are not as aware of and appreciative of CSR and its potential benefits to them as they ought to be (RAMASAMY and TING, 2004). CSR in Nigeria is faced with several challenges that limit the ability to achieve its full potential. These can be ascribed to limited resources and a lack of suitable and workable institutions that facilitate CSR execution.

### 2.8. Financial Performance

Financial performance details a comprehensive assessment of a firm's financial health, in connection with its assets, liabilities, revenue, expenses, equity, and profitability. It encompasses a thorough analysis of financial statements, unveiling crucial indicators through the lens of financial ratios. These ratios serve as gateways to evaluating a company's financial well-being, drawing upon data provided in the financial statements. By examining financial performance, organizations can gauge their achievements in monetary terms, assessing the efficacy of their goals, policies, and operations (NGUMO et al., 2020).

For shareholders, the measurement of financial performance centers on the extent to which they are better off at the end of a period compared to the beginning. This evaluation can be accomplished through ratios derived from financial statements, particularly the balance sheet and income statement, or by examining data on stock market prices (BARAZA, 2014). Capital adequacy, liquidity, and profitability indices form the bedrock for the evaluation of financial performance (YUDHARMA, 2016). Assessing financial performance typically involves utilizing accounting and market measures of performance. Accounting results are evaluated through indicators such as return on assets, return on investment, and profit margins, while market performance entails gauging market value to book value and stock performance, Tobin’s Q among others (KÜÇÜKBAY, 2016).

Financial reporting plays a critical role in shedding light on a company's financial results. The establishment of International Financial Reporting Standards (IFRS) in 2001 has provided a comprehensive framework that encompasses not only financial reports but also the foundational principles of financial reporting. IFRS ensures comparability and offers valuable information about an entity's financial and income position. This information is instrumental for foreign partners, investors, and creditors, enabling them to make informed decisions (ORBÁN et al., 2016). As the demand for financial statement users grows, there is a pressing need to enhance the financial reporting of financial instruments (ORBÁN and TAMIMI, 2020).

According to COPELAND et al. (2001), a company's intrinsic value rests upon its ability to generate revenue. Assessing financial performance entails employing various analytical tools, including ratio analysis, cash flow analysis, and comparative financial statement analysis (SUBRAMANYAN and WILD, 2014). Serving as indicators of an organization's current development and potential growth, financial performance measures act as lagging indicators, capturing historical performance primarily influenced by tangible assets (ONG, 2003). The selection of appropriate ratios for assessing financial performance depends on the characteristics of the entities under study and the specific research objectives. Among the most widely used ratios for measuring financial performance are Return on Equity (ROE) and Return on Assets (ROA), as they offer valuable and comprehensive insights into a firm's financial standing (IQBAL et al., 2019; MONTEIRO, 2006). ROA, in particular, holds significance as it measures a company's efficiency in utilizing its assets to generate profits (JØRGENSEN, 2011). Considered an authentic gauge of financial performance, ROA provides a lens into a company's effectiveness in capitalizing on its assets to generate returns (MISHRA and SUAR, 2010).

In summary, financial performance serves as a dynamic tool for assessing a firm's financial health and growth potential. Through a burst of analytical insights, organizations can evaluate their achievements, leveraging ratios and analytical tools to delve into the intricacies of their financial statements. By unlocking the complexities of financial performance, companies can make informed decisions, enhance investor confidence, and chart a path toward sustainable financial success.

## 2.9. Review of Relevant Empirical Studies

This section reviews the empirical literature that has established a link between the identified CSR proxies, board equity ownership and FP. The variables of concern are social disclosure, environmental disclosure, economic disclosure and board equity ownership as against FP.

For decades, the connection between a company's CSR and FP has been a cause of concern and debate. There has been no consensus among scholars on the relationship that exists between these variables. A review of 52 studies by CORDEIRO and TEWARI (2015) indicates that an organization that pays attention to the needs of its stakeholder group through CSR activities boosts its market value and profitability.

Sustainability reporting will provide the company with a competitive edge by increasing employee engagement and productivity and improving the company's image. HAMMANN et al. (2009) found that socially responsible practices tailored towards employee development and customer satisfaction have a favourable impact on the organization and its overall performance. Socially responsible behaviour is believed to prompt a positive reaction from the stakeholders, which will in turn have a beneficial impact on performance. In the study of JO and HARJOTO (2011), board equity ownership has a positive effect on CSR, which implies that the increase in board equity ownership will increase in CSR disclosure. This will invariably enhance corporate performance and attract positive responses from investors. Furthermore, PHAM and TRAN (2020) explored the mediating role of corporate reputation on the relationship between CSR and corporate performance. Findings demonstrate that CSR boosts a firm's reputation, and reputation has a great impact on FP. Firms gain from CSR disclosure by providing favourable indications to diverse stakeholders, which could positively impact financial performance (THUY et al., 2021). The ability to leverage the reputation advantage through CSR participation may strengthen consumer relationship leading to higher sales and profitability, which is the core purpose of public relations (AKSAK et al., 2016). CSR disclosure as a public relation raises consumer awareness, which leads to a favourable attitude toward purchasing the firm's products/services (FELDMAN and VASQUEZ-PARRAGA, 2013). In the study on the link between CSR and FP, WADDOCK and GRAVES (1997) found a close link between these two variables. Firms that are financially sound will invest more in CSR as they have the means to invest in long-term strategies, as opposed to their counterparts who are struggling with finances. However, in order to maintain effective

performance, all stakeholders' concerns must be recognized. BECK et al. (2018) undertook a cross-country study in Australia, Hong Kong, and the United Kingdom to determine the link between CSR and FP. The study discovered a substantial and positive link between CSR and FP using a wide range of GRI measures. Similarly, TSOUTSOURA (2004) conducted a 5-year study on the nexus between social responsibility and FP in most S&P 500 companies and discovered a strong and positive connection. PAN et al. (2014) used panel data to examine the connection between FP and social responsibility in 228 Chinese mineral-listed firms. They discovered that the stakeholder responsibility with the closest connection to the company had stronger ties with financial performance. As a result, many mineral companies disregard the public interest, resulting in conflicts.

According to WADDOCK and GRAVES (1997), being accountable and fulfilling the interests of stakeholders can have a good impact on all aspects of the business, notably financial performance. Positive financial gains have frequently been attributed to a good reputation. A study conducted in Nigeria by UADIALE and FAGBEMI (2012) showed a significantly positive link between CSR and FP measures. Investing in CSR activities will likely boost the firm's image/reputation thereby increasing its returns. In addition, ALIYU and NOOR (2015) conducted a regression analysis on the link between CSR and corporate FP in Nigeria. As shown from the findings, social disclosure such as community involvement, product/customer related, and employee concern improves financial performance, whereas environmental disclosure negatively relates to financial performance.

Additionally, KARIM et al. (2020) examined the impact of socially responsible behaviour on the performance of Malaysian firms, using board independence as a moderating variable. The researchers found a negative effect of CSR accounting measure of performance (ROA). Whereas no significant impact is observed with the market base measure of corporate performance (Tobin's Q). Additionally, board independence has a negative moderating effect on the connection between CSR and firm FP. According to PORTER and KRAMER (2006), "a well-initiated CSR can be a source of opportunity, innovation and competitive advantage". Firms can improve their market competitiveness while also enhancing the economic and social conditions of the communities by adopting and implementing policies and practices that aim at creating "shared value". Scholars that argue a positive correlation stress the social role that organizations play as a part of society.

As a company grows, so do the social duties it must perform. Through a questionnaire survey, RUF et al. (2001) argue that the higher the level of stakeholder satisfaction, the higher the firm's FP. Additionally, DUNAY et al. (2021); THUY et al. (2021); PLATONOVA (2018); SARKAR et al. (2021); NAIR et al. (2019); IKRAM et al. (2020); AWAYSHEH et al. (2020); BAG and OMRANE (2022) all found a positive correlation in their various investigations**.** Those that argue for a positive link believe that the additional money generated through CSR outweighs the costs.

In contrast, firms' finances may suffer because of additional costs incurred through CSR engagement with the aim of building a corporate reputation as good social citizens (JO and HARJOTO, 2011; KOTCHEN and MOON, 2012; DAVIS, 1973). According to neoclassical theory, CSR and financial performance are negatively correlated since CSR expenditures increase corporate expenses and divert funds that could have been utilized for a more profitable potential investment (BIRD et al., 2007). Authors who argue that CSR should not be part of a firm's strategy or corporate activities emphasize the possible negative impact of "excessive diversification", claiming that managers could lose focus on the primary objectives, posing a barrier to surviving and remaining competitive (PLATONOVA et al., 2018). VANCE (1975) found a negative link between a company's FP and social responsibility when he investigated investment risks. He concluded that participation in CSR will jeopardize the company's ability to perform well in the stock market. Those who hold a negative view believe that pursuing CSR goals will conflict with maximizing shareholders' value. BLOWFIELD and MURRAY (2008) and JENSEN (2002) also hold a negative opinion. Building on agency theory, BARNEA and RUBIN (2010) suggested that when resources are excessively tailored towards CSR engagement by managers, which could be for private gains (e.g., careers advancement), it increases agency costs, resulting in a fall in firm value which results in a negative relationship between CSR and corporate value. NELLING and WEBB (2009) argue that CSR cannot enhance a company's financial performance. Studies by GOLLOP and ROBERTS (1983) found a negative relationship, implying that investing in CSR diverts funds that could have been used for investments that are profitable. Further empirical investigations (GILLAN et al., 2021; CHO et al., 2012; BUCHANAN et. al. 2018; MOORE, 2001; LÓPEZ et al., 2007) demonstrated a negative link between CSR and corporate FP. Those who propose a negative relationship argue it is enough for organizations to concentrate on the primary goal of maximizing shareholders' profits in compliance with laws and regulations.

On the other hand, some scholars disagree that any relationship exists between CSR and FP (PEKOVIC and VOGT, 2021; MAHONEY and ROBERTS, 2007; BROWN et al., 2006; HARJOTO and JO, 2007; MCWILLIAMS and SIEGEL, 2000; SEIFERT et al., 2003; SOANA, 2011; SU et al. 2020). Studies by AUPPERLE et. al (1985) and PELOZA (2009) found a neutral or no correlation between FP and social responsibility.

# 3. MATERIALS AND METHODS

In the introduction chapter, the hypotheses were explored and formed in accordance with the study's goals. This chapter covers the methodology, research design, study population, and study sample considering the primary purpose of the study. The chapter also defines and details how all the variables are measured.

A diagnostic test which includes a multicollinearity test, auto and serial correlation test, heteroskedasticity test, normality test and hausman specification test is carried out prior to analyzing the hypotheses under investigation. Regression analysis is further deployed to ascertain the correlation between the variables under investigation. Panel Corrected Standard Error and Feasible General Least Square (FGLS) model are thereby utilized to analyse the underlying hypotheses.

Secondary data from the Nigerian stock exchange, the annual reports, and other statistical data will be used in the study. The study sample includes seven publicly traded oil and gas firms on the Nigerian stock exchange (NXE) from the period of 2012 to 2020. Board equity ownership is used as a moderator to capture the indirect effect of CSR disclosure on firm FP. The sample consists of 10 oil firms listed in the Nigerian stock exchange. However, after the due screening, 3 of the oil companies without consistent annual reports for the period (2012 to 2020) were eliminated, which reduced the sample to 7 oil firms. The oil sector remains the most relevant extractive sector in analyzing environmental issues. This study employs a sample of publicly traded oil and gas companies because of a variety of reasons such as, the sector’s significance to the Nigerian economy, its extensive operational impact on the environment, the conflict between the host communities and the oil firms and data availability concerns. The data will be analyzed using STATA 14 statistical software. Table 3 presents the data of the examined oil and gas firm relating to the year of incorporation, number of employees, revenue generated for the period under investigation and the profit thereof.

**TABLE 3: LIST OF THE ANALYZED OIL AND GAS COMPANIES**

| No | Name | Year Incorporated | Employees N0 | Revenue 2012-2020 (₦) | Net profit 2012-2020 (₦) |
|---|---|---|---|---|---|
| 1 | ETERNA PLC | 1989 | 100-200 | 1,182,115,997,000 | 9,502,400,000 |
| 2 | JAPAUL GOLD & VENTURES PLC | 1994 | 200-500 | 41,435,243,000 | -18,719,540,000 |
| 3 | MRS OIL NIGERIA PLC | 1969 | 200-500 | 760,763,410,000 | 139,433,000 |
| 4 | TOTAL NIGERIA PLC | 1956 | 200-600 | 2,288,555,003,000 | 54,462,168,000 |
| 5 | CONOIL PLC | 1970 | 200-500 | 1,100,780,955,000 | 16,551,991,000 |
| 6 | 11 PLC | 1951 | Nil | 1,044,497,822,000.00 | 54,454,699,000 |
| 7 | ARDOVA PLC | 1964 | 200-400 | 2,874,001,991,000 | 45,496,943,000 |

*Source: Author's edition based on (Nigerian Exchange Group, 2020; African Financials, 2020)*

ETERNA PLC is a Nigerian lubricant and petrochemical manufacturer and marketer. In 1997, the company was first listed on the Nigerian stock exchange (NGX). With a market capitalization of ₦9.78 billion (21.30 million USD), it is the 60th most traded stock on the NGX in the last quarter. JAPAUL GOLD & VENTURES PLC was listed on the NGX in 2005 as an upstream service oil and gas company. With a market capitalization of ₦2.13 billion (4.63 million USD), it is the 60th most traded stock on the NGX in the last quarter. MRS OIL NIGERIA PLC market and distributes refined petroleum products, lubricants, and manufacturing of greases. With a market capitalization of ₦5.49 billion (11.96 million USD), It is currently the 82nd most valuable stock on the NGX. It was listed in 1978. TOTAL NIGERIA PLC is a Petroleum Marketer that currently has the 30th most valuable stock on the NGX, with a market capitalization of ₦76.1 billion (165.72 million USD). In 2001, the company was listed on the NGX. Conoil Plc is a marketer of refined petroleum products and lubricants. It was first Listed in 1989 and has a current market capitalization of ₦18.4 billion (40.07 million USD), ranking as the 54th most valuable stock on the NGX. 11 PLC is a marketer of petroleum products such as gasoline, motor oils, lubricants, and fuel. The company was first quoted on NGX in 1991 with a market capitalization of ₦82.22 billion (179.04 million

USD). ARDOVA PLC is engaged in the business of marketing petroleum products. It was first Listed in 1978 and has a current market capitalization of ₦24.9 billion (54.22 million USD), ranking it as the 46th most valuable stock on the NGX (AFRICA EXCHANGES, 2023; AFRICAN FINANCIALS, 2023).

### 3.1. Moderating Variable

The direct link between CSR and corporate performance has been examined extensively throughout the years, with inconclusive/mixed results. The findings between these variables are classified as either positive, negative, or non-existent (OEYONO et al., 2011; ABU BAKAR and AMEER, 2011; CRISÓSTOMO and DE SOUZA FREIRE, 2011). Many scholars contend that the inconsistencies in empirical findings between CSR and corporate FP may be ascribed to the exclusion of intermediate variables (MCWILLIAMS et al., 2006; ORLITZKY, 2008). The quest for a simple link between these variables may be futile because CSR may have an impact on company performance via intermediary variables. A moderator variable should be explored when inconsistency persists in findings (KIM et al., 2001). According to PERRINI (2006), including a mediating or moderating variable would help to increase the understanding of the mechanisms through which CSR affects a company's performance. SURROCA et al. (2010) assessed that the absence of some moderating and mediating variables may explain the lack of proof for a significant relationship between CSR and FP.

Equity measures a company’s total assets to its total liabilities. ALHAJI (2018) defined board equity ownership as the number of shares owned by the board to the total number of shares. Under the agency theory, many studies argue that ownership and control should be separated (JENSEN and MECKLING, 1976). The board of directors continues to be one of the mechanisms used by corporations to maintain some level of control and efficiency (PEASNELL, et al., 2003). Equity incentives, according to BOUWENS and VERRIEST (2014), act as a technique. Equity ownership may prompt managers to implement risk-mitigation methods to protect the firm. REN and CHANDRASEKAR (2012) found that board ownership had an impact on business performance. It is presumed that board members will act in the interests of the organization if they own equity. Holding a portion of the company's shares reduces the agency problem (BOKPIN, 2013). Thus, this study proposes the use of board equity ownership to moderate the correlation between CSR and firm performance.

### 3.2. Dependent Variables

Performance is one of the most crucial indicators of a company's success. Firm performance is a notion that describes how well a company accomplishes its goals. Firm performance is a metric that may be used to assess and measure how well a company accomplishes its goals (ANTONY and BHATTACHARYYA, 2010). It refers to a firm's capacity to fulfill its objectives through the efficient and effective use of available resources.

Corporate success can be measured in a variety of ways. This study will employ two accounting measures (ROA and ROE) and two market measures of corporate performance (Tobin's Q and Stock Return). The use of these measures is consistent with numerous studies on corporate performance (SHRADER et al., 1997; CHEN et al., 2018; ORLITZKY et al., 2003; YUSOFF et al., 2013; SIMPSON and KOHERS, 2002).

*ROA* evaluates a firm's profitability level by measuring the returns on total assets after interest and taxes. This demonstrates management's ability to make profits by utilizing the company's assets. Thus, it measures the net profit made from the utilization of assets (PURBA and BIMANTARA, 2020).

*ROE* measures the earnings attributable to the firm's owners in relation to the capital invested in the company (PURNAMASARI, 2015). The more the returns, the better the position of the owners of the business and the likelihood of an increase in investment. BRIGHAM and EHRHARDT (2011) among others stated that maximizing a firm's market value is essential in order to efficiently manage a firm. As a result, the significance of ROE as a profit metric is relevant for both the company and the investors. MONTEIRO (2006) stated that ROE remains the most important ratio for investors to consider while making investment decisions. ROE is the net earnings divided by the book value of equity (DE WET and DU TOIT, 2007).

*Tobin's Q* as developed by TOBIN (1998) is commonly used to measure corporate performance. This metric measures the market value of an asset to its replacement cost (TOBIN, 1998; WOLFE and SAUAIA, 2003). It is calculated as the "market value of equity in addition to the book value of debt, divided by the total assets" (AL-Matari et a., 2012; PHAM et al., 2011).

*Stock Returns* is another key indicator utilized for performance measurement by scholars (O'SULLIVAN and ABELA, 2007; ITTNER et al., 2003; SUHADAK et al., 2019). The value of

a publicly listed firm can be determined by the value of its existing stock in the capital market (SUHADAK et a., 2019). Stock returns is measured as the ratio of price and book value of share (BRAMMER et al., 2006; SUHADAK et al., 2019).

### 3.3. Independent Variables

In this study, CSR disclosure will be used as an independent variable. The research will be centered on three dimensions of sustainable reporting: social, economic, and environmental disclosure in accordance with the GRI. Each parameter is measured by dividing the number of items disclosed by an organization to the total number of items for each dimension. A score of 1 represents every item disclosed which indicates that a CSR indicator has been reported. Whereas a score of 0 represents no disclosure, indicating that no disclosure has occurred for each indicator index per firm.

### 3.4. Control Variables

*Firm size* has long been thought to be a factor in determining a company's performance. Previous research defined firm size as a company's total assets (MALMI and BROWN, 2008; DOGAN, 2013; PHAM and TRAN, 2020). In accordance with the concept of economies of scale found in the “traditional neoclassical view”, firm size is a significant component that impacts profitability (NIRESH and THIRUNAVUKKARASU, 2014). Additionally, prior research by EMBONG et al. (2012), argues that size as a control variable is critical because it has been found to influence the cost of equity capital. prior research by KARIM et al. (2020) and AKBEN-SELCUK (2019) also employed firm size and leverage as control variables.

*Leverage* is a measure of how much debt a company uses to finance its assets. It is frequently cited as a determinant factor of corporate FP because it helps in addressing the agency problem. In line with prior studies (such as SALEHI, 2009; ANG et al., 2000; HENRY, 2010; PHAM and TRAN, 2020), leverage will be measured as the ratio of debt to equity. Debt to equity relates to a firm's total liabilities to its shareholder equity used to determine the extent of leverage being used (JIHADI et al., 2021). The variables under investigation are therefore summarized in Table 4.

**TABLE 4: VARIABLE MEASUREMENTS**

| Variables | Nature | Proxies | Measurement | Source |
|---|---|---|---|---|
| Corporate Performance | Dependent Variable | ROA | $\frac{\text{Net Profit}}{\text{Total Asset}}$ | (ARAS et al., 2010). |
| | | ROE | $\frac{\text{Net Profit}}{\text{Total Equity}}$ | (LEE, 2009) |
| | | Tobin's Q (TOBINSQ) | $\frac{\text{Equity + Liabilities}}{\text{Total Asset}}$ | (AL-MATARI et al., 2012**;** PHAM et al., 2011) |
| | | Stock Return (STOCKRET) | The ratio of price and book value of share. | (BRAMMER et al., 2006; SUHADAK et al., 2019). |
| Corporate Social Responsibility | Independent Variable | Environmental Performance Disclosures (ENVDIS) | GRI disclosure checklist was assigned the value of "1" if fully disclosed, and "0" if assumed relevant but no disclosure. | (SIAL et al., 2018) |
| | | Economic Performance Disclosures (ECONDIS) | GRI disclosure checklist was assigned the value of "1" if fully disclosed, and "0" if assumed relevant but no disclosure. | (SIAL et al., 2018) |
| | | Social Performance Disclosures (SOCDIS) | GRI disclosure checklist was assigned the value of "1" if fully disclosed, and "0" if assumed relevant but no disclosure. | (SIAL et al., 2018) |
| Board Equity Ownership | Moderator | (BOWN) | The number of shares owned by the board to total shares (ALHAJI, 2018) | (KHAN et al., 2013) |
| Firm Size | Control | FSIZE | Total assets | (DOGAN, 2013) |
| Leverage | Control | | $\frac{\text{Total Debt}}{\text{Total Equity}}$ | (SALEHI, 2009) |

*Source: own computation (2020)*

# 4. RESEARCH FINDINGS AND THEIR EVALUATIONS

This chapter begins with a description of the sample under consideration, followed by a comparison of the oil and gas firms regarding their CSR disclosure. A diagnostic test which includes a multicollinearity test, auto and serial correlation test, heteroskedasticity test, normality test and hausman specification test is carried out prior to analyzing the hypotheses under investigation. Regression analysis is further deployed to ascertain the correlation between the variables under investigation.

## 4.1. Descriptive Statistics

Social, economic and environmental disclosure represents the independent variable while FP as proxied by ROA, ROE, Stock Return and Tobin's Q is the dependent variable. Board equity ownership is the study's moderating variable, while firm size and leverage are the control variables. Table 5 displays individual firm's descriptive statistics as well as a statistical overview of the explained and explanatory factors, based on the mean and standard deviation. The most crucial part of descriptive analysis is seeing how the data behaves in terms of variance and departure from the mean, which may lead to comparisons between what was collected and what was typically needed by an organization's legal standards (LAWLESS and HEYMANN, 2010).

## TABLE 5: DESCRIPTIVE STATISTICS

| | MEAN | STD. DEV. | MIN | MAX |
|---|---|---|---|---|
| **ETERNA PLC** | | | | |
| ROA | .034 | .021 | -.005 | .069 |
| ROE | .107 | .055 | -.012 | .161 |
| TOBINSQ | .82 | .07 | .73 | .933 |
| STOCKRET | .156 | .076 | .078 | .322 |
| ENVDIS | .2 | 0 | .2 | .2 |
| ECONDIS | .6 | 0 | .6 | .6 |
| SOCDIS | .361 | .105 | .25 | .45 |
| BOWN | .023 | .004 | .02 | .032 |
| FSIZE | 3.286e+10 | 1.176e+10 | 1.825e+10 | 5.314e+10 |
| LEVERAGE | 2.202 | .993 | 1.205 | 4.192 |
| **ARDOVA PLC** | | | | |
| ROA | .047 | .024 | .021 | .083 |
| ROE | .138 | .057 | .067 | .242 |
| TOBINSQ | 1.574 | .903 | .817 | 3.58 |
| STOCKRET | .911 | .918 | .198 | 2.96 |
| ENVDIS | .211 | .033 | .2 | .3 |
| ECONDIS | .533 | .141 | .4 | .8 |
| SOCDIS | .3 | 0 | .3 | .3 |
| BOWN | .095 | .06 | 0 | .143 |
| FSIZE | 1.055e+11 | 4.291e+10 | 4.251e+10 | 1.472e+11 |
| LEVERAGE | 2.166 | 1.007 | 1.227 | 4.606 |
| **JAPAUL GOLD & VENTURES PLC** | | | | |
| ROA | -.143 | .406 | -.716 | .763 |
| ROE | -.207 | .876 | -2.304 | .722 |
| TOBINSQ | 1.142 | .615 | .643 | 2.533 |
| STOCKRET | .104 | .058 | .054 | .249 |
| ENVDIS | .033 | .05 | 0 | .1 |
| ECONDIS | .333 | .2 | .2 | .6 |
| SOCDIS | .1 | .15 | 0 | .3 |
| BOWN | .064 | .007 | .059 | .071 |
| FSIZE | 2.941e+10 | 7.611e+09 | 1.561e+10 | 3.878e+10 |
| LEVERAGE | 1.871 | 3.514 | -2.574 | 8.715 |
| **MRS OIL NIGERIA PLC** | | | | |
| ROA | -.005 | .029 | -.062 | .022 |
| ROE | -.004 | .073 | -.134 | .066 |
| TOBINSQ | .792 | .095 | .655 | .912 |
| STOCKRET | .15 | .048 | .105 | .234 |
| ENVDIS | .2 | 0 | .2 | .2 |
| ECONDIS | .8 | 0 | .8 | .8 |
| SOCDIS | .406 | .068 | .3 | .45 |
| BOWN | 0 | 0 | 0 | 0 |
| FSIZE | 5.830e+10 | 1.307e+10 | 3.666e+10 | 8.136e+10 |
| LEVERAGE | 1.865 | .482 | 1.176 | 2.671 |

| | MEAN | STD. DEV. | MIN | MAX |
|---|---|---|---|---|
| **TOTAL NIGERIA PLC** | | | | |
| ROA | .056 | .029 | .014 | .108 |
| ROE | .308 | .173 | .073 | .628 |
| TOBINSQ | 1.357 | .176 | 1.07 | 1.569 |
| STOCKRET | .549 | .171 | .281 | .741 |
| ENVDIS | .233 | .1 | .2 | .5 |
| ECONDIS | .6 | 0 | .6 | .6 |
| SOCDIS | .389 | .078 | .0026 | .0029 |
| BOWN | .003 | 0 | .003 | .003 |
| FSIZE | 1.099e+11 | 2.721e+10 | 7.607e+10 | 1.436e+11 |
| LEVERAGE | 4.39 | 1.042 | 2.826 | 5.857 |
| **CONOIL PLC** | | | | |
| ROA | .027 | .011 | .009 | .041 |
| ROE | .101 | .043 | .046 | .17 |
| TOBINSQ | 1.034 | .146 | .866 | 1.353 |
| STOCKRET | .301 | .118 | .171 | .572 |
| ENVDIS | .2 | 0 | .2 | .2 |
| ECONDIS | .622 | .067 | .6 | .8 |
| SOCDIS | .4 | .075 | .3 | .45 |
| BOWN | 0000413 | 0000303 | 7.98e-06 | .0000714 |
| FSIZE | 6.982e+10 | 1.252e+10 | 4.886e+10 | 8.753e+10 |
| LEVERAGE | 2.958 | .975 | 1.503 | 4.438 |
| **11 PLC** | | | | |
| ROA | .098 | .032 | .032 | .132 |
| ROE | .313 | .12 | .074 | .472 |
| TOBINSQ | 1.697 | .326 | 1.15 | 2.283 |
| STOCKRET | 1.039 | .278 | .585 | 1.631 |
| ENVDIS | .067 | .141 | 0 | .4 |
| ECONDIS | .467 | .2 | .2 | .6 |
| SOCDIS | .2 | .156 | 0 | .35 |
| BOWN | .0001675 | .0001273 | .0000603 | 0003112 |
| FSIZE | 6.324e+10 | 2.099e+10 | 3.366e+10 | 9.306e+10 |
| LEVERAGE | 2.19 | .972 | 1.092 | 3.941 |

Source: Summary of STATA OUTPUT, 2022

#### *4.1.1. ETERNA PLC*

Table 5 summarizes the descriptive statistics of the return rate as measured by ROA, revealing an average mean of 3.4% with a 2.1% standard deviation. The maximum and minimum values of ROA are 6.9% and -5% respectively. The descriptive statistic of ROE shows an average of 10.7% with a standard deviation of 5.5%. This measures the effectiveness of the owners' invested capital. The ROE ranges from 16.1% at the greatest to -1.1% at the lowest. The average of market performance measured using Tobin's Q stood at 8.6%, with a standard deviation of 6.9%, which shows that it's not widely dispersed. The minimum and maximum of Tobin's Q understudy are 73% and 93.3% respectively. In addition, the average stock return is 15.6% with a standard

deviation of 7.5%, which is widely dispersed for the period understudy. The minimum and maximum are 7.8% and 32.2% respectively.

Furthermore, the averages of environmental, economic, and social disclosure are 2%, 6% and 36.1% respectively, with the corresponding standard deviation of 0%, 0% and 10.5%. The minimum disclosures are 2%, 6% and 25%, while the maximum disclosure stood at 2%, 6% and 45%. The average board equity ownership as seen in Table 5.1 is 2.25% with the standard deviation of 3.7%. The minimum and maximum of shares owned by the directors are 2% and 3.2% respectively. The average of firm size measured by the total asset stood at ₦3.29 trillion (7.15 billion USD) with a corresponding standard deviation of ₦1.8 billion (3.91 million USD), which signifies low variation for the period understudy. The minimum and maximum total assets for the period covered are ₦1.83 billion (3.98 million USD) and ₦5.31 billion (11.54 million USD) respectively. Also, the minimum and maximum leverage are 1.205 and 4.19 respectively, which deviate from the mean of 2.2 with 0.993. This implies low variation for the period understudy.

#### *4.1.2. ARDOVA PLC*

The descriptive data for return rate as assessed by return on asset (ROA) are summarised in Table 5.1. The average return rate is 4.7%, with a 2.4% standard deviation. The ROA gauges how effectively assets are used by the management. The ROA ranges from a high of 8.3% to a low of 2.1%. For Ardova Plc, the descriptive statistics for ROE show an average is 13.8% with a standard deviation of 5.7%. The ROE fluctuates from 24.2% at its highest and 6.7% at its lowest. Tobin's Q's average market performance was 157.4% on average, with a standard deviation of 90.3%, indicating the widespread of the market. The market performance understudy has a minimum and maximum of 81.7% and 358%, respectively. Additionally, the standard deviation and average stock return for the research period are 91.1% and 91.8%, with a range of 19.8%. and 296% respectively.

The averages of environmental, economic, and social disclosures are 21.1%, 53.3%, and 30%, respectively, with the corresponding standard deviations of 3.3%, 14.1%, and 0%. The required minimum disclosures were formerly 20%, 40%, and 30%, respectively. As shown in Table 5, the average board equity ownership is 9.5%, with a standard deviation of 6%. The director owns between 0% and 14.3% of the total shares outstanding. Furthermore, as it was determined throughout the research period that certain years with the board of directors had no shares in the

firm, the minimum value of 0 implies that the requirement of (SEC) 2011 and Central Bank of Nigeria (CBN) 2010 are not satisfied. The standard deviation for the period under review was ₦4.29 billion (9.32 million USD), which indicates that the average business size, as determined by total assets, was ₦1.5 trillion (3.26 billion USD). The lowest and highest values are ₦4.29 billion (9.32 million USD) and ₦1.47 trillion (3.19 billion USD) respectively. The lowest and maximum leverage, which depart from the average of.16 with 1.077, are 1.227 and 4.6, respectively. This suggests little fluctuation during the studied time.

#### *4.1.3. JAPAUL GOLD & VENTURES PLC*

The descriptive statistics of the return rate assessed by ROA show an average of -14.3% with a standard deviation of 40.6% in Table 5.1. The ROA ranges from 72.2% at the greatest to -2.3% at the lowest. The ROE has an average of -20.7%. The ROE varies from 72.2% at its highest and -230% at its lowest. Tobin's Q's average market performance value was 114.2%, and its standard deviation was 61.5%, indicating that it was not wildly spread. The market performance understudy has the lowest and highest values of 64.3% and 253.3% respectively. Additionally, the standard deviation of stock returns for the research period is 5.8%, with an average return of 10.4%, while the least and highest stock returns reported for the period understudy are 5.4% and 24.9% respectively.

The averages of environmental, economic, and social disclosures in terms of CSR are 3.3%, 33.3%, and 10%, respectively, with the corresponding standard deviations of 5%, 2%, and 15%. The minimum disclosures 0%, 2%, and 0%, while the maximum disclosures are 10%, 60% and 30%.

As shown in Table 5.1, the average board equity ownership is 6.4%, with a standard deviation of 7%. The directors' own shares between 5.9% and 7.1% of the total shares outstanding. The standard deviation of firm size for the period under review was ₦7.611 billion (16.53 million USD), and the average business size, as determined by total assets, was ₦2.94 trillion (6.39 billion USD). The lowest and highest values are ₦1.56 billion (3.39 million USD) and ₦3.87 trillion (8.40 billion USD) respectively. The lowest and maximum leverage are -2.574 and 8.715 respectively. The average stood at 1.871 with a deviation of 3.514, which indicates wide variation for the period of study.

### *4.1.4. MRS OIL NIGERIA PLC*

The descriptive statistics of return rate assessed ROA show an average of -5% with standard a deviation of 2.9% in Table 5.1, which signifies high variation for the period understudy. The ROA ranges from 2.2% at the greatest to -6.2% at the lowest. The return on equity (ROE) has an average of -4%. ROE varies from 6.6% at its highest and -13.4% at its lowest. Tobin's Q's average market performance value stood at 79.2%, and its standard deviation is 9.5%, indicating that it was not wildly spread. The market performance understudy's lowest and highest values are 65.5% and 91.2% respectively. Additionally, the standard deviation of stock returns for the research period is 4.8%, with an average return of 15%, while the least and highest stock returns reported for the period understudy are 10.5% and 234% respectively.

The averages of environmental, economic, and social disclosures in terms of CSR are 20%, 80%, and 40.6%, respectively, with the corresponding standard deviations of 0%, 0%, and 6.8%. The minimum disclosures for the period covered are 20%, 80%, and 30% with the corresponding maximum disclosures of 20%, 80% and 45%.

The average of board equity ownership, standard deviation, minimum and maximum all stood at 0%. The implication is that 0% indicates that the requirement of the SEC 2011, CBN, 2010 and FRCN 2018 code of corporate governance are not met within the period of study it was discovered that the board of directors have no shares in the company. The standard deviation of firm size for the period under review was ₦130.7 billion (283.95 million USD), the average business size, as determined by total assets, was ₦583 billion (1.27 billion USD). The lowest and highest values are ₦366 billion (795.16 million USD) and ₦813 billion (1.766 billion USD) respectively. The lowest and maximum leverage are 1.176 and 2.671 respectively. The average stood at 1.86 with a deviation of 0.482, which indicates low variation for the period of study.

### *4.1.5. TOTAL NIGERIA PLC*

According to Table 5.2, ROA has a standard deviation of 2.9% and an average of 5.6%, which indicates low variation for the period under study. The ROA varies from a maximum of 10.8% to a minimum of -6.2%. The average return on equity (ROE) is 30.8%. At its highest point, ROE ranges from 62.8% to 1.4% at its lowest point. It deviated from the mean by 2.9%. The average market performance value according to Tobin's Q is 135.7%% with a standard deviation of 17.6%,

which isn't widely dispersed. The lowest and highest values for the market performance understudy are 107% and 156.9% respectively. The least and highest stock returns reported for the study period are 28.1% and 74.1% respectively. The standard deviation of stock returns for the research period is 17.1%, with an average return of 54.9%.

In terms of CSR, the average environmental, economic, and social disclosures are 23.3%, 60%, and 38.9% respectively, with standard deviations of 10%, 0%, and 7.8%. For the period covered, the minimum disclosures are 20%, 60%, and 30%, with the corresponding maximum disclosures of 50%, 60%, and 50%.

Board equity ownership had a mean of 3%, a standard deviation of 0.001%, and minimum and maximum of 2.6% and 2.9%. The average business size, as measured by total assets, is ₦1.9 trillion (4.12 billion USD) during the review period, with a standard deviation of ₦271 billion (588.77 million USD). The lowest and highest values are ₦760 billion (1.65 billion USD) and ₦1.43 trillion (3.106 billion USD) respectively. Leverage varies between 2.826 and 5.857 respectively. The average is 4.39 with a standard deviation of 1.042, which shows a slight variation during the study period.

#### *4.1.6. CONOIL PLC*

The return rate as defined by return on asset (ROA) has a standard deviation of 1.1% and an average of 2.7%, which suggests modest variance for the period under consideration, according to Table 5.2, the ROA ranges from 4.1% at its highest to 0.9% at its lowest. 10.1% is the average return on equity (ROE), which ranged from 17% at its best point to 4.6% at its lowest. It differed by 4.3% from the mean. Tobin's Q estimates an average market performance value of 103.4% with a standard deviation of 14.6%, which is not wildly scattered. The market performance understudy's lowest and greatest numbers are 86.6% and 135.3%, respectively. The lowest and greatest stock returns recorded during the research period are, respectively, 17.1% and 57.2%. For the study period, stock returns had an average return of 30.1% and a standard deviation of 11.8%.

The average environmental, economic, and social disclosures in terms of CSR are 20%, 62.2%, and 40%, respectively, with standard deviations of 0%, 6.7%, and 7.5%. The minimum disclosures for the covered period are 20%, 60%, and 30%, while the maximum disclosures are 20%, 80%, and 45%. The mean percentage of board equity ownership was 0.0004%, with a range of

0.0000798% to 000714% and a standard deviation of 0.0003%. During the study period, the average firm size, as determined by total assets, is ₦698 billion (1.516 billion USD), with a standard deviation of ₦125 billion (271.5 million USD). The value ranges from ₦488 billion (1.06 billion USD) to ₦875 trillion (1,901 trillion USD) respectively. The range of the leverage is between 1.503 and 4.438. The standard deviation is 0.975 and the average is 2.958, indicating some variances over the research period.

#### *4.1.7. 11 PLC*

According to Table 5.2, ROA has a standard deviation of 3.2% and an average of 9.8%, indicating a minimal fluctuation for the period under review. The ROA varies from 3.2% to 13.2% respectively. The average return on equity (ROE) is 31.3%, ranging from 47.2% at its highest to 7.4% at its lowest. It was 12% off from the mean. Tobin's Q predicts an average market performance value of 169.7% with a standard deviation of 32.6%, which is not outrageously dispersed. The market performance understudy's lowest and highest statistics are 115% and 228.3%, respectively. During the study period, the lowest and highest stock returns were 58.5% and 163.1%, respectively. Stock returns averaged 103.9% throughout the research period, with a standard deviation of 27.8%.

The average environmental, economic, and social disclosures in terms of CSR are 6.7%, 47.7%, and 20%, respectively, with standard deviations of 14.1%, 20%, and 15.6%. The minimum disclosures for the covered period are 0%, 20%, and 0%, whereas the maximum disclosures are 40%, 60%, and 35%. The average proportion of board equity ownership is 0.00168%, with a range of 0.0000603% to 00311%, and a standard deviation of 0.00127%. During the research period, the average business size is ₦632 billion (1.373 billion USD), with a standard deviation of ₦209 billion (454.07 million USD). The values vary from ₦336.6 billion (731.29 million USD) to ₦930.6 billion (2.02 billion USD). The leverage ranges from 1.092 to 3.941. The standard deviation is 0.972 and the average is 2.19, showing a low variation over the study period.

### *4.1.8. SUMMARY OF DESCRIPTIVE STATISTICS*

**TABLE 6: SUMMARY OF DESCRIPTIVE STATISTICS**

| Variables | Mean | Std. Dev. | min | max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| ROA | .017 | .164 | -.716 | .763 | -.514 | 15.152 |
| ROE | .108 | .367 | -2.304 | .722 | -4.526 | 30.996 |
| TOBINSQ | 1.202 | .534 | .643 | 3.58 | 1.981 | 8.148 |
| STOCKRET | .459 | .504 | .054 | 2.96 | 2.536 | 11.454 |
| ENVDIS | .163 | .099 | 0 | .5 | -.026 | 4.411 |
| ECONDIS | .565 | .178 | .2 | .8 | -.899 | 3.211 |
| SOCDIS | .308 | .147 | 0 | .45 | -1.017 | 3.21 |
| BOWN | .026 | .042 | 0 | .143 | 1.66 | 4.708 |
| FSIZE | 6.701e+10 | 3.645e+10 | 1.561e+10 | 1.472e+11 | .776 | 2.661 |
| LEVERAGE | 2.52 | 1.724 | -2.574 | 8.715 | .36 | 5.582 |

Source: Summary of STATA OUTPUT, 2022

Table 6 presents a summary of the descriptive statistics of the variables under investigation. The return rate as assessed by return on asset (ROA) has a standard deviation of 16.4% with an average of 1.7% for the period under consideration, demonstrating a low variation. The relative ROA ranges from -71.6% to 76.3%. The highest loss incurred of -71.6% and profit of 76.3% made can be traced to Japaul Gold & Ventures Plc, as indicated in Table 5. The average return on equity (ROE) is 10.8% with a standard deviation of 36.7% indicating wide variation across the sampled oil and gas firms. The minimum and maximum ROE are -230% and 72.2%, which can also be traced to Japaul Gold & Ventures Plc. In respect of market performance, the average of Tobin's Q stood at 120.2% with a corresponding standard deviation of 53.4%. It means that there is low variation among the selected firms. The minimum and maximum market performance stood at 64.3% and 358%. The minimum of 64.4% can be traced to Japaul Gold & Ventures Plc while the maximum of 358% can be traced to Ardova Plc and gas firm as revealed in Table 5. The lowest and best stock returns over the research period are 54% and 296%, respectively. Throughout the study period, stock returns averaged 45.9%, with a standard deviation of 50.4%, which is widely dispersed across the examined oil and gas firms. The lowest stock return of 54% is traced to Japaul Gold & Ventures Plc and Ardova Plc with the maximum stock return of 296%. By Implication, Japaul Gold & Ventures Plc is reported to be performing sub-optimally.

Environmental, economic, and social disclosures account for an average of 16.3%, 56.5%, and 30.8% of CSR efforts, respectively, with standard deviations of 9.9%, 17.8%, and 14.7%, respectively. The minimum and maximum percentages of disclosure for environmental disclosure

are 0% and 50%. The lowest disclosure of 0% can be traced to MRS oil Nigeria plc, Conoil plc, and Eterna plc while Total Nigeria plc has a maximum environmental disclosure of 50%. The minimum economic disclosure of 20% is traced to Japaul Gold & Ventures Plc and 11 plc while the maximum disclosure of 80% can be traced to Conoil plc and Ardova plc. The minimum and maximum social disclosure are 0% and 45% respectively. The lowest of 0% can be traced to 11 plc and the maximum of 45% can be traced to Total Nigeria plc and MRS Oil Nigeria plc. It is evident that the oil firms have performed poorly in social disclosure, followed by environmental disclosure. Economic disclosure seems to be given more consideration as compared to the other indicators.

The average board equity ownership percentage is 2.6%, with a range of 0% to 14.3% and a standard deviation of 4.2%. The 0% indicated that some firms such as MRS oil Nigeria plc had directors without equity shares. The implication is that such firms failed to comply with the requirement of the SEC 2011, CBN, 2010 and FRCN 2018 Code of Corporate Governance that mandated the board of directors to possess shares in the company not more than 25% of outstanding shares. The maximum 14.3% of board equity ownership can be traced to Ardova plc. During the period of study, the average firm size is ₦670 billion (1.46 billion USD), with a standard deviation of ₦364 billion (790.82 million USD). The values range from ₦156.1 billion (339.14 million USD) to ₦1.472 trillion (3.198 billion USD). It was revealed from Table 5 that Japaul Gold & Ventures plc has the lowest asset size of ₦156.1 billion (339.14 million USD) while Ardova plc has the highest total asset of ₦1.472 trillion (3.198 billion USD). Lastly, the range of leverage is -2.574 to 8.715. There was not much change throughout the study period, as shown by the standard deviation of 1.724 and the mean of 2.52. The least of -2.574 and maximum of 8.715 leverage are traced to Japaul Gold & Ventures.

The data, however, is assumed to be normally distributed even if it is displayed as negatively skewed since the values of the skewness are found in Table 7. The distribution's peakness is anticipated to be normal given the kurtosis value shown in Table 7. This is consistent with several studies that demonstrate how the usage of skewness and kurtosis should be used to predict the distribution of the data, as assessing the data might disclose if the stated data is skewed or the kurtosis is anomalous (BARATO and SEIFERT, 2015; BLANCA et al., 2013; RYU, 2011).

### 4.2. Correlation between CSR and Financial Performance

In this study, the author used a correlation analysis to look at the associations between CSR and corporate FP with board equity ownership as the moderating variable (i.e., a correlation coefficient of 0) (BEWICK et a., 2003; REIMANN et al., 2008; GARCIA, 2011). For the study to be considered worthwhile, **"**there must be at least a positive or negative relationship between the dependent variable and each of the independent variables" (YUNUSA, 2017:205). It is expected that social, environmental and economic disclosure contributes to an increase in FP. It is also expected that board equity ownership would strengthen this relationship.

A correlation analysis is performed to see whether CSR is associated with FP and business metrics. The author employed the product moment method, often known as Pearson's correlation. Parametric analysis is used to probe the interdependencies necessary to make further forecasts in light of some of the characteristics under consideration. Correlation coefficients are also used to show the strength and direction of the disclosure measurement and, in certain cases, to test for multicollinearity.

How the variables are measured is another factor that might be decided by the algorithm. Although a connection between the explained and explanatory factors is necessary, correlation among the independent variables should be zero (GUJARATI, 2004). However, this is very difficult to achieve, since correlation often occurs across variables provided, they are quantitative in character. Assuming the coef is weak, moderate, or relatively strong, the value of the correlation among the explanatory variables is anticipated to be in these ranges (BUTT et al., 2007). When the correlation coefficient of the independent variables is more than 0.7, suggesting multicollinearity, the regression assumption is violated (GUJARATI, 2004).

To address the concerns raised in the preceding paragraphs, this study calculates the product moment or Pearson correlation coefficients for the listed companies that exist between CSR and each of the FP indicators, including the moderating variable for this research. For this reason, when a variable's measurement is numerical, a product moment (Pearson) correlation is used since it is well-suited for quantitative data analysis (VARGHA et al., 2013). Establishing the significance of the stated correlation allows one to evaluate the strength of the established link between the variables. The importance is evidence for the existence of the established link; hence, the correlation could neither be disputed nor happen by chance (VARGHA et al., 2013).

Although positive correlations are expected in this research, a negative correlation is practically worthless if it is not significant, or the model's regression is positive. In this investigation, the outcomes of the regression model will be relied upon more heavily than the previously established correlation. This is because correlation provides more of a descriptive picture, while regression is more of an inferential tool (BEWICK et al., 2003). Since inferring requires making a judgement, regression findings are more advantageous than correlational outcomes. Therefore, the study's correlation matrix is shown in Table 7 below.

**TABLE 7: PAIRWISE CORRELATIONS**

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) ROA | 1.000 | | | | | | | | | | | | |
| (2) ROE | 0.173 | 1.000 | | | | | | | | | | | |
| | (0.174) | | | | | | | | | | | | |
| (3) STOCKRET | -0.178 | 0.270* | 1.000 | | | | | | | | | | |
| | (0.163) | (0.033) | | | | | | | | | | | |
| (4) TOBINSQ | 0.031 | 0.311* | 0.867* | 1.000 | | | | | | | | | |
| | (0.809) | (0.013) | (0.000) | | | | | | | | | | |
| (5) SOCDIS | 0.694* | 0.305* | 0.010 | -0.012 | 1.000 | | | | | | | | |
| | (0.000) | (0.015) | (0.940) | (0.924) | | | | | | | | | |
| (6) ENVDIS | 0.349* | 0.225 | -0.022 | 0.072 | 0.171 | 1.000 | | | | | | | |
| | (0.005) | (0.077) | (0.862) | (0.577) | (0.181) | | | | | | | | |
| (7) ECONDIS | -0.142 | 0.521* | 0.414* | 0.288* | 0.078 | -0.204 | 1.000 | | | | | | |
| | (0.268) | (0.000) | (0.001) | (0.022) | (0.545) | (0.108) | | | | | | | |
| (8) BOWN | 0.111 | -0.030 | 0.238 | 0.259* | -0.145 | 0.186 | 0.095 | 1.000 | | | | | |
| | (0.386) | (0.818) | (0.060) | (0.040) | (0.257) | (0.145) | (0.459) | | | | | | |
| (9) BOWN_SOC | 0.649* | 0.314* | 0.010 | -0.069 | 0.953* | 0.029 | 0.126 | -0.190 | 1.000 | | | | |
| | (0.000) | (0.012) | (0.940) | (0.590) | (0.000) | (0.819) | (0.325) | (0.137) | | | | | |
| (10) BOWN_ENV | 0.555* | 0.009 | -0.249* | 0.054 | 0.164 | 0.211 | -0.358* | -0.170 | 0.122 | 1.000 | | | |
| | (0.000) | (0.946) | (0.049) | (0.673) | (0.198) | (0.097) | (0.004) | (0.184) | (0.342) | | | | |
| (11) BOWN_ECO | 0.146 | -0.148 | -0.073 | 0.015 | -0.090 | -0.004 | -0.091 | 0.323* | -0.072 | 0.062 | 1.000 | | |
| | (0.254) | (0.247) | (0.570) | (0.905) | (0.481) | (0.973) | (0.480) | (0.010) | (0.573) | (0.630) | | | |
| (12) LEVERAGE | -0.158 | 0.291* | -0.122 | -0.199 | 0.051 | -0.138 | 0.420* | -0.143 | 0.088 | -0.227 | 0.020 | 1.000 | |
| | (0.216) | (0.020) | (0.341) | (0.117) | (0.690) | (0.282) | (0.001) | (0.264) | (0.492) | (0.073) | (0.873) | | |
| (13) FSIZE | -0.278* | 0.053 | -0.278* | -0.337* | 0.078 | -0.021 | 0.177 | -0.407* | 0.003 | -0.243 | -0.048 | 0.605* | 1.000 |
| | (0.027) | (0.680) | (0.027) | (0.007) | (0.545) | (0.870) | (0.165) | (0.001) | (0.982) | (0.055) | (0.711) | (0.000) | |

**** p<0.01, ** p<0.05, * p<0.1*

Source: STATA OUTPUT, 2022

As demonstrated in Table 7, the correlation coefficient between social disclosure, environmental disclosure and return on asset is positive. This suggests that social and environmental disclosure are going in the same direction with return on asset; as return on asset rises, social and environmental disclosure rise as well, although not at the same pace. However, a negative correlation was found between economic disclosure and return on asset. It implies that economic disclosure and return on asset move in opposite directions. This is shown by the correlation coefficients between the variables, which have values of 0.694, 0.349 and -0.142, as presented in the given Table 7. When the correlation (r) value is more than 0.5, it is deemed strong since the value is above 0.5 and the other approaching 0.5 (VARGHA et al., 2013). The coefficient has a significant value at 5% level of significance, indicating that it is strong. Based on the data found, the relationship between social disclosure, environmental disclosure and return on asset was confirmed to be significantly positive. In addition, the results revealed that there is a positive relationship between social disclosure, environmental disclosure, economic disclosure and return on equity. This is statistically proven by the coefficient of 0.270, 0.305 and 0225. This implies that environmental, social, and economic disclosure move in the same direction as ROE; when ROE increases, environmental, social and economic disclosure also increases, but not at the same pace. Since the value is below 0.5 a correlation (r), it is assumed that the relationship is not strong, while a value greater than 0.5 is considered high (VARGHA *et al.,* 2013). The results further revealed that a positive relationship exists between social disclosure, economic disclosure and stock returns measurement, as proven statistically with the coefficient of 0.01 and 0.414. However, a negative relationship was found between environmental disclosure and stock return at a coefficient of -0.022. This means that they move in opposite directions. Considering the fourth model using Tobin's Q, the result shows that there is a negative relation between social disclosure and Tobin s' Q with the parameter of -0.012. However, the result revealed that economic and environmental disclosure are positively correlated with Tobin's Q, as proven statistically with a coefficient of 0.072 and 0.288 respectively.

Similarly, board ownership (BOWN) (0.111, -0.030, 0.238 and 0.259) shows a positive connection with return on asset, stock return and Tobin's Q. However, the correlation (r) of less than 0.5 is considered low (VARGHA et al., 2013). A negative relationship was found between BOWN and return on equity. Considering the moderating impact, BOWN_SOC and BOWN_ENV are all directly linked with return on asset. With a coefficient of 0.649 and 0.555, which are greater than

0.5, this link is deemed strong. In contrast, a positive and weak association was discovered between BOWN_ECO (0.146) and ROA. As previously stated, this is only evaluated if the variables are both dependent and independent. Considering the second model (return on equity), a weak and positive relationship was found between BOWN_SOC and BOWN_ENV and return on equity with the coefficient of 0.314 and 0.009 respectively. However, a negative and weak relationship was found between BOWN_ECO (-0.148) and return on equity. BOWN_ECO (-0.073) and BOWN_ENV (-0.249) are negatively correlated with stock return. In contrast, BOWN_SOC (0.010) is positively correlated with stock return. The result further revealed that BOWN_ENV (0.054) and BOWN_ECO (0.015) have a weak and positive relationship with Tobin's Q. On the contrary, BOWN_SOC (-0.069) is found to be negatively correlated with Tobin's Q.

In accordance with other previously established correlations, the correlation value is larger than 0.3 and less than 0.5, (BACH and BACH, 2005). However, the association among the independent variables is not found to be substantial enough to indicate that there is multicollinearity until the variance inflation factor (VIF) and tolerance values are well above the accepted rule of thumb. Thus, the VIF and tolerance value are advanced methods for measuring regressor multicollinearity.

### 4.3. Diagnostic Test

This section presents the results from the diagnostic tests. The diagnostic tests include a multicollinearity test, auto and serial correlation test, heteroskedasticity test, normality test, and hausman specification test.

#### *4.3.1. COLLINEARITY ANALYSIS*

Linear regression presupposes that the independent variables are not correlated with one another (ALIN, 2010). The first step is to look for patterns of correlation among the explanatory factors; those variables whose correlation is at least 0.7 are particularly important (GREWAL et al., 2004). There is a need to further investigate the possibility of multicollinearity when there is a high degree of correlation between the independent variables. This study used both the VIF and their inverse to analyze the data (SHIEH, 2010). VIF measures the strength of the correlation between the independent variables. Even if this study's correlation suggests indicators of less than 0.7, the condition of multicollinearity in the presented data still must be proven (SHIEH, 2010). The VIF demarcation range varies from 1–9 depending on the author, with some settling on a range of 1–

5. According to GUJARATI theory (2004), multicollinearity occurs in the related variable if the VIF is more than 5. This study employed a VIF range of 1-6 for each explanatory variable as demonstrated in Table 8.

**TABLE 8: MULTICOLLINEARITY TEST**

| VARIABLE | VIF | 1/VIF |
|---|---|---|
| FSIZE | 1.34 | 0.514 |
| LEVERAGE | 1.31 | 0.524 |
| BOWN | 1.38 | 0.722 |
| ECONDIS | 1.33 | 0.753 |
| ENVDIS | 1.19 | 0.843 |
| SOCDIS | 1.09 | 0.917 |
| MEAN VIF | 1.47 | |

Source: STATA OUTPUT, 2022

The VIF for each independent variable is shown in Table 8 along with the inverse of the VIF, which is almost equivalent to the tolerance value. Inverse VIF should be bigger than 0.1 because, like a tolerance value, the lower it is, the more probable it is that multicollinearity will exist in the variable in question (ALIN, 2010; COX, 2010). There is no multicollinearity in FSIZE, for instance, even though FSIZE has a VIF value of 1.34 and an inverse value of 0.514. This is because the VIF is not more than 5. The fact that the inverse VIF is much higher than 0.01 supports this.

The next is LEVERAGE with a VIF value of 1.31, which is also less than 5. The LEVERAGE is collinearity-free even though it has a modest VIF inverse of 0.524. Additionally, the independent variable BOWN has a low VIF, and it is collinearity-free since its VIF of 1.38 and its inverse VIF of 0.722 are both below 5 and above 0.1, respectively. This is also true for ECONDIS, which returned a VIF value of 1.33 and an inverse VIF of 0.753 and was consequently determined to be collinearity-free. Since the VIF and inverse VIF of the variable ENVDIS are 1.19 and 0.843, respectively, it follows the same pattern. As a result, SOCDIS is likewise free of collinearity since its VIF is under 5, having a low VIF inverse as low as 0.917 is still larger than 0.1, which is the yardstick.

There is no multicollinearity among the independent variables used in this study because the overall average VIF is much lower than 5 and the mean VIF shown in Table 8 indicates that each explanatory variable has an average VIF of 1.66. Therefore, regression analysis may be used to

carry out the research since the prerequisite for doing so has been met. This study's multicollinearity is no longer a problem.

### *4.3.2. NORMALITY OF THE DATA DISTRIBUTION*

Another key tenet of linear regression, when it is utilized as a prerequisite for parametric test analysis, is the normality of the data distribution. This is because one of the prerequisites for a good parametric test is that the data must be regularly distributed across the variables (PARK, 2008). However, it was argued that because the dependent variable dictates the appropriate parametric analysis, the normality test should be run on the model's residuals rather than the data (GHASEMI & ZAHEDIASL, 2012). In this study, a normality graph was applied to the model's residuals with the use of P-P plot to demonstrate the normality of the data as indicated in Figure 11-14. For a regression analysis, the data ought to be normally distributed in order to stand for generation.

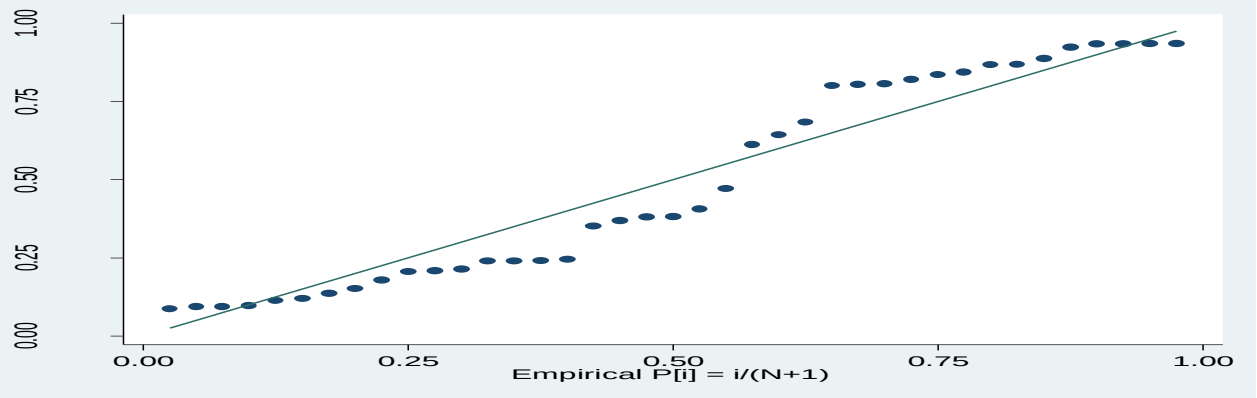



**FIGURE 11: (P-P)PLOT FOR NORMALITY OF RESIDUAL (MODEL ONE)**

Source: STATA OUTPUT, 2022

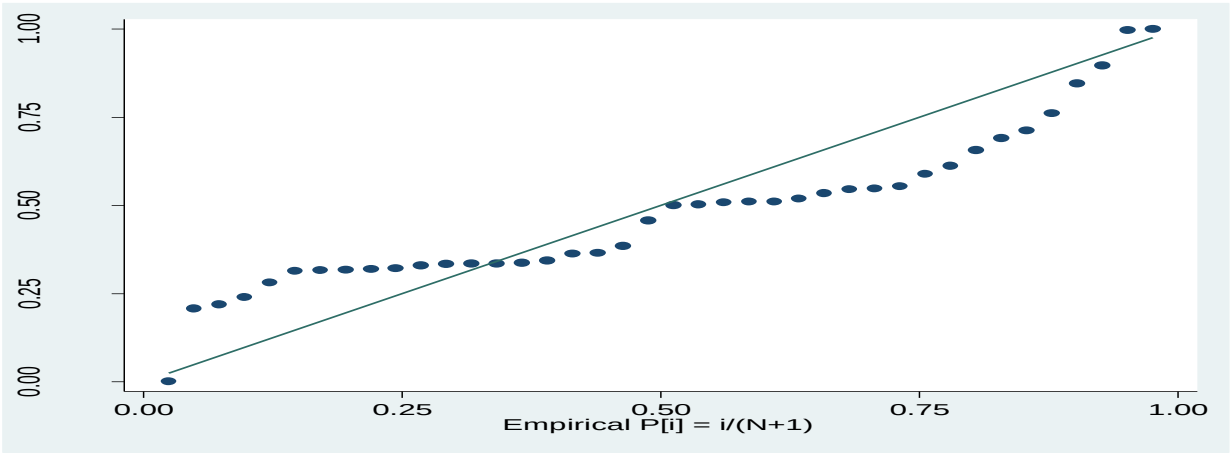



**FIGURE 12: (P-P)PLOT FOR NORMALITY OF RESIDUAL (MODEL TWO)**

Source: STATA OUTPUT, 2022

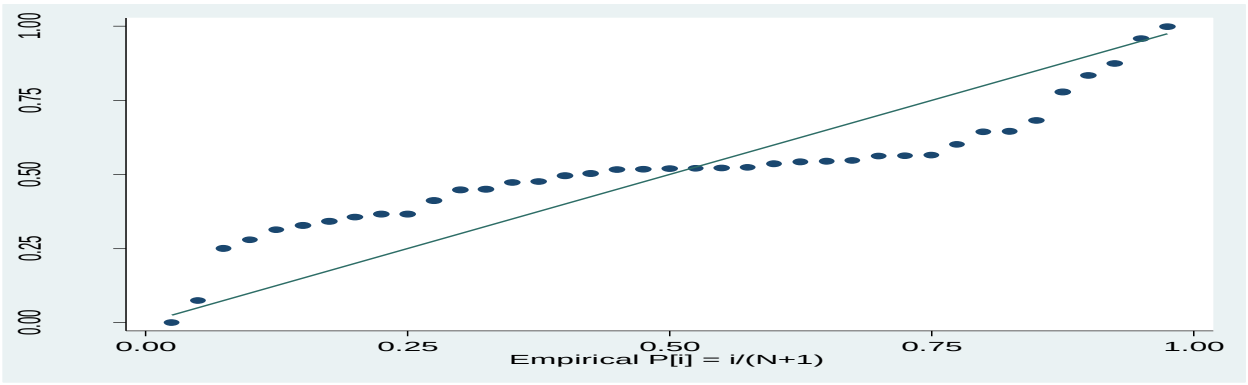



**FIGURE 13: (P-P)PLOT FOR NORMALITY OF RESIDUAL (MODEL THREE)**

Source: STATA OUTPUT, 2022

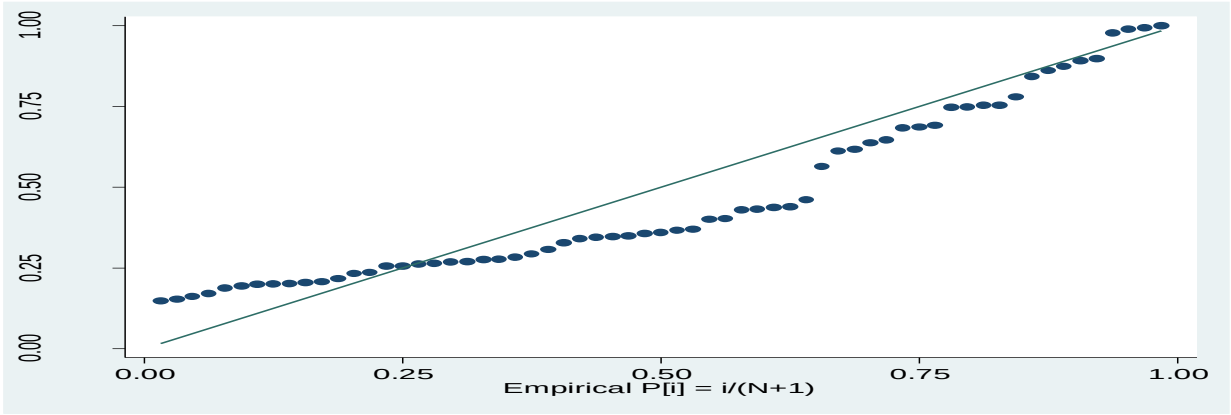



**FIGURE 14: (P-P)PLOT FOR NORMALITY OF RESIDUAL (MODEL FOUR)**

Source: STATA OUTPUT, 2022

### *4.3.3. NORMALITY DISTRIBUTION*

The normal distribution of the data on the model's residuals, according to SCHÜTZENMEISTER et al. (2012), is more precise and reliable for regression analysis. Furthermore, the distribution of the model's residuals shown in Figures 11, 12, 13 and 14 is essentially linear, demonstrating a clear normality in the data's distribution (PARK, 2008; SCHÜTZENMEISTER et al., 2012; GHASEMI and ZAHEDIASL, 2012).

To verify the normalcy problem, a normality test using the Shapiro-Wilk test is carried out to validate the graph shown in Figure 11-14. The outcome must be compared to the results of the Monte Carlos simulation table, which demonstrates that for a sample size of 100 and higher, the significant value at 1 percent is 0.1560 and up, or at 5 percent, it is 0.062 and up, indicating normality of the data distribution (KOIZUMI et al 2009; THADEWALD and BÜNING, 2007). The findings of the Shapiro-Wilk test for normality are shown in Table 9 below and are used to support the claim.

**TABLE 9: SHAPIRO-WILK TEST FOR NORMAL DATA**

| Variable | Obs | W | V | Z | Prob>z |
|---|---|---|---|---|---|
| **ROA** | | | | | |
| Resid | 63 | 0.975 | 1.414 | 0.749 | 0.227 |
| **ROE** | | | | | |
| Resid | 63 | 0.987 | 0.733 | -0.671 | 0.749 |
| **Stockreturn** | | | | | |
| Resid | 63 | 0.982 | 0.996 | -0.008 | 0.503 |
| **Tobin's Q** | | | | | |
| resid | 63 | 0.977 | 1.310 | 0.584 | 0.280 |

*Source: Author's computations generated with STATA 14 software*

The four models' p-values for the Shapiro-Wilk test are (0.227, 0.749, 0.503 and 0.280). Thus, the data is normally distributed across the models, as shown in Table 9 at a 5% level of significance. This investigation concludes that the model residuals are regularly distributed. The criterion for the requirement on the normality distribution of data is satisfied based on the Shapiro-Wilk test of

normality as shown in Table 9 and the normality distribution graph shown in Figures 11, 12, 13 and 14.

#### *4.3.4. AUTO CORRELATION AND SERIAL CORRELATION*

The similarities between auto correlation and serial correlation include the fact that the existence of one implies the existence of the other and the absence of one implies the absence of both (DRUKKER, 2003; GONG et al., 2011). If the data includes a component of time, as in the case of a panel where the data is a mixture of cross-section and time, a positive correlation coefficient for either auto or serial correlation indicates the presence of noise in the period under examination (GONG et al., 2011). Auto/serial correlation is stated to occur when the model's residuals correlate with time since it is presumed that they have "zero correlation" (GETMANSKY et al., 2004). OLS or panel regression models must not have auto/serial correlation in the study's model to be considered deserving of reporting. However, the issue of auto/serial correlation is not important when a panel data set have only a few observations (HAUSMAN and KUERSTEINER, 2008; MAEKAWA et al., 2014).

**TABLE 10: TEST FOR AUTO/SERIAL CORRELATION**

| | Chi2 (1) | Prob > chi2 |
|---|---|---|
| ROA | 19.559 | 0.0045 |
| ROE | 1.377 | 0.2852 |
| STOCKRETURN | 14.753 | 0.0085 |
| Tobin's Q | 6.821 | 0.0400 |

*Source: Author's computations generated with STATA 14 software, 2022*

Table 10 shows that there is an auto and serial correlation in Model one (ROA with 0.0045), Model three ( Stock return with 0.0085) and Model four (Tobin's Q with 0.0400) because the probability of the chi-square is statistically significant indicating that there is auto and serial correlation (MANTOBAYE et a., 2018). However, Model two (ROE) was found not to have auto and serial correlation problem, as it is statistically insignificant at 5%.

### *4.3.5. HETEROSKEDASTICITY*

A significant problem when using linear regression, particularly OLS, is heteroskedasticity. This is a sign of unequal variance in the residuals because of the diversity of the data that was thusly obtained (GUJARATI, 2004). The model's residuals must be homoskedastic, or devoid of heteroskedasticity, in order for linear regression to be assumed. However, as advised by GUJARATI (2004), other analytical methods other than OLS or panel regression should be used when heteroskedasticity is found in a model. If a model is homoskedastic, bootstrapping is required; if bootstrapping fails, OLS and panel regression may not be suitable for the model. In the case of panel data, a test must be conducted after the panel regression in addition to the pooled regression in order to detect the problem of heteroskedasticity (PATRIOTA et al., 2011). The Breusch-Pagan and Cook-Weisberg test for heteroskedasticity is the analysis that will be done. The null hypothesis in this situation advocated constant variance among the model's residuals, or the model is homoscedastic, but the alternative stated differently meaning the model's residuals are not constant and the model is heteroskedastic, as shown in Table 11 below.

**TABLE 11: HETEROSKEDASTICITY TEST FOR THE FOUR MODELS**

| | Chi2 (1) | Prob > chi2 |
|---|---|---|
| ROA | 23.49 | 0.0000 |
| ROA | 7.30 | 0.0069 |
| STOCKRETURN | 36.89 | 0.0000 |
| Tobin's Q | 4.44 | 0.0352 |

*Source: Author's computations generated with STATA 14*

The results for the four models as indicated in Table 11 illustrate that heteroskedasticity exists, as the probability of the chi square is statistically significant at 1% which indicates that the model is not homoskedastic. The implication is that Hausman Test, whether Fixed Effect or Random Effect regression will not suit this study. This study uses Feasible General Least Square (FGLS) for random effect and Panel Corrected Standard Error for fixed effect to ameliorate the downsides of Fixed or Random Effect as heteroskedasticity exist.

### *4.3.6. MODEL WITH POOLED, FIXED, AND RANDOM EFFECTS*

If the data are panel data, then pooled regression is always the initial step to determining the connection between the variables. After that, post-estimation tests like heteroskedasticity and auto/serial correlation are required. As a result, the research used pooled regression first, then fixed effect regression, and finally random effect regression. Following the random regression, Hausman's test is run to ascertain the model's implications for public policy. To determine if the chosen model may be retained, a second test for heteroskedasticity is run at the conclusion of the Hausman-favored model 3. It is significant to highlight that, for a panel data of few years, as the one in this research, auto/serial correlation is not very essential (DRUKKER, 2003; GONG et al., 2011; BORENSTEIN et a., 2009). Therefore, Table 12 below shows the outcomes of the pooled, random, and fixed regression models.

**TABLE 12: FIXED, AND RANDOM EFFECTS**

| VARIABLES | (RE) STOCKRET | (FE) STOCKRET | (FE) ROE | (RE) ROE | (FE) ROA | (RE) ROA | Tobin's Q FE | RE |
|---|---|---|---|---|---|---|---|---|
| SOCDIS | 0.605 | 0.737** | -0.00232 | 0.101 | 0.149* | 0.122* | 1.658*** | 1.151*** |
| | (0.408) | (0.362) | (0.130) | (0.136) | (0.0813) | (0.0677) | (0.382) | (0.431) |
| ENVDIS | 0.000772 | -0.000445 | 0.00369*** | 0.00387*** | 0.00144** | 0.00206*** | 0.000168 | -0.000330 |
| | (0.00365) | (0.00310) | (0.00117) | (0.00117) | (0.000728) | (0.000581) | (0.00328) | (0.00386) |
| ECONDIS | 0.436*** | -0.0802 | 0.175*** | 0.215*** | -0.00611 | 0.0307 | 0.000135 | 0.471*** |
| | (0.116) | (0.177) | (0.0371) | (0.0666) | (0.0232) | (0.0331) | (0.187) | (0.123) |
| BOWN | -1.150 | 4.290 | -0.579 | -1.273 | 0.657* | 0.529 | 4.143 | -1.292 |
| | (1.903) | (2.703) | (0.609) | (1.016) | (0.380) | (0.506) | (2.855) | (2.015) |
| BOWN_SOC | -303.3 | -401.2** | 27.06 | -37.32 | 22.64 | 49.81 | -7.980*** | -5.665*** |
| | (205.2) | (180.5) | (65.63) | (67.87) | (40.96) | (33.77) | (1.749) | (1.993) |
| BOWN_ENV | -0.635** | -0.205 | 0.0774 | 0.122 | 0.344*** | 0.242*** | 0.294 | 0.0782 |
| | (0.323) | (0.277) | (0.103) | (0.104) | (0.0646) | (0.0519) | (0.293) | (0.342) |
| BOWN_ECO | 0.0620 | -0.185 | -0.115 | 0.604 | 0.223* | 0.639** | 2.345* | 0.490 |
| | (0.660) | (1.281) | (0.211) | (0.481) | (0.132) | (0.240) | (1.353) | (0.699) |
| LEVERAGE | -1.344 | 0.372 | 1.163 | 0.0352 | 0.248 | 0.416 | -0.934* | -1.567*** |
| | (2.393) | (2.251) | (0.765) | (0.846) | (0.478) | (0.421) | (0.497) | (0.570) |
| FSIZE | -1.320** | -1.232** | -0.207 | -0.161 | -0.172 | -0.107 | 0.951 | -0.794 |
| | (0.538) | (0.471) | (0.172) | (0.177) | (0.107) | (0.0881) | (2.377) | (2.533) |
| Constant | -9.489*** | 2.922 | -4.263*** | -5.136*** | 0.261 | -0.621 | 1.735 | -9.535*** |
| | (2.826) | (4.334) | (0.904) | (1.629) | (0.564) | (0.811) | (4.577) | (2.992) |
| Observations | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| Number of id | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

*Source: Author's computations generated with STATA 14*

Hausman's test is conducted as shown in Table 13 below so that the researcher may choose which model is most suitable for interpretation. It is crucial to keep in mind that the proper model must be chosen based on Hausman's test, and only then can the essential diagnostic tests be carried out.

Therefore, Hausman's test can help in addressing the issues of normalcy, auto-correlation, and heteroskedasticity.

### *4.3.7. HAUSMAN TEST*

The result of Hausman test is represented in Table 13. This is done to ascertain the most suitable between random and fixed model. It is significant to note that choosing the appropriate model based on Hausman's test is necessary to explain the models presented in Table 13.

**TABLE 13: HAUSMAN'S SPECIFICATION TEST FOR THREE MODELS (ROA, ROE AND STOCKRETURN)**

| Test: Ho: difference in coefficients | chi2(11) | Prob > chi2 |
|---|---|---|
| ROA | 27.21 | 0.001 |
| ROE | 12.44 | 0.0529 |
| STOCKRETURN | 6.27 | 0.6175 |
| Tobins's Q | 23.80 | 0.0006 |

*Source: Author's computations generated with STATA 14*

As seen from Table 13, the chi-square values for the four models **(**ROA, ROE, Stock Return and Tobin's Q) are 27.21, 12.44, 6.27 and 23.80 with corresponding probability values of 0.001, 0.0529, 0.6175 and 0.0006. This indicate that fixed effect model is appropriate for model one (ROA) and model four (Tobin's Q) since they are statistically significant as the probability value is below 5% level of significance. In contrast, the random effect model is found to be appropriate for mode two (ROE) and Model three (STOCK RETURN) since they are found to be statistically insignificant and greater 5% level of significance.

In a nutshell, the random effect for two and three (ROE and STOCK RETURN) is to be considered based on Hausman's test. This is done in the absence of heteroskedasticity however, all four models (ROA, ROE, STOCK RETURN and Tobin's Q) are heteroskedacstics thus, the fixed or random effect model could no longer be considered. therefore, the model that can address the heteroskedasticity in fixed and random effect model are the Panel Corrected Standard Error and Feasible General Least Square (FGLS) model. Thus, this study run the FGLS model based on the recommendation of GUJARATI (2004) which is hereby presented and discussed next.

### 4.4. Regression Results

The general linear regression model in econometrics is a generalisation of the classical linear regression model. By changing some of the assumptions of the classical linear model, general linear regression may be constructed from the classical assumptions. A non-spherical disturbance is assumed rather than spherical (OLOYEDE, 2021). To address heteroscedasticity and autocorrelation issues, the generic linear regression model is therefore used. One of the underlying presumptions is that the errors in the general linear regression model are not spherical. Furthermore, the error term is also not correlated with any of the independent variables. This contrasts the normal classical linear regression model, in which the disturbance is supposed to be spherical.

When heteroskedasticity and autocorrelation are present, the hypothesis tests are invalid because, unlike the OLS estimator, the standard error estimates are inconsistent and biased and not based on maximum likelihood. Thus, Panel-Corrected Standard Error (PCSE) is a more appropriate estimator. To understand the implication of the relationship between explanatory and explained variables, especially for model one, The results of the PCSE model are shown in Table 14 below, detailing all the variables, standard errors, and probabilities, along side the values of R-square, Wald test value for joint significance, and the correlation between the error terms. The coefficients also indicate the level of significance; thus, one star implies a 10% significance, two stars demonstrate a 5% significance, and three stars denote 1% significance. The study's model is expressed in table 14 using the aforementioned parameters.

**TABLE 14: PANEL CORRECTED STANDARD ERROR FOR ROA (MODEL ONE)**

| Variable | Coef. | St.Err. | t-value | p-value | Sig |
|---|---|---|---|---|---|
| SOCDIS | .23 | .081 | 2.84 | . 005 | *** |
| ENVDIS | .002 | .001 | 1.74 | . 081 | ** |
| ECONDIS | .024 | .021 | 1.09 | . 278 | |
| BOWN | -.737 | .498 | -1.48 | . 140 | ** |
| BOWN_SOC | 62.26 | 41.417 | 1.50 | . 133 | * |
| BOWN_ENV | .389 | .088 | 4.43 | .000 | *** |
| BOWN_ECO | .249 | .084 | 2.94 | . 003 | * |
| FSIZE | .19 | . 088 | 2.16 | . 031 | ** |
| Constant | .452 | .517 | 0.87 | . 383 | |

| | | | |
|---|---|---|---|
| Mean dependent var | 0.032 | SD dependent var | 0.259 |
| Number of obs | 63.000 | Chi-square | 285.16 |
| Prob > chi2 | 0.000 | R-squared | 0.8945 |

**** p<.01, ** p<.05, * p<.1*

*Source: Author's computations generated with STATA 14*

The proportion of the overall variation in the dependent variable described by the independent variables together was calculated using the cumulative R2 of 0.8945 for the variables, which is the multiple coefficient of determination. As a result, the independent variables in the analysis account for 89.45 % of the overall variance in ROA of the examined oil and gas firms in Nigeria. The model in Table 14 also reveals that wald chi2 of 285.16 with a p-value of 0.000 indicates that the model is fit, as it is significant at 1%. Furthermore, according to the likelihood of the wald chi2, which is significant at 1%, all of the independent variables collectively in the model are significant. It means that there is a 99.9% likelihood that the association between the variables is not attributable to chance, and that the regression findings can be trusted. Furthermore, it means that the study's independent variables reliably predict the study's dependent variable.

### *4.4.1. TEST OF HYPOTHESES*

### 4.4.2. *THE DIRECT INTERACTION BETWEEN CSR AND ROA*

The section evaluates the proposed hypotheses on the connection between CSR and the ROA of the examined oil and gas firms. This study hypothesized a significant correlation between the variables under investigation as seen below.

- **H1a:** Social disclosure significantly affects the ROA of the examined oil and gas firms.
- **H1b:** Environmental disclosure significantly affects the ROA of the examined oil and gas firms.
- **H1c:** Economic disclosure significantly affects the ROA of the examined oil and gas firms.

The coefficient of social disclosure as revealed in Table 14 is 0.230. This shows that there is a positive link between social disclosure and ROA. The relationship is found to be statistically significant at 1% with the p-value of 0.005. that the greater the firms' disclosure of their social activities, the greater the firms' ROA. Hence, this study found evidence to accept hypothesis 1a which state that social disclosure significantly affects the ROA of the examined oil and gas firms. Social disclosure can improve stakeholder relationship, trust and confidence in a firm. This can lead to an increase in sales. Increased sales will increase the company's net profit. And the increased in corporate profits will have an impact on the company's ROA.

According to Table 14, the environmental disclosure coefficient is 0.002, demonstrating the existence of a positive link between environmental disclosure and ROA. The result is consistent

with sustainability development theory as it proposed a positive relationship between environmental disclosure and return ROA. The established link is stated to be statistically insignificant at 5% since the p-value is 0.081. The p-value is more than 5%, indicating that this study uncovered evidence to fail to reject the null hypothesis. Therefore, hypothesis 1b which states that environmental disclosure significantly affects the ROA of the examined oil and gas firms is rejected. The result on the correlation between enivronmental disclosure and ROA is in consistant with those of NYIRENDA et al. (2013) and NOR et al. 2016.

The coefficient of economic disclosure is 0.024. The outcome of economic disclosure from this parameter, as seen in the table 14 is a clear sign of a statistically positive association, implying that economic disclosure moves in the same direction as FP (measured using ROA). Notwithstanding, the result is in line with legitimacy theory. Because the p-value is 0.278, as shown in Table 14, the relationship formed is statistically insignificant at 5%. As a result of the p-value being greater than 5%, this study revealed evidence to support and retain the null hypothesis, thereby rejecting hypothesis 1c which says that economic disclosure significantly affects the ROA of the examined oil and gas firms. An intriguing aspect to consider is the possible lack of correlation between economic disclosure and the ROA among the examined oil firms. This absence of a significant relationship could stem from the quality disclosure. If economic disclosure lacks transparency or reliability, its impact on the firm's ROA may be achieved. Furthermore, in industries characterized by stability, predictability, and financial strength, economic disclosure might not exert a substantial influence on ROA. This can be attributed to investors already possessing a solid understanding of the industry's fundamentals. Hence, Economic disclosure may not provide much additional information.

### 4.4.3. *THE INDIRECT EFFECT OF BOARD EQUITY OWNERSHIP ON CSR AND ROA*

- **H2a:** Board equity ownership significantly moderates the correlation between social disclosure and the ROA of the examined oil and gas.
- **H2b:** Board equity ownership significantly moderates the connection between environmental disclosure and the ROA of the examined oil and gas firms.
- **H2c:** Board equity ownership significantly moderates the nexus between economic disclosure and the ROA of the examined oil and gas firms.

The study anticipates that board equity ownership will strengthen the link between social disclosure and FP (ROA) will be improved. As a result, the study's finding is likely to corroborate with the postulation of stakeholder theory. The coefficient of the interaction between social disclosure (BOWN-SOC) and market measurement of financial performance is 62.26, indicating that BOWN positively moderates the correlation between SOCDIS and ROA. In comparison, Table 14 shows that SOCDIS direct link coefficient is 0.23 with a p-value of 0.005. The interaction detected so far is 13.3%, which is considered insignificant. This is because the p-value is 0.133. Since the p-value is greater than 10% significance level, there is evidence to reject hypothesis 2a which says that board equity ownership significantly moderates the correlation between social disclosure and the ROA of the examined oil and gas firms.

The parameter as seen in model one review that the coefficient of the interaction between board equity ownership, environmental disclosure and ROA (BOWN_ENV) is 0.389, when compared with the ENVIDIS direct relationship coefficient of 0.002 with the p-value of 0.081, as obtained from Table 14. The result reveals a stronger relationship with moderation, which means the more of directors' ownership the more measures are taken toward environmental disclosure. The relationship is significant at 1% as reviewed with a p-value is 0.000. Therefore, this study found sufficient evidence to accept hypothesis 2b which states that board equity ownership significantly moderates the connection between environmental disclosure and the ROA of the examined oil and gas firms.

This study hypothesized that board equity ownership has a moderating effect on the relationship between economic disclosure and ROA. From the result obtained, the coefficient of the interaction between economic disclosure and ROA (BOWN_ECON) is 0.249 as against the direct relationship of the ECONDIS coefficient which is 0.024 with a p-value of 0.287. This implies that the board of directors due to ownership interest is likely to play a significant role in bringing corporate management and other stakeholders' perspectives closer together, which influences the company's performance, and is in line with the postulation of stakeholder theory. The relationship is found to be significant since the p-value is 0.003, giving sufficient evidence to accept hypothesis 2c which says that board equity ownership significantly moderates the nexus between economic disclosure and the ROA of the examined oil and gas firms.

**TABLE 15: FEASIBLE GENERALIZED LEAST SQUARE FOR ROE (MODEL TWO)**

| Variable | Coef. | St.Err. | t-value | p-value | Sig |
|---|---|---|---|---|---|
| SOCDIS | .004 | .001 | 3.37 | .001 | *** |
| ENVDIS | .062 | .121 | 0.51 | .611 | |
| ECONDIS | .203 | .035 | 5.85 | .000 | *** |
| BOWN | .45 | .586 | 0.77 | .442 | |
| BOWN_SOC | .101 | .101 | 1.01 | .314 | |
| BOWN_ENV | .054 | .053 | 1.03 | .303 | |
| BOWN_ECO | .122 | .208 | 0.58 | .559 | |
| FSIZE | .052 | .132 | 0.39 | .694 | |
| Constant | 4.986 | .837 | 5.96 | .000 | *** |

| | | | |
|---|---|---|---|
| Mean dependent var | 0.091 | SD dependent var | 0.188 |
| Number of obs | 63.000 | Chi-square | 57.626 |
| Prob > chi2 | 0.000 | | |

**** p<.01, ** p<.05, * p<.1*

*Source: Author's computations generated with STATA 14*

When generalized least squares (GLS) is used to estimate model parameters, total squares cannot be divided in the same way as other estimators, which makes the R-squared statistic less effective as a diagnostic tool for FGLS regressions. Also, removing or adding variables in a model does not necessarily result in an increase or decrease in the estimated R-squared value (ALLEN, 2021).

### *4.4.4. THE DIRECT RELATIONSHIP BETWEEN CSR AND ROE*

- **H3a:** Social disclosure significantly affects the ROE of the examined oil and gas firms.
- **H3b:** Environmental disclosure significantly affects the ROE of examined oil and gas firms.
- **H3c**: Economic disclosure significantly affects the ROE of the examined oil and gas firms.

Followed by the previous argument in the literature, the study hypothesized that the more social disclosure the more the firm's performance improve, since it proposed a positive relation in line with stakeholder theory.

The coefficient of social disclosure as revealed in Table 15 is 0.004. This is a clear indication of a positive relationship as proposed in model two, as social disclosure has directly correlated with FP (measured using ROE). The established relationship is statistically significant at 1% since the p-value is 0.001, giving sufficient evidence to reject the null hypothesis that social disclosure has no significant effect on the ROE of examined oil and gas firms. Hypothesis 3a is therefore accepted.

The firm's capacity to entice prospective investors is increased through environmental transparency. According to the study's hypothesis, which was supported by prior research, stakeholder theory suggested a positive relationship, the amount of environmental disclosure had a favourable propensity to increase equity shareholders' profits. This is supported by the fact that the coefficient of ENVDIS is .062 as shown by the model parameter result. As ROE and ENVDIS move in the same direction, this indicates a statistically beneficial association. As a result, ROE would increase if more environmental information is disclosed. The p-value, which can be seen in Table 15, is 0. 611, which means that the link as established is considered to be statistically insignificant at a level of 5%. The research found evidence to reject hypothesis 3b that stated environmental disclosure significantly affects the ROE of the examined oil and gas firms.

The model's interpretation of the economic disclosure from the parameter indicates that the ECONDIS coefficient is 0.203. This signifies a statistically positive association, meaning that ECONDIS and ROE are moving in the same direction. It implies that when ECONDIS rises, performance will rise following the stakeholder theory. Since the p-value is 0.000 as shown in Table 15, the link thus formed is considered statistically significant. The research revealed evidence to reject the null hypothesis, which states that economic disclosure has no significant effect on the ROE of the examined oil and gas firms. Hypothesis 3c is there accepted.

#### *4.4.5. THE INDIRECT EFFECT OF BOARD EQUITY OWNERSHIP ON CSR AND ROE*

- **H4a:** Board equity ownership significantly moderates the correlation between social disclosure and the ROE of the examined oil and gas firms.

- **H4b:** Board equity ownership significantly moderates the connection between environmental disclosure and the ROE of the examined oil and gas firms.

- **H4c:** Board equity ownership significantly moderates the nexus between economic disclosure and the ROE of the examined oil and gas firms.

The research predicts that the link between board equity ownership and social disclosure (BOWN_ SOC) on FP (as measured by ROE) would strengthen with the addition of board equity ownership. The result of the investigation is thus likely to support the legitimacy theory's postulation. The coefficient of the interaction (BOWN_SOC) is thus 0.101, indicating a positive link. It is said that

the link so established is insignificant. This is due to the fact that the p-value as shown in Table 15 is 0. 314. This study discovered adequate evidence to support the null hypothesis. Hypothesis 4a which states that board equity ownership significantly moderates the correlation between social disclosure and the ROE of the examined oil and gas firms is rejected.

According to the research, adding board equity ownership would strengthen the relationship between environmental disclosure and FP as measured by ROE. The interaction between board equity ownership and environmental disclosure is positively correlated with ROE, according to the coefficient of the interaction (BOWN_ENV), which is 0.054. This is found to be statistically insignificant, as proven by the p-value of 0.303. This research revealed adequate evidence to retain the null hypothesis. Hypothesis 4b which state board equity ownership significantly moderates the connection between environmental disclosure and the ROE of the examined oil and gas firms is rejected.

Board equity ownership and economic disclosure have an positive interaction with ROE (BOWN _ECON) at a coefficient of 0. 122. The link so established is insignificant at a p-value of 0. 559, above the 5% threshold. This research found evidence to reject hypothesis 4c, which states that board equity ownership significantly moderates the nexus between economic disclosure and the ROE of the examined oil and gas firms.

**TABLE 16: FEASIBLE GENERALIZED LEAST SQUARE FOR STOCK RETURN (MODEL THREE)**

| Variable | Coef. | St.Err. | t-value | p-value | [95% Conf | Interval] | Sig |
|---|---|---|---|---|---|---|---|
| SOCDIS | .001 | .003 | 0.22 | .823 | -.006 | .007 | |
| ENVDIS | .682 | .353 | 1.93 | .054 | -.01 | 1.374 | * |
| ECONDIS | .415 | .101 | 4.10 | .000 | .217 | .614 | *** |
| BOWN | .086 | .107 | 0.81 | .42 | -.123 | .296 | |
| BOWN_SOC | .662 | .294 | 2.25 | .025 | .085 | 1.239 | ** |
| BOWN_ENV | .297 | .154 | 1.94 | .050 | -.004 | .598 | * |
| BOWN_ECO | .068 | .607 | 0.11 | .911 | -1.123 | 1.259 | |
| FSIZE | .094 | .024 | 3.93 | .000 | .047 | .142 | *** |
| Constant | -8.945 | 2.443 | -3.66 | .000 | -13.733 | -4.158 | *** |

| | | | |
|---|---|---|---|
| Mean dependent var | 0.459 | SD dependent var | 0.504 |
| Number of obs | 63.000 | Chi-square | 38.711 |
| Prob > chi2 | 0.000 | | |

**** p<.01, ** p<.05, * p<.1*

*Source: Author's computations generated with STATA 14*

Table 16 shows the FGLS model result, which includes the coefficient, standard error, z-statistics, probability values, and significant level of all variables under investigation. The R-squared statistic is less useful as a diagnostic tool for FGLS regressions since total squares cannot be split in the same manner when generalized least squares (GLS) is used to estimate model parameters. Additionally, a model's estimated R-squared value need not always rise or fall as a consequence of adding or eliminating variables (ALLEN, 2021).

### 4.4.6. *THE DIRECT INTERACTION BETWEEN CSR AND STOCK RETURNS*

- **H5a:** Social disclosure significantly affects the stock returns of the examined oil and gas firms.

- **H5b:** Environmental disclosure significantly affects the stock returns of the examined oil and gas firms.

- **H5c:** Economic disclosure significantly affects the stock returns of the examined oil and gas firms.

This research propose a positive relationship in accordance with the stakeholder theory, followed by the prior argument in the literature that the more social disclosure, the greater the improvement of the company's FP.

According to Table 16, the coefficient of social disclosure is 0.001 indicating a positive relationship social disclosure and FP as measured using Stock return. Since the p-value is 0. 823, the link so formed is considered to be statistically insignificant. The finding provides sufficient evidence to retain the null hypothesis, thereby rejecting hypothesis 5a which states that social disclosure significantly affects the stock returns of the examined oil and gas firms.

The disclosure about the company's environmental impact improves its ability to attract potential investors. The study's premise, which was validated by earlier research, revealed a favorable association between stakeholder theory, the environmental disclosure and stock returns. The coefficient of ENVDIS, as shown by the model parameter result, is 0.682. This suggests a statistically advantageous link since ENVDIS and stock return move in the same direction. The more environmental information is revealed, the higher the stock return would be. The association as established is regarded as statistically significant at a level of 10%, according to the p-value of

0.054. According to the study's findings, environmental disclosure has significant effect on the stock return of the examined oil and gas firms, giving evidence to accept hypothesis 5b.

The ECONDIS coefficient is 0.415, according to the model's interpretation of the economic disclosure from the parameter. This is an obvious instance of a statistically positive connection, which indicates that ECONDIS and stock return move in the same direction. It suggests that as ECONDIS increases, performance will increase in line with the legitimacy theory. Since the p-value for the z-statistics is 0.000, which is statistically significant at a level of 1%. The study found evidence to accept hypothesis 5c which propose that economic disclosure significantly affects the stock returns of the examined oil and gas firms.

#### *4.4.7. THE INDIRECT EFFECT OF BOARD EQUITY OWNERSHIP ON CSR AND STOCK RETURN*

- **H6a:** Board equity ownership significantly moderates the correlation between social disclosure and the stock returns of the examined oil and gas firms.

- **H6b:** Board equity ownership significantly moderates the connection between environmental disclosure and the stock returns of the examined oil and gas firms.

- **H6c:** Board equity ownership significantly moderates the nexus between economic disclosure and the stock returns of the examined oil and gas firms.

This study hypothesized that board equity ownership has a moderating effect on the relationship between social disclosure and stock return. From the result obtained, the coefficient of the interaction between economic disclosure and stock return (BOWN_SOC) is 0.661 as against the direct relationship of SOCDIS coefficient which is 0.001 with a p-value of 0.823. This implies that the board of directors due to ownership interest is likely to play a significant role in bringing corporate management and other stakeholders' perspectives closer together, which influences the company's performance, which is in line with the postulation of stakeholder theory. The relationship is found to be significant since the p-value of the z-statistics is 0.025. This gives sufficient evidence to accept hypothesis 6a which propose that board equity ownership significantly moderates the correlation between social disclosure and the stock returns of the examined oil and gas firms.

It was expected in this research that board equity ownership would moderate the link between environmental disclosure and stock performance. Based on the findings, the coefficient of the interaction between environmental disclosure and stock return (BOWN_ENV) is 0.297. This suggests that, in keeping with the tenet of stakeholder theory, the board of directors' ownership interest is likely to play a key role in bringing corporate management and other stakeholders' viewpoints closer together. Given that the p-value for the z-statistics is 0.050, the relationship is said to be significant. As a result, there is enough evidence to reject the null hypothesis that board equity ownership has no significant moderating effect on the relationship between environmental disclosure and stock return of the examined oil and gas. Hypothesis 6b is therefore accepted.

The findings show that the interaction between board equity ownership and economic disclosure on stock return have coefficient of 0.680, which is statistically insignificant with p-value of 0.911. This demonstrates unequivocally how board stock ownership may not work as a moderating factor to improve the relationship between economic disclosure and FP (Using stock return). This study provides sufficient evidence to reject hypothesis 6c which states that board equity ownership significantly moderates the nexus between economic disclosure and the stock returns of the examined oil and gas firms.

**TABLE 17: PANEL CORRECTED STANDARD ERROR FOR TOBINS'S Q (MODEL FOUR)**

| Variable | Coef. | St.Err. | t-value | p-value | Sig |
|---|---|---|---|---|---|
| SOCDIS | .0034 | .004 | 0.07 | .940 | |
| ENVDIS | 1.196 | . 405 | 2.96 | . 003 | *** |
| ECONDIS | .459 | . 116 | 3.95 | .000 | *** |
| BOWN | 1.427 | 2.306 | 0.62 | . 536 | |
| BOWN_SOC | .063 | . 458 | 0.14 | . 891 | |
| BOWN_ENV | .556 | . 177 | 3.14 | . 002 | *** |
| BOWN_ECO | .493 | . 430 | 1.15 | . 251 | |
| FSIZE | 1.68 | . 455 | 3.69 | .000 | *** |
| Constant | 9.214 | 2.789 | 3.30 | .001 | *** |

| | | | |
|---|---|---|---|
| Mean dependent var | -1.202 | SD dependent var | 0.534 |
| Number of obs | 63.000 | Chi-square | 45.73 |
| Prob > chi2 | 0.000 | R-square | 0.3839 |

**** p<.01, ** p<.05, * p<.1*

*Source: Author's computations generated with STATA 14*

The percentage of the total variance in the dependent variable explained by the independent variables jointly was computed using the variables' cumulative R2 of 0.3839, which is the cumulative coefficient of determination. As a consequence, the independent variables in the study account for 38.39% of the entire variation in the market performance of the Nigerian listed oil and

gas enterprises. The model in Table 17 also demonstrates that the Wald chi2 of 285.16 with the matching p-value of 0.000 suggests that the model is fit since it is significant at 1%. Furthermore, according to the probability of the Wald chi2, which is significant at 1%, all of the independent variables in the model are significant collectively. It signifies that there is a 99.9% possibility that the relationship between the variables is not due to chance and that the regression results may be believed. Furthermore, it implies that the study's independent factors accurately predict the study's dependent variable.

#### *4.4.8. THE DIRECT RELATIONSHIP BETWEEN CSR AND TOBIN'S Q*

- **H7a:** Social disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H7b:** Environmental disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H7c:** Economic disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

Social disclosure coefficient is 0. 0003. The output of SOCDIS from the parameter, as shown in model four, is a clear indication of a statistically positive connection, meaning that SOCDIS moves in the same direction as market measures of the financial performance. Regardless, the outcome is consistent with the theory of stakeholders. Because the p-value is 0.940, as indicated in Table 17, the established association is statistically insignificant at 5%. This research found evidence to reject hypothesis 7a which propose that social disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

The parameter of environmental disclosure as seen in this model reveals a coefficient of 1.196. By implication, a positive relationship exists between the environmental disclosure and Tobin's Q; in other words, they both move in the same direction. This means environmental disclosure may influence investors' perspective about the firm which would better its market performance. The relationship is statistically significant at 1% since the p-value is 0.003, giving adequate evidence to support and accept hypothesis 7b which states that economic disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q. KING and LENOX

(2001) also found a significant association between environmental responsibility and Tobin's Q of the examined manufacturing firms in the United State.

The economic disclosure coefficient, as shown in Table 17, is 0.458, indicating a positive association with Tobin's Q. It is a clear indication of economic disclosure and Tobin's Q moving in the same direction. It means that the more economic disclosure, the greater the influence on the firm's market performance. The established link is deemed to be statistically significant since the p-value is 0.000. Because the p-value is less than 1%, this result revealed evidence to accept hypothesis 7c which propose that economic disclosure significantly affects the performance of the examined oil and gas firms as measured by Tobin's Q.

#### *4.4.9. THE INDIRECT EFFECT OF BOARD EQUITY OWNERSHIP ON CSR AND TOBIN'S Q*

- **H8a:** Board equity ownership significantly moderates the correlation between social disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H8b:** Board equity ownership significantly moderates the connection between environmental disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

- **H8c:** Board equity ownership significantly moderates the nexus between economic disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

The study anticipates that when board equity ownership is added, the effect between social disclosure (SOCDIS) and market performance (Tobin's Q) will be improved. As a result, the study's finding is likely to corroborate with the postulation of the stakeholder theory. The coefficient of the interaction between social disclosure (BOWN_SCO) and market measurement of performance is 0.062, indicating that it is positively related to Tobin's Q. In comparison, Table 17 shows that the SOCDIS direct link coefficient is 0003 with a p-value of 0.940. Since the parameter was found to be insignificant and less than that of moderation, this means that the greater the amount of equity ownership of board members, the more efforts will be implored to increase social disclosure, which could affect the oil and gas firm's market dimension of financial

performance. This is because effective disclosure tactics would be used by managers when their interests collide with those of the shareholders. They do this to increase their personal wealth while also reaping the benefits of changes in commodity prices and other factors. Though, the interaction detected so far is insignificant. The p-value of 0. 891 has provided adequate evidence to retain the null hypothesis that, board equity ownership does not significantly moderates the correlation between social disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q. Hypothesis 8a is therefore rejected.

The coefficient of the interaction between board equity ownership and economic disclosure on Tobin's Q (BOWN_ENV) is 0. 555, with a p-value of 0.002. The result reveals that the more directors' ownership, the more measures are taken towards environmental disclosure that would better the company's reputation and hence improve their market performance. The established correlation is significant at 1%, giving that the the p-value is less than 5%. Thus, this study found sufficient evidence to accept hypothesis 8b which states that board equity ownership significantly moderates the connection between environmental disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

This study hypothesized that board equity ownership has a moderating effect on the relationship between economic disclosure and firm' Tobin's Q. The coefficient of the interaction between board equity ownership and economic disclosure on Tobin's Q (BOWN_ECON) is 0.493. The relationship is found to be insignificant since the p-value is 0.251, giving adequate evidence to reject hypothesis 8c which propose that board equity ownership significantly moderates the nexus between economic disclosure and the performance of the examined oil and gas firms as measured by Tobin's Q.

## 4.5. Discussion of Findings

With a focus on the the examined oil and gas firms in Nigeria, this research examines the moderating impact of board equity ownership on the link between CSR disclosure and financial success.

### *4.5.1. CSR AND FINANCIAL PERFORMANCE*

The outcome of this research demonstrates a positive relationship between social disclosure and corporate FP using ROA, ROE, Stock Return and Tobin's Q, as proven statistically with the

coefficient of 0.23, 0.004. 0.001 and 0.034 respectively, as seen in Table 14 to Table 17. This means when the firms increase their social disclosure, there would be an improvement in their FP. This is because, social initiatives can strengthen and keep up a good business image, pleasing many stakeholders. This is because companies with significant social disclosure initiatives may gain credibility faster, which will boost their performance. This is in line with the legitimacy theory that an entity should be able to live up to public norms because it is a part of society. A firm runs the danger of losing the necessary legitimacy to exist and function in society if it does not adhere to societal norms. The finding is also in line with that of CORDEIRO and TEWARI (2015), who found that an organization's market worth and profitability are increased when it attends to the requirements of its stakeholder group via CSR initiatives. It is also in line with the study of HAMMANN et al. (2009), that an organization's performance as a whole benefits from socially responsible activities that are geared toward customer happiness and staff development. Socially responsible behaviour is thought to elicit a favourable response from the stakeholders, which will favourably affect performance. In addition, ALIYU and NOOR (2015) found that social disclosure such as participation in the community and employee concerns improves FP. However, it contradicts the finding of VANCE (1975), who found a negative link between a company's FP, that participation in CSR will jeopardize the company's ability to perform well in the stock market. However, the significance of the established relationship as intented by this research showed mixed findings. The significance of the relationship between social disclosure and accounting measures of FP as proxied by ROA and ROE has been proven to be significant with the p-values of 0.005 and 0.001. This conclude that the link between social disclosure, ROA and ROE is positive and statistically significant as a measure of the Nigerian oil and gas firms performance. In contrast, the market measures of performance as proxied by stock returns and tobin's q is found to be positive but statistically insignificant with the p-values of 0.823 and 0.940, giving evidence to reject the proposed hypotheses.

In Table 14 to Table 17, the results of this study show a statistically positive correlation between environmental disclosure and FP using ROA, ROE, Stock Return, and Tobin's Q, with coefficients of 0.02, 0.062, 0.682, and 1.196, respectively. This means that when companies engage in environmental disclosure, it signals positive information to prospective shareholders. This is because environmental disclosures provide valuable user information. Therefore, a CSR program is not only developed due to regulatory requirements but also to attract and shape investors' views,

which economically benefits the businesses and, ultimately, will be reflected in the company value. These firms are doing it either to improve their reputation, increase brand awareness, or demonstrate their commitment to concern for the community, the environment, or employee welfare, which would invariably influence performance. This finding is in line with that of RUF et al. (2001) who found that the higher the level of stakeholder satisfaction, the higher the firm's financial performance. Also, correspond with Triple Bottom Line Environmental Approach that utilizing the existing resources effectively prevents acts from endangering the natural resources for future generations. This ensures that businesses operate in an ecologically sustainable way. It however conflicts with research by KOTCHEN and MOON (2012), DAVIS (1973). However, the significance of the established relationship between the environmental disclosure and the FP of the oil and gas firms as proxied by ROA, ROE, stock return, and Tobin's Q has shown mixed result. Environmental disclosure has no significant effect on ROA and ROE as proven with the p-values of 0.081, 0.611 respectively. However, a p-value of 0.003 and 0.054 below the significant level proves that a significant link exists between environmental disclosure, Stock Return and Tobin's Q as a measure of the oil and gas firms' performance. Providing information about a company's environmental practices can help improve its reputation and, as a result, its financial performance. According to CAESARIA and BASUKI (2017), environmental disclosure improves financial performance by increasing the confidence of potential investors and creditors, which enhances the organization's image. transparency and accountability in environmental reporting can drive positive financial outcomes. One avenue through which companies can demonstrate their commitment to sustainable practices is environmental disclosure - the communication of a company's environmental impacts, initiatives, and performance. The legitimacy theory posits that companies engaging in environmental disclosure can enhance their reputation and legitimacy, consequently gaining stakeholders' trust and support. Firms that proactively disclose their environmental practices and performance tend to attract environmentally conscious investors, experience reduced regulatory risks, and gain a competitive advantage in increasingly sustainability-focused markets. environmental disclosure can mitigate reputational risks and enhance stakeholder trust.

Environmental disclosure has emerged as a powerful tool for driving financial performance. By embracing transparency, accountability, and sustainability, companies can unlock a range of benefits, including improved profitability, enhanced brand value, reduced regulatory risks, and

increased access to capital. The findings from theoretical frameworks and empirical studies strongly advocate for the integration of environmental considerations into corporate strategies, emphasizing the importance of proactive environmental disclosure in shaping a company's financial success. The improvement in stakeholder relationship, trust and confidence in a firm can lead to an increase in sales. Companies can reduce cost through energy savings and conservation, thereby increasing efficiency. Empirical evidence by Enz and Siguaw (1999) has proven that cost saving is associated with environmental initiatives. Increased sales combined with lower cost of operation could boost the company's net profit. Pollution prevention can thus assist firms in achieving a win-win situation that can be beneficial to both the firm and the environment.

Using ROA, ROE, Stock Return, and Tobin's Q, the study's findings demonstrate a statistically positive relationship between economic disclosure and FP, with coefficients of 0.02, 0.203, 0.415, and 0.459, respectively. This implies that when some of these businesses provide economic responsibility, it sends a good message to potential shareholders. In this way, the expansion of the company and its support of the economy are linked. This is because the accomplishment of other obligations that must be fulfilled throughout company operations depends on a firm's ability to perform its economic responsibility. Economic responsibility, according to LU et al. (2019), is a means of fostering opportunities in society and promoting the nation's economic development. This may greatly enhance the business reputation, resulting in long-term sustainable growth. This finding is also in line with that of UADIALE and FAGBEMI (2012), that there is a strong and positive correlation between CSR financial success metrics. The positive correlation between CSR and FP found in this research is in line with several other studies such as those of (PHAM and TRAN 2020; Thuy et al., 2021; AKSAK et al., 2016; FELDMAN and VASQUEZ-PARRAGA, 2013; BECK et al.. 2018; TSOUTSOURA 2004; CALLAN and THOMAS 2009; PAN et al., 2014; ROBERTS and DOWLING 2002; PORTER and KRAMER 2006; THUY et al., 2021; PLATONOVA et al. 2018; SARKAR et al. 2021; NAIR et al. 2019; IKRAM et al., 2020; AWAYSHEH et al., 2020; BAG and OMRANE, 2022). The firm's image/reputation will improve as a result of investing in CSR initiatives, thereby, improving firm profits. It’s also in line with the proposition of stakeholder theory, as it that affirmed management of the company is committed to living up to the expectations of those stakeholders who are investing more significant resources. From a managerial standpoint, a company should prioritize its economically important stakeholders more, as would be expected ethically. Therefore, the management perspective of

stakeholder theory places a strong focus on managing a company's relationship with its key stakeholders. However, it contradicts the result of BARNEA and RUBIN (2010), who opined that when managers allocate too many resources to CSR involvement, which may be done for personal reasons (such as career promotion), it raises agency costs, lowers the firm value, and creates a negative link between CSR and corporate value. The significance of the established link between economic disclosure and FP of the oil and gas firms as measured by ROE, stock return, and Tobin's Q has been proven to be statistically significant with the p-values of 0.000, 0.000 and 0.000 respectively, which is below the threshold of 5%. However, no statistically significant link exists between the economic disclosure and ROA as a measure of FP, as proven with a p-value of 0.278. This can be attributed to the quality and level of disclosure by the oil and gas firms.

### *4.5.2. THE MODERATION OF BOARD EQUITY OWNERSHIP ON CSR AND FINANCIAL PERFORMANCE*

The finding revealed that the moderating effect of board equity ownership on the relationship between CSR(social, environmental and economic disclosure) and FP (using ROA) is positive in light of the first model (ROA), as shown in Table 14, with a parameter of 62.26, 0.389 and 0.249 respectively. Similarly, the moderation of BOWN on the link between the three dimensions of CSR and ROE is likewise found to be positive, with a parameter of 0.101, 0.054 and 0.122 respectively. As shown in Table 16, board equity ownership has a positive moderating effect on the relationship between CSR and Stock Return as statistically proven with the parameters of 0.662, 0.297 and 0.068 respectively. Additionally, the moderation of BOWN on the interaction of CSR and Tobin's Q is equally positive as shown in Table 17 with the parameters of 0.063, 0.556 and 0.493 respectively. Considering the coefficient results of the four models, it revealed that board equity ownership would strengthen the relationship between CSR disclosure and the selected dimensions of the FP. This means by giving the directors the chance to own some stock, the company's costs associated with conflicts of interest between the management and the shareholders would be reduced. The board of directors with a sizable percentage of stock may also be motivated to promote CSR since they stand to gain more from the company's positive image. In this situation, it is reasonable to anticipate even greater preferences for reputation over immediate outcomes. Board equity ownership is one of the forms of ownership that, according to agency theory, is characterized by directors that behave opportunistically unless provided the appropriate incentives. These findings conform to that of JO and HARJOTO (2011); REN and CHANDRASEKAR (2012) that board equity ownership has a favourable impact on CSR, suggesting that as board equity

ownership rises, CSR disclosure would also rise. This will undoubtedly improve business performance and elicit favourable feedback from investors. The board members with equity interests put more effort on their oversight function because they are more sensitive to the effects of bad decisions than other shareholders. As a consequence, directors who hold more shares are more likely to objectively evaluate the performance of the firm and influence corporate decisions.

The significance of the moderation of board equity ownership on the exising link between CSR disclosures and FP has shown mixed findings. The result prove that BOWN have no significant moderating effect on social disclosure and FP as meausred by ROA, ROE and Tobin's Q, with the p-values of 0.133, 0.314 and 0. 891 respectively. In contrast, a p-value of 0.025 prove a significant moderation of BOWN on social disclosure and Stock Returns. Furthermore, BOWN significantly moderates the link between environmental disclosure and FP as measured by ROA (p-value of 0.000), Stock Returns (p-value of 0.050), and Tobin's Q ((p-value of 0.002). However, board equity ownership have no significant moderating effect on environmental disclosure and FP as measured by ROE ((p-value of 0.303). Lastly, BOWN has proven to have a significant moderating effect on economic disclosure and FP as measured by ROA with a p-value of 0.003. In contrast, no significant moderation of BOWN on economic disclosure and the rest of the performance indicators as meaured by ROE, stock returns and Tobin's Q, with the p-values of 0.559, 0.911 and 0.251 respectively.

# 5. CONCLUSIONS, POLICY IMPLICATIONS AND LIMITATIONS

## 5.1. Conclusion

The conflicting empirical evidence on CSR and FP has been a topic of debate by scholars for decades. Although this field of study has been extensively researched over time, fundamental gaps in research methodologies and empirical findings continue to undercut the correlation between CSR and FP. The modern concerns of the twenty-first century are the reason why CSR is gaining significance in academia and corporate world. The growing challenges of global warming, deteriorating pollution, increased exploitation of resources, employee rights, and healthy work environment have highlighted the importance of CSR (REVERTE, 2016). There has been a growing demand for corporations to embrace the concept of CSR, which refers to principles that a firm adheres to that are focused on economic, social, and environmental contributions that are targeted to positively impact society. Short-term gains cannot guarantee a corporate entity's success in a globally competitive market, as acknowledged by many large corporations globally (HOSSAIN et al., 2022). As a result, there is need to employ long term sustainable goals while maximizing short-term earnings, which could be accomplished through CSR initiatives. A well-planned and implemented CSR strategy can have a good impact on a developing country like Nigeria, where people no longer believe in the government to provide them with basic needs and instead hope on businesses to come to their aid (ADEGBITE and NAKAJIMA, 2011).

Sustainable development is a concern for both the government and corporate bodies. This is because nations will struggle to foster sustainable growth without the involvement of corporate entities. Therefore, the role of business in promoting long-term development cannot be emphasized. In a world of limited resources, firms must demonstrate concern for environmental and societal issues. Developing countries are particularly vulnerable to social and environmental issues. This means that CSR efforts are the ideal steps for developing countries to close the socioeconomic gap that keeps them from advancing.

The government's reliance on the oil sector has harmed the host communities' environmental and socioeconomic situations. As a result, the host communities are on the receiving end of dealing with the dilemma from the industrial operations. Environmental degradation, pollution, and distortion of the ecosystem resulting from oil production continue to pose a big challenge. These issues, which can sometimes be avoided, contribute to massive climatic change which harms the

environment and society. The failure of regulators to enforce laws has fueled the violence in the oil region. Contamination of the environment has made life intolerable for most of the people who rely on farming as a source of livelihood. Losing their source of livelihood has increased unrest in the oil region. This has resulted in oil pipeline vandalism or sabotage, as well as theft by members of the host community, resulting in more spills in the region.

CSR is embedded in today's corporate world, particularly as a result of the increasing impact of globalization, which requires firms to contribute more significantly to all stakeholders rather than just shareholders (ABBAS, 2020). CSR is inextricably linked to the pursuit of effective customer relationships and the goal of fostering trust and loyalty (SKOWRON-GRABOWSKA et al., 2016). CSR is perceived as a means by which companies strike a plethora deal of harmony and collaborations with companies' top executives with the view to integrate information transparency bothering on the environment in their reporting framework as part of their statutory contributions and recourse to legacy. If companies can successfully attract investors by disclosing evidence of their CSR activities to the satisfaction and expectations of stakeholders, it could improve financial performance (PHAM and TRAN, 2020). CSR programs can be a profitable component of corporate strategy, minimizing risks, boosting brand image, increasing staff productivity, decreasing a firm's cost of capital, and sustaining inter-relationships with diverse stakeholders that are critical to long-term success. Investing in socially responsible programs can help a company's market position by increasing profits in the long run. An environmentally conscious organization gain from an improved financial performance by ensuring that its operations are less harmful to the environment.

CSR forms part of business investment, and the connection between CSR disclosure and FP is complex, rather than a direct relationship. Not considering the moderating factors that could impact on these variables poses a limitation that could lead to inconsistency in findings. 2021). Thus, intermediate variables play a critical role in mediating/moderating the existing link (THUY et al. (2021). Several prior research has striven to show a direct correlation between CSR disclosure and FP. Additionally, due to the inconsistency in the findings on CSR and firm performance, scholars have recently advocated for a more complex link, proposing the use of intermediate variables to strengthen the existing link, by measuring both the direct and the indirect effects

(AKHTARUDDIN and HARON 2010). Equity ownership may prompt management to undertake risk-mitigating strategies to protect the firm.

This research aimed to investigate how the three dimensions of CSR (Social, Environmental and Economic Disclosure) affect various measures of performance as proxied by ROA, ROE, Stock Returns and Tobin's Q. Additionally, the moderating role of board equity ownership was also investigated.

The evidence suggests that the examined oil and gas firms disclosed their social and environmental performance to a maximum of 50% only as compared to the total number of indicators per dimension for the period under study. It is evident that the examined oil firms have performed poorly in terms of CSR disclosure.

This study tested 8 hypotheses, each of which had three subcategories, for a total of 24 hypotheses. The result of this empirical investigation provided evidence to accept 12 hypotheses consisting of 7 direct hypotheses and 5 indirect hypotheses.

This research draws the following conclusion:

The relationship between social disclosure and the ROA of the examined oil and gas firms have been found to be positively significant based on the coefficient of 0.23 and a p-value of 0.005 below the significant level. This finding provides sufficient evidence to support hypothesis **(1a),** which contends that social disclosure significantly affects the ROA of the examined oil and gas firms. This finding is also in line with that of CORDEIRO and TEWARI (2015; HAMMANN et al. (2009; ALIYU and NOOR (2015). This implies that the firm's ROA would improve as they increased the disclosure of their social performance. This is because social initiatives can strengthen and keep up a good business image, pleasing many stakeholders. Social disclosure can improve stakeholder relationship, trust and confidence in a firm. This can lead to an increase in sales. Increased sales will increase the company's net profit. And the increase in corporate profits will have an impact on the company's ROA. Thus, companies with significant social disclosure initiatives might gain credibility more quickly, which will boost their performance.

The relationship between environmental disclosure and the ROA of the examined oil and gas firms has been found to be positive but statistically insignificant. This study was unable to confirm that increasing environmental disclosure would increase the oil and gas firms' ROA as a proxy for FP.

As a result, there is insufficient evidence to claim the stated relationship because the p-value of 0.081 exceeds 5%. This study therefore rejects hypotheses **(1b)** as the said positive correlation as indicated by the coefficient of 0.002 is found to be insignificant.

In hypothesis (**1c)**, the correlation between economic disclosure and FP as measured by ROA is found to be positive. However, it is statistically insignificant with the p-value of 0.278, exceeding the significant level. As a result, there is no significant evidence to confirm that economic disclosure would improve ROA. This absence of a significant relationship could stem from the quality disclosure. If economic disclosure lacks transparency or reliability, its impact on the firm's ROA may be achieved. Furthermore, in industries characterized by stability, predictability, and financial strength, economic disclosure might not exert a substantial influence on ROA. This can be attributed to investors already possessing a solid understanding of the industry's fundamentals. Hence, Economic disclosure may not provide much additional information.

Furthermore, the moderation of BOWN on the relationship between social disclosure and FP as measured by ROA has yielded mixed results. The moderating effect of BOWN on the link between social disclosure and ROA is found to be positive but insignificant in hypothesis (**2a)**, with a p-value of 0.133 exceeding the threshold. As a result, there is no compelling evidence that BOWN moderates the relationship between social disclosure and ROA. In hypothesis (**2b)**, the result revealed a positive and significant correlation between BOWN, environmental disclosure and ROA, with a p-value of 0.000. This has provided enough evidence in support of hypothesis (**2b),** which contends that board equity ownership significantly moderates the connection between environmental disclosure and the ROA of the examined oil and gas firms. The result reveals a stronger relationship with moderation, which means the more of directors' ownership the more measures are taken toward environmental disclosure. Equity ownership would prompt the board to pay close attention the environmental disclosure which in turn, would increase FP as measured by ROA. CSR program is not only developed due to regulatory requirements but also to attract and shape investors' views, which economically benefits the businesses and, ultimately, will be reflected in the company value. Therefore, this study found sufficient evidence to accept hypothesis 2b which states that board equity ownership significantly moderates the connection between environmental disclosure and the ROA of the examined oil and gas firms.

Similarly, hypothesis (**2c)** has also proven a positive and significant finding at a p-value of 0.003. Thus, there is sufficient evidence to support hypothesis (**2c)** which confirms that, board equity ownership significantly moderates the nexus between economic disclosure and the ROA of the examined oil and gas firms. The board will pay close attention to improving the economic disclosure of the oil and gas firms which can improve the FP as proxied by ROA. This implies that the board of directors due to ownership interest is likely to play a significant role in bringing corporate management and other stakeholders' perspectives closer together, which influences the company's performance.

In model 2, the relationship established between social disclosure and ROE, as proposed in hypothesis **(3a)**, has proven to be positive and statistically significant, with a p-value of 0.001 below the threshold. This provides sufficient evidence to support hypothesis (**3a),** that increasing social disclosure would increase the FP of the examined oil and gas firms in Nigeria as measured by ROE. In hypothesis **(3b)**, the findings revealed a positive but statistically insignificant effect, with a p-value of 0.611 exceeding the threshold. This provides evidence to reject hypothesis (**3b)**, which states that environmental disclosure would increase the oil and gas firm's FP as measured by ROE. Additionally, hypothesis **(3c)** produced a positive and statistically significant result with a p-value of 0.000, providing sufficient evidence to support the notion that economic disclosure will increase FP as measured by ROE. Furthermore, hypotheses (**4a–4c)** have all demonstrated a positive moderation of BOWN on the correlation between CSR and ROE. However, based on statistically insignificant p-values of 0.314, 0.303, and 0.559, this study was unable to find sufficient evidence to support the aforementioned interaction. These findings do not support the contention that BOWN significantly moderates the relationship between social, environmental, and economic disclosure and ROE of examined oil and gas firms.

As shown in model 3, the interaction between CSR and stock returns yielded mixed results. While all interactions move in the same direction, statistical significance varies, providing reasons to accept or reject a hypothesis. The link between social disclosure and Stock Returns has produced positive but statistically insignificant results in hypotheses (**5a)**, with the p-value of 0.823, giving reasons to reject hypothesis **(5a)** because there is no evidence to prove that social disclosure would improve the stock returns of the examined oil and gas firms in Nigeria. In contrast, the correlation between environmental disclosure and Stock Return, this study found a statistically significant

correlation having a p-value below 10% significance level (0.054). Environmental disclosure boosts financial performance by instilling confidence in potential investors and creditors, thereby improving the organization's image. Environmental reporting that is transparent and accountable can result in positive financial outcomes. Energy savings and conservation can help businesses cut costs while increasing efficiency.

In hypothesis **(5c),** the relationship established between economic disclosure and stock return is said to be positively significant at 0.000 p-value. As a result of the sufficient evidence found in favor of hypothesis 5c, the alternate hypothesis that there is a significant relationship between economic disclosure and stock returns of the examined oil and gas firms is supported. Firms that proactively disclose their environmental practices and performance are more likely to attract environmentally conscious investors, face fewer regulatory risks, and gain a competitive advantage in increasingly sustainability-focused markets. Environmental disclosure can help to reduce reputational risks and increase stakeholder trust. BOWN's moderating effect on social disclosure and stock returns was found to be positively significant, with a p-value of 0.025. Similarly, with a p-value of 0.050, BOWN has demonstrated a positive and statistically significant moderation on the interaction between environmental disclosure and stock returns. These findings provide sufficient evidence to back up the notion that BOWN will strengthen the link between social and environmental disclosure and stock returns. The findings provide evidence to support hypotheses **(6a)** and **(6b).** The result however differs in hypothesis **(6c),** giving the p-value 0.911 above the threshold. Evidence has revealed a positively insignificant result, providing reasons not to support hypothesis 6c. Thus, there is no evidence to support that BOWN will improve the interaction of economic disclosure and stock returns.

Similarly, to the other models, the findings in model 4 also varies across different indicators. Hypothesis **(7a)** has proven a positive but statistically insignificant result, with the p-value of 0.940. This means that the researcher did not find evidence to support that increasing social disclosure would increase the FP of the examined oil and gas firms as measured by Tobin's Q. contrary to the findings in hypothesis **(7a),** the interaction of environmental disclosure and Tobin's Q as shown in hypothesis **(7b)** was found to be positively significant, with a p-value of 0.003. Similar to the findings in hypothesis **(7b),** hypothesis **(7c)** has a p-value of 0.000, demonstrating a positive and statistically significant interaction between economic disclosure and Tobin's Q. These

results offer sufficient proof to support hypotheses **(7b)** and **(7c)** which contend that environmental and economic disclosure would strengthen the examined oil and gas firms' performance as determined by Tobin's Q.

Hypotheses **(8a-8c)** measured the moderating effect of BOWN on the connection between CSR and Tobin's Q. In hypothesis **(8a),** the result is found to be positive, however, it is insignificant with the t-value of 0. 891 above the threshold. The study's findings did not corroborate hypothesis 8a because there is insufficient evidence to back up the notion that board equity ownership enhances the link between social disclosure and Tobin's Q of the examined oil and gas firms. In hypothesis **(8b),** the moderating effect of BOWN on the connection between environmental disclosure and Tobin's Q is positively significant, demonstrating that the equity ownership of the board improves the interaction between the environmental disclosure and Tobin's Q of the examined oil and gas firms. This study contends that because the board owns equity, it would pay more attention to environmental disclosure. This means by giving the directors the chance to own some stock, the company's costs associated with conflicts of interest between the management and the shareholders would be reduced. The board of directors with a sizable percentage of stock may also be motivated to promote CSR since they stand to gain more from the company's positive image. Finally, hypothesis 8c yielded a positive but statistically insignificant result. This study was unable to confirm that BOWN will improve the relationship between economic disclosure and Tobin's Q. This is because there is insufficient evidence to claim the stated relationship, as the p-value is 0.251, which exceeds the threshold. A summary result of the tested hypotheses is presented in table 18-22 below.

**TABLE 18: RESULT SUMMARY FOR ROA (MODEL ONE)**

| **HYPOTHESES** | | **P-Values** | **FINDINGS** | | **DECISION** |
|---|---|---|---|---|---|
| **H1a** | SOC-ROA | 0.005 | + | Significant | Accepted |
| **H1b** | ENV-ROA | 0.081 | + | Insignificant | Rejected |
| **H1c** | ECO-ROA | 0.278 | + | Insignificant | Rejected |
| **H2a** | SOC-BOWN-ROA | 0.133 | + | Insignificant | Rejected |
| **H2b** | ENV-BOWN-ROA | 0.000 | + | Significant | Accepted |
| **H2c** | ECO-BOWN-ROA | 0.003 | + | Significant | Accepted |

**TABLE 19: RESULT SUMMARY FOR ROE (MODEL TWO)**

| HYPOTHESES | | P-Value | FINDINGS | | DECISION |
|---|---|---|---|---|---|
| **H3a** | SOC-ROE | 0.001 | + | Significant | Accepted |
| **H3b** | ENV-ROE | 0.611 | + | Insignificant | Rejected |
| **H3c** | ECO-ROE | 0.000 | + | Significant | Accepted |
| **H4a** | SOC-BOWN-ROE | 0.314 | + | Insignificant | Rejected |
| **H4b** | ENV-BOWN-ROE | 0.303 | + | Insignificant | Rejected |
| **H4c** | ECO-BOWN-ROE | 0.559 | + | Insignificant | Rejected |

**TABLE 20: RESULT SUMMARY FOR STOCK RETURN (MODEL THREE)**

| HYPOTHESES | | P-Value | FINDINGS | | DECISION |
|---|---|---|---|---|---|
| **H5a** | SOC-STOCKRET | 0.823 | + | Insignificant | Rejected |
| **H5b** | ENV-STOCKRET | 0.054 | + | Significant | Accepted |
| **H5c** | ECO- STOCKRET | 0.000 | + | Significant | Accepted |
| **H6a** | SOC-BOWN- STOCKRET | 0.025 | + | Significant | Accepted |
| **H6b** | ENV-BOWN- STOCKRET | 0.050 | + | Significant | Accepted |
| **H6c** | ECO-BOWN- STOCKRET | 0.911 | + | Insignificant | Rejected |

**TABLE 21: RESULT SUMMARY FOR TOBIN'S Q (MODEL FOUR)**

| HYPOTHESES | | P-Values | FINDINGS | | DECISION |
|---|---|---|---|---|---|
| **H7a** | SOC- TOBINSQ | 0.940 | + | Insignificant | Rejected |
| **H7b** | ENV- TOBINSQ | 0.003 | + | Significant | Accepted |
| **H7c** | ECO- TOBINSQ | 0.000 | + | Significant | Accepted |
| **H8a** | SOC-BOWN- TOBINSQ | 0. 891 | + | Insignificant | Rejected |
| **H8b** | ENV-BOWN- TOBINSQ | 0.002 | + | Significant | Accepted |
| **H8c** | ECO-BOWN- TOBINSQ | 0.251 | + | Insignificant | Rejected |

**TABLE 22: RESULT SUMMARY**

| | Accepted Direct Hypotheses | Findings |
|---|---|---|
| **H1a** | Social Disclosure significantly affects the ROA of the examined oil and gas firms | Positively Significant |
| **H3a** | Social Disclosure significantly affects the ROE of the examined oil and gas firms | Positively Significant |
| **H3c** | Economic Disclosure significantly affects the ROE of the examined oil and gas firms | Positively Significant |
| **H5b** | Environmental Disclosure significantly affects the Stock Returns of the examined oil and gas firms | Positively Significant |
| **H5c** | Economic Disclosure significantly affects the Stock Returns of the examined oil and gas firms | Positively Significant |
| **H7b** | Environmental Disclosure significantly affects the FP of the examined oil and gas firms as measured by Tobin's Q | Positively Significant |
| **H7c** | Economic Disclosure significantly affects the FP of the examined oil and gas firms as measured by Tobin's Q | Positively Significant |
| | **Accepted Indirect Hypotheses** | **Findings** |
| **H2b** | BOWN significantly moderates the correlation between ENVDIS and the ROA of the examined oil and gas | Positively Significant |
| **H2c** | BOWN significantly moderates the correlation between ECODIS and the ROA of the examined oil and gas. | Positively Significant |
| **H6a** | BOWN significantly moderates the correlation between SOCDIS and the Stock Returns of the examined oil and gas | Positively Significant |
| **H6b** | BOWN significantly moderates the correlation between ENVDIS and the examined oil and gas Stock Returns | Positively Significant |
| **H8b** | BOWN significantly moderates the correlation between ENVDIS and the FP of the examined oil and gas firms as measured by Tobin's Q | Positively Significant |

| | Rejected Direct Hypotheses | Findings |
|---|---|---|
| **H1b** | Environmental Disclosure significantly affects the ROA of the examined oil and gas firms | Positively Insignificant |
| **H1c** | Economic Disclosure significantly affects the ROA of the examined oil and gas firms | Positively Insignificant |
| **H3b** | Environmental Disclosure significantly affects the ROE of the examined oil and gas firms | Positively Insignificant |
| **H5a** | Social Disclosure significantly affects the Stock Returns of the examined oil and gas firms | Positively Insignificant |
| **H7a** | Social Disclosure significantly affects the FP of the examined oil and gas firms as measured by Tobin's Q | Positively Insignificant |
| | **Rejected Indirect Hypotheses** | **Findings** |
| **H2a** | BOWN significantly moderates the correlation between SOCDIS and the ROA of the examined oil and gas | Positively Insignificant |
| **H4a** | BOWN significantly moderates the correlation between SOCDIS and the ROE of the examined oil and gas. | Positively Insignificant |
| **H4b** | BOWN significantly moderates the correlation between ENVDIS and the examined oil and gas ROE | Positively Insignificant |
| **H4c** | BOWN significantly moderates the correlation between ECODIS and the ROE of the examined oil and gas | Positively Insignificant |
| **H6c** | BOWN significantly moderates the correlation between ECODIS and the Stock Returns of the examined oil and gas | Positively Insignificant |
| **H8a** | BOWN significantly moderates the correlation between SOCDIS and the FP of the examined oil and gas firms as measured by Tobin's Q | Positively Insignificant |
| **H8c** | BOWN significantly moderates the correlation between ECODIS and the FP of the examined oil and gas firms as measured by Tobin's Q | Positively Insignificant |

Despite a positive effect of CSR on corporate FP and a positive moderation of BOWN on the aforementioned interaction between the dependent and independent variables, this study was unable to support all hypotheses because some findings were statistically insignificant. This study's findings support six direct hypotheses while rejecting the other six. Furthermore, the findings show that five indirect moderating hypotheses are supported, while the remaining seven are not. The variance in the statistical significance could be attributed to the low CSR disclosure of the

examined oil and gas firms and hence, their performance relating to some of the indicators is insignificant. The maximum percentage of environmental, economic, and social disclosure for the oil and gas firms under consideration is 50%, 80%, and 45%, respectively. This demonstrates that the examined oil and gas firms must improve their level of disclosure in relation to environmental and social issues in order to reap the benefits.

This research, therefore, recommends that the management of listed Industrial firms in Nigeria should improve on their CSR disclosure for all indicators in order to reap the benefits of higher financial performance that has been proven to be associated with being socially responsible. It is evident that the Nigerian oil companies have not fully embraced full disclosure. Oil companies must raise their level of CSR disclosure if they want to reap all the benefits from its proven ability to boost FP. In consideration of the immense impact of CSR on a firm's performance, corporations ought to prioritize their social duties while paying close attention to them. As a result, CSR should be incorporated as a long-term business strategy to reap financial benefits. Additionally, the government should play its part by ensuring that strong policies are established to prompt and encourage the participation and disclosure of CSR by corporate bodies.

### 5. 2. Policy Implication

The study's findings help to better understand the factors affecting the FP of examined oil and gas firms in Nigeria. As a consequence, the findings of this research have policy implications. The results emphasize the significance of director ownership in enhancing the quality of information on CSR issues for regulators of governance codes like the Security and Exchange Commission since it impacts the performance of examined oil and gas firms in Nigeria. This study is pertinent given the growing significance of CSR and the expanding significance of emerging markets in international business. This research provides recommendations to help regulators, policymakers, institutions, and corporate management comprehend CSR disclosure and financial performance framework in the context of a developing economy. A key implication of this study is in the argument in support that organizations can benefit from voluntary disclosure of CSR rather than merely participating in CSR without adequately communicating such actions to stakeholders. To reap long-term financial rewards, corporate bodies should not only participate in CSR initiatives but also take conscious steps to disclose them appropriately.

This study has both theoretical and practical consequences, and so contributes to the literature in various ways. First, the results of this study broaden the literature on CSR and serve to clarify the relationship between CSR and corporate FP. It expands on the existing literature by utilizing profitability as an assessment of a firm's CSR accomplishments. The findings of this research will aid the management of organizations in understanding the significance of CSR. The beneficial impact of sustainable conduct generates value for organizations and continually strengthen stakeholder relationships. It highlights the significance of strategic CSR adoption and execution for the firm in terms of enhancing performance through socially responsible behaviour.

The findings of this research is also relevant to investors as it can influence an investor's decision to invest in a company. This is relevant for investors to consider when benchmarking in terms of risk, returns and the promotion of ethical and socially conscious principles. Additionally, the findings of this research can assist the government to grasp the important role of corporations in economic development through CSR participation. Thus, appropriate legislations can be enacted to urge firms to participate in CSR.

The aforementioned investigation showed that corporations publish more CSR information when they have director ownership, which enhances the organization's performance. Since the study focused on not only social disclosure but also environmental and economic disclosure, it will prompt the Ministry of Environment to pay attention to social and environmental disclosure since it is important in the case of its stakeholders. Additionally, knowing the traits that companies are exposed to from non-disclosure of social and environmental obligations, will keep them on their toes and prompt good citizenship. The Nigerian government may solicit both the domestic and the international investors to conform to the societal and environmental policies. The policymakers can comprehend the result in understanding how economic policies affect the industries under review. The findings in this research will help them choose the best social and environmental policies for the economy.

Finally, these factors will improve the annual report's quality and help stakeholders make wise decisions. The findings of this study seek to aid in the development and implementation of better environmental monitoring regulations that could ultimately result in the achievement of sustainability goals.

### 5.3. Limitations

This research is not free of limitations. This study period is constrained by the availability of data. This is typical in most developing nations, where data availability concerns present severe challenges to empirical study. Additionally, the sample size is constrained by the emphasis on the oil and gas sector, resulting in a smaller sample size. This research can be enhanced by extending the timeframe and broadening the scope to cover other sectors. This study is also limited to secondary data from the annual reports of the examined oil companies and the National Stock Exchange. It is argued that secondary data can be manipulated and thus may not be authentic or reliable.

# 6. MAIN CONCLUSIONS AND NOVEL FINDINGS OF THE DISSERTATION

This study emphasizes the significance of CSR in contemporary economics, particularly in the case of a developing nation like Nigeria, facing numerous challenges in achieving sustainable growth due to scarce resources, corruption, inequality, a failed government, and the rising demands from the continuous increase in population. The major conclusions and novelty of this research are outlined as follows:

1. Firstly, the novelty of this research lies in the empirical investigation. This research is among the first to investigate the moderating effects of board equity ownership on the connection between CSR and firm FP. This is paramount due to the inconsistency in the existing studies. The findings of this study have further strengthened the correlation between CSR and FP. Thus, the novel findings of this research proposed that BOWN positively strengthens the relationship CSR and FP. BOWN has been identified as a strong moderator that would make a firm disclose its CSR engagement, which in turn improves the firm's image, giving a competitive edge and improving corporate FP. This empirical investigation has expanded the existing body of knowledge that has both theoretical and practical implications.
2. The research findings have provided useful information that is essential in key decision making relating to government policy implications, corporate sustainability strategies and investment in general. Results have proven that increasing CSR disclosure can improve corporate performance. Thus, Managers can adopt effective strategies to improve on their CSR disclosure for all indicators to reap the benefits of higher financial performance that has been proven to be associated with being socially responsible. The government can utilize this information to play its part by ensuring that strong policies are established and well-regulated to prompt and encourage the participation and disclosure of CSR by corporate bodies. The findings of this research can assist the government to grasp the important role of corporations in economic development through CSR participation. This research will aid in the development and implementation of better environmental monitoring regulations that could ultimately result in the achievement of sustainability goals. Thus, appropriate legislations can be enacted to urge firms to participate in CSR. Additionally, investors can utilize this information in making key decisions when benchmarking in terms of risk, returns and the promotion of ethical and socially conscious principles.

3. Furthermore, GRI covers three major dimensions of CSR (social, economic, and environmental), but most existing studies have omitted the economic aspect of CSR even though it is obvious that there is a connection between economic disclosure and FP, focusing primarily on social and environmental CSR (ALSHEHHI et al., 2018). The existing research has focused on the social and environmental dimensions of CSR disclosure; however, little attention has been paid to the economic dimension of CSR (NGUYEN et al., 2022). This study is among the few to cover all three dimensions of CSR disclosure, investigating economic disclosure as well. This adds to the existing literature by examining the three dimensions of CSR and analyzing how different categories of CSR influence corporate FP using both "accounting and market-based" measures.
4. Another important finding of this study is that the level of social and environmental disclosure by the oil and gas firms is significantly low, with some of the oil firms under study publishing low information about their social and environmental engagement. Economic disclosure appears to be given more consideration than the other indicators, with the maximum disclosure of 80% of total economic metrics disclosed for the period under consideration. The maximum percentage of environmental and social disclosure for the oil and gas firms under consideration is 50% and 45% respectively. This demonstrates that the examined oil and gas firms must improve their level of disclosure in relation to environmental and social issues in order to reap the benefits. Low disclosure can be attributed to weak institutions and the voluntary nature of CSR in Nigeria.

## SUMMARY

Over the years, CSR has sparked considerable interest in academic and professional circles. The concept is gaining importance in the corporate and academic world due to modern concerns of the twenty-first century. The growing challenges of global warming, pollution, increased resource exploitation, product quality and safety, employee rights, and a healthy work environment have highlighted the importance of CSR. In a developing country like Nigeria, the challenges of achieving sustainable growth due to limited resources, inequality, the rising demands from an increase population and a failed government that cannot meet its citizens' basic needs have highlighted the importance of CSR. Organizations in all sectors are expected to play critical roles in eradicating poverty and ensuring sustainability. As a result, there is a growing demand for corporations to be socially responsible to all stakeholders as part of their role as corporate citizens. This study is pertinent given the growing significance of CSR and the expanding significance of emerging markets in international business.

The first chapter covered the introduction, the overview of the research topic, detailing the need for this study and setting the research aim and hypotheses under investigation. This study investigated the direct and the moderating effects of BOWN on CSR and FP in the oil and gas sector of Nigeria. It is assumed that board members will act in the best interests of the organization if they own equity. Owning a portion of the company's stock alleviates the agency problem. Equity ownership may prompt management to implement risk-mitigating strategies to protect the firm, greatly impacting corporate performance. Furthermore, the oil and gas industry is the focus of this study due to its crucial role in the Nigerian economy. Firstly, the oil sector is profit-driven, and hence, the management of the oil companies have a duty to boost profit. Secondly, as the primary source of government revenue, the oil sector is critical to the social and economic prosperity of Nigeria. Additionally, the ongoing dispute between the oil corporations and the host society is a cause of concern, necessitating further attention to the subject matter.

In line with the intended aim of this research, a total of eight hypotheses with three sub-hypotheses each were formulated to investigate the direct and the moderating effect of board equity ownership on the nexus between CSR (Social, Environmental and Economic disclosure) and the oil and gas firms FP as proxied by ROA, ROE, stock returns and Tobin’s Q.

Chapter two consisted of a review of relevant literature, covering the study country's economic background, the concept of CSR, empirical studies on the relationship between CSR and FP, and the theoretical framework of the study. The theoretical background of this study is based on stakeholder theory, legitimate theory, and sustainable development Theory. Empirical review shows a mixed result on the relationship between CSR and FP. While some scholars propose a positive relationship, indicating that an organization that pays attention to the needs of its stakeholder group through CSR activities boosts its market value and profitability, other scholars propose a negative relationship. According to neoclassical theory, CSR and financial performance are negatively correlated since CSR expenditures increase corporate expenses and divert funds that could have been utilized for a more profitable potential investment. In contrast, some scholars disagree with any existing relationship between CSR and FP. Many scholars contend that the inconsistencies in empirical findings between CSR and corporate FP may be attributed to the exclusion of certain confounding variables. Hence, the use of a moderator is paramount to strengthen the connection between CSR and FP.

Subsequent chapters cover the materials and methods, the research findings, their evaluations and the concluding remarks. The study sample consists of 7 listed oil and gas firms on the Nigerian stock exchange. The study adopts a regression analysis with the use of secondary data from the Nigerian stock exchange, annual financial reports, and other statistics for the period of 2012 to 2020. Panel Corrected Standard Error and Feasible General Least Square (FGLS) model are thereby utilized to analyse the underlying hypotheses. Further diagnostic tests such as multicollinearity test, auto and serial correlation test, heteroskedasticity test, normality test, and hausman specification test were conducted to ensure that appropriate technique is selected for analysis and interpretation.

The descriptive statistics review that the oil and gas firms under investigation has not fully disclosed their CSR engagement for the period under study. The examined oil and gas firms have disclosed their social, environmental and economic performance on a maximum of 50% only as compared to the total number of indicators per dimension. This goes to prove the limited disclosure of CSR in Nigeria. The result of the correlation analysis shows that there is a positive relationship between all the three dimensions of CSR disclosure and the FP of the oil and gas firms in Nigeria.

Additionally, BOWN positively moderates the relationship between disclosure and the FP of the oil and gas firms in Nigeria. However, the statistical significance of the hypotheses under investigation varies. Despite a positive effect of CSR on corporate FP and a positive moderation of BOWN on the aforementioned interaction between the dependent and independent variables, this study was unable to support all the proposed hypotheses because some findings were statistically insignificant. This study's findings support seven direct hypotheses while rejecting the other five. Furthermore, five indirect moderating hypotheses are supported, while the remaining seven are not. The variance in the statistical significance could be attributed to the low CSR disclosure of the examined oil and gas firms and hence, their performance relating to some of the indicators were insignificant.

This research argues in support that organizations can benefit from voluntary disclosure of CSR rather than merely participating in CSR without adequately communicating such actions to stakeholders or completely non-engagement in CSR. The findings of this research have both theoretical and practical implications for researchers, regulators, policymakers, institutions, and corporate management. It broadens the literature on CSR and FP and can aid various bodies in making strategic decisions.

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## List of Tables

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# Appendix

## TABLE 23: ETERNA PLC

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | .0344166 | .0207659 | -.0050568 | .0694551 |
| roe | 9 | .1074273 | .0553707 | -.0116288 | .1612221 |
| tobinsq | 9 | .8198628 | .069628 | .7296866 | .9326683 |
| stockret | 9 | .1560027 | .0759369 | .0781399 | .322229 |
| envdis | 9 | .2 | 0 | .2 | .2 |
| econdis | 9 | .6 | 0 | .6 | .6 |
| socdis | 9 | .3611111 | .1054092 | .25 | .45 |
| bown | 9 | .0225751 | .0037974 | .0196649 | .0321139 |
| fsize | 9 | 3.29e+10 | 1.18e+10 | 1.83e+10 | 5.31e+10 |
| leverage | 9 | 2.201627 | .9926484 | 1.205049 | 4.191856 |

.

Source: Stata output, 2022

## TABLE 24: ARDOVA PLC

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | .0472831 | .0238801 | .020535 | .0832673 |
| roe | 9 | .1379131 | .0571356 | .0667019 | .2422237 |
| tobinsq | 9 | 1.574083 | .9030892 | .8166326 | 3.580055 |
| stockret | 9 | .9113662 | .9183244 | .1984316 | 2.96016 |
| envdis | 9 | .2111111 | .0333333 | .2 | .3 |
| econdis | 9 | .5333333 | .1414214 | .4 | .8 |
| socdis | 9 | .3 | 0 | .3 | .3 |
| bown | 9 | .0947937 | .0601505 | 0 | .1428174 |
| fsize | 9 | 1.06e+11 | 4.29e+10 | 4.25e+10 | 1.47e+11 |
| leverage | 9 | 2.166145 | 1.007449 | 1.226539 | 4.606465 |

Source: Stata output, 2022

## TABLE 25: JAPAUL GOLD & VENTURES PLC

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | -.1425289 | .406101 | -.7159563 | .7626693 |
| roe | 9 | -.2072896 | .8757612 | -2.303833 | .7220478 |
| tobinsq | 9 | 1.1419 | .6150195 | .6427978 | 2.533177 |
| stockret | 9 | .1044935 | .0580004 | .053958 | .2488006 |
| envdis | 9 | .0333333 | .05 | 0 | .1 |
| econdis | 9 | .3333333 | .2 | .2 | .6 |
| socdis | 9 | .1 | .15 | 0 | .3 |
| bown | 9 | .064074 | .0065765 | .0585224 | .0710062 |
| fsize | 9 | 2.94e+10 | 7.61e+09 | 1.56e+10 | 3.88e+10 |
| leverage | 9 | 1.871208 | 3.514403 | -2.5741 | 8.714664 |

Source: Stata output, 2022

## TABLE 26: MRS

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | -.0047872 | .0294248 | -.0617622 | .0222712 |
| roe | 9 | -.0037745 | .0725433 | -.1344227 | .0661395 |
| tobinsq | 9 | .7922655 | .0947139 | .6548562 | .9116822 |
| stockret | 9 | .1502653 | .0484694 | .10548 | .2335866 |
| envdis | 9 | .2 | 0 | .2 | .2 |
| econdis | 9 | .8 | 0 | .8 | .8 |
| socdis | 9 | .4055555 | .0682113 | .3 | .45 |
| bown | 9 | .0001531 | .000049 | .0001122 | .0002513 |
| fsize | 9 | 5.83e+10 | 1.31e+10 | 3.67e+10 | 8.14e+10 |
| leverage | 9 | 1.865187 | .4819135 | 1.176457 | 2.671061 |

Source: Stata output, 2022

## TABLE 27: TOTAL

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | .0562395 | .0285583 | .0143677 | .1080647 |
| roe | 9 | .3077584 | .1734879 | .0732971 | .627791 |
| tobinsq | 9 | 1.357052 | .1760848 | 1.069761 | 1.569254 |
| stockret | 9 | .5491022 | .1710253 | .2814381 | .741389 |
| envdis | 9 | .2333333 | .1 | .2 | .5 |
| econdis | 9 | .6 | 0 | .6 | .6 |
| socdis | 9 | .3888889 | .0781736 | .3 | .5 |
| bown | 9 | .0028372 | .0001139 | .0026596 | .0029789 |
| fsize | 9 | 1.10e+11 | 2.72e+10 | 7.61e+10 | 1.44e+11 |
| leverage | 9 | 4.389715 | 1.041922 | 2.825678 | 5.856709 |

Source: Stata output, 2022

## TABLE 28: CONOIL

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | .0271556 | .0112135 | .0086043 | .0406379 |
| roe | 9 | .1014593 | .0430324 | .0456527 | .1702066 |
| tobinsq | 9 | 1.033915 | .1462673 | .8660973 | 1.353308 |
| stockret | 9 | .300785 | .1177179 | .1711998 | .5722837 |
| envdis | 9 | .2 | 0 | .2 | .2 |
| econdis | 9 | .6222222 | .0666667 | .6 | .8 |
| socdis | 9 | .4 | .075 | .3 | .45 |
| bown | 9 | .0000413 | .0000303 | 7.98e-06 | .0000714 |
| fsize | 9 | 6.98e+10 | 1.25e+10 | 4.89e+10 | 8.75e+10 |
| leverage | 9 | 2.957779 | .9746768 | 1.50331 | 4.437775 |

Source: Stata output, 2022

## TABLE 29: 11PLC

```
. sum roa roe tobinsq stockret envdis econdis socdis bown fsize leverage
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| roa | 9 | .0982924 | .0318681 | .0316388 | .1321575 |
| roe | 9 | .313323 | .1201567 | .0742527 | .4718118 |
| tobinsq | 9 | 1.69683 | .3262989 | 1.149677 | 2.282769 |
| stockret | 9 | 1.038731 | .277685 | .5847857 | 1.630533 |
| envdis | 9 | .0666667 | .1414214 | 0 | .4 |
| econdis | 9 | .4666667 | .2 | .2 | .6 |
| socdis | 9 | .2 | .1561249 | 0 | .35 |
| bown | 9 | .0001675 | .0001273 | .0000603 | .0003112 |
| fsize | 9 | 6.32e+10 | 2.10e+10 | 3.37e+10 | 9.31e+10 |
| leverage | 9 | 2.189531 | .9722636 | 1.092241 | 3.941408 |

Source: Stata output, 2022

## TABLE 30: DESCRIPTIVE STATISTICS

```
. asdoc tabstat roa roe tobinsq stockret envdis econdis socdis bown fsize leverage, statistics(mean sd min max skewness kurtosis) column(statistics)
(File Myfile.doc already exists, option append was assumed)
```

| | mean | sd | min | max | skewness | kurtosis |
|---|---|---|---|---|---|---|
| roa | .0165816 | .1640461 | -.7159563 | .7626694 | -.5142561 | 15.15214 |
| roe | .1081167 | .3670634 | -2.303833 | .722048 | -4.525626 | 30.99575 |
| tobinsq | 1.202273 | .53446 | .6427978 | 3.580055 | 1.981417 | 8.147774 |
| stockret | .458678 | .5044987 | .053958 | 2.96016 | 2.535904 | 11.45443 |
| envdis | .1634921 | .0988671 | 0 | .5 | -.0262384 | 4.410806 |
| econdis | .5650794 | .1779441 | .2 | .8 | -.8992923 | 3.210602 |
| socdis | .3079365 | .1467954 | 0 | .5 | -1.016865 | 3.210053 |
| bown | .0263774 | .041747 | 0 | .1428174 | 1.660401 | 4.707552 |
| fsize | 6.70e+10 | 3.65e+10 | 1.56e+10 | 1.47e+11 | .7758174 | 2.660981 |
| leverage | 2.52017 | 1.724457 | -2.5741 | 8.714664 | .3600064 | 5.581854 |

Source: Stata output, 2022

## TABLE 31: PAIRWISE CORRELATIONS

```
. pwcorr roa roe stockret tobinsq socdis envdis econdis bown bown_soc bown_env bown_eco leverage fsize, star(0.05)sig
```

| | roa | roe | stockret | tobinsq | socdis | envdis | econdis |
|---|---|---|---|---|---|---|---|
| roa | 1.0000 | | | | | | |
| roe | 0.1735 | 1.0000 | | | | | |
| | 0.1739 | | | | | | |
| stockret | -0.1780 | 0.2695* | 1.0000 | | | | |
| | 0.1628 | 0.0327 | | | | | |
| tobinsq | 0.0310 | 0.3113* | 0.8671* | 1.0000 | | | |
| | 0.8091 | 0.0130 | 0.0000 | | | | |
| socdis | 0.6939* | 0.3051* | 0.0097 | -0.0123 | 1.0000 | | |
| | 0.0000 | 0.0151 | 0.9398 | 0.9241 | | | |
| envdis | 0.3492* | 0.2246 | -0.0223 | 0.0717 | 0.1708 | 1.0000 | |
| | 0.0050 | 0.0768 | 0.8622 | 0.5768 | 0.1808 | | |
| econdis | -0.1418 | 0.5206* | 0.4135* | 0.2882* | 0.0777 | -0.2042 | 1.0000 |
| | 0.2675 | 0.0000 | 0.0008 | 0.0220 | 0.5451 | 0.1084 | |
| bown | 0.1112 | -0.0296 | 0.2379 | 0.2594* | -0.1451 | 0.1858 | 0.0950 |
| | 0.3855 | 0.8179 | 0.0605 | 0.0401 | 0.2566 | 0.1449 | 0.4588 |
| bown_soc | 0.6488* | 0.3138* | 0.0096 | -0.0692 | 0.9531* | 0.0295 | 0.1260 |
| | 0.0000 | 0.0123 | 0.9405 | 0.5901 | 0.0000 | 0.8188 | 0.3252 |
| bown_env | 0.5547* | 0.0086 | -0.2492* | 0.0543 | 0.1643 | 0.2113 | -0.3575* |
| | 0.0000 | 0.9464 | 0.0489 | 0.6725 | 0.1983 | 0.0965 | 0.0040 |
| bown_eco | 0.1459 | -0.1482 | -0.0730 | 0.0154 | -0.0904 | -0.0043 | -0.0907 |
| | 0.2539 | 0.2465 | 0.5698 | 0.9045 | 0.4810 | 0.9731 | 0.4796 |
| leverage | -0.1581 | 0.2914* | -0.1220 | -0.1994 | 0.0512 | -0.1377 | 0.4201* |
| | 0.2160 | 0.0205 | 0.3410 | 0.1171 | 0.6903 | 0.2819 | 0.0006 |
| fsize | -0.2783* | 0.0530 | -0.2785* | -0.3375* | 0.0776 | -0.0210 | 0.1771 |
| | 0.0272 | 0.6799 | 0.0271 | 0.0068 | 0.5452 | 0.8702 | 0.1649 |

| | bown | bown_soc | bown_env | bown_eco | leverage | fsize |
|---|---|---|---|---|---|---|
| bown | 1.0000 | | | | | |
| bown_soc | -0.1896 | 1.0000 | | | | |
| | 0.1367 | | | | | |
| bown_env | -0.1696 | 0.1218 | 1.0000 | | | |
| | 0.1838 | 0.3418 | | | | |
| bown_eco | 0.3227* | -0.0724 | 0.0619 | 1.0000 | | |
| | 0.0099 | 0.5730 | 0.6297 | | | |
| leverage | -0.1429 | 0.0881 | -0.2274 | 0.0205 | 1.0000 | |
| | 0.2638 | 0.4924 | 0.0731 | 0.8734 | | |
| fsize | -0.4072* | 0.0029 | -0.2427 | -0.0476 | 0.6048* | 1.0000 |
| | 0.0009 | 0.9820 | 0.0553 | 0.7110 | 0.0000 | |

Source: Stata output, 2022

## TABLE 32: MULTICOLLINEARITY TEST

. vif

| Variable | VIF | 1/VIF |
|---|---|---|
| fsize | 1.94 | 0.514342 |
| leverage | 1.91 | 0.524049 |
| bown | 1.38 | 0.722574 |
| econdis | 1.33 | 0.753659 |
| envdis | 1.19 | 0.843633 |
| socdis | 1.09 | 0.917506 |
| Mean VIF | 1.47 | |

Source: Stata output, 2022

## TABLE 33: SHAPIRO-WILK TEST

. asdoc swilk resid
(File Myfile.doc already exists, option **append** was assumed)

Shapiro-Wilk W test for normal data

| Variable | Obs | W | V | z | Prob>z |
|---|---|---|---|---|---|
| resid | 63 | 0.98703 | 0.733 | -0.671 | 0.74874 |

. swilk resid

Shapiro-Wilk W test for normal data

| Variable | Obs | W | V | z | Prob>z |
|---|---|---|---|---|---|
| resid | 63 | 0.97682 | 1.310 | 0.584 | 0.27951 |

. asdoc swilk resid
(File Myfile.doc already exists, option **append** was assumed)

Shapiro-Wilk W test for normal data

| Variable | Obs | W | V | z | Prob>z |
|---|---|---|---|---|---|
| resid | 63 | 0.98238 | 0.996 | -0.008 | 0.50319 |

Click to Open File: Myfile.doc

. asdoc swilk resid
(File Myfile.doc already exists, option append was assumed)

Shapiro-Wilk W test for normal data

| Variable | Obs | W | V | z | Prob>z |
|---|---|---|---|---|---|
| resid | 63 | 0.98703 | 0.733 | -0.671 | 0.74874 |

Source: Stata output, 2022

## TABLE 34: HETEROSKEDASTICITY TEST

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of tobinsq

         chi2(1)      =     4.44
         Prob > chi2  =   0.0352


. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of stockret

         chi2(1)      =    36.89
         Prob > chi2  =   0.0000

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of roa

         chi2(1)      =    23.49
         Prob > chi2  =   0.0000

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of roe

         chi2(1)      =     7.30
         Prob > chi2  =   0.0069

.
```

## TABLE 35: FIXED, AND RANDOM EFFECTS

```
. xtreg tobinsq socdis envdis econdis  bown bown_soc bown_env bown_eco fsize leverage, re

Random-effects GLS regression                   Number of obs     =         63
Group variable: id                              Number of groups  =          7

R-sq:                                           Obs per group:
     within  = 0.2573                                         min =          9
     between = 0.6279                                         avg =        9.0
     overall = 0.3851                                         max =          9

                                                Wald chi2(9)      =      33.19
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0001
```

| tobinsq | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| socdis | 1.15117 | .431475 | 2.67 | 0.008 | .3054945 | 1.996845 |
| envdis | -.0003298 | .0038614 | -0.09 | 0.932 | -.007898 | .0072384 |
| econdis | .4709058 | .1228389 | 3.83 | 0.000 | .230146 | .7116655 |
| bown | -1.291593 | 2.014958 | -0.64 | 0.522 | -5.240838 | 2.657653 |
| bown_soc | -5.66473 | 1.993278 | -2.84 | 0.004 | -9.571484 | -1.757976 |
| bown_env | .0782027 | .3424352 | 0.23 | 0.819 | -.5929579 | .7493632 |
| bown_eco | .4898829 | .6991601 | 0.70 | 0.484 | -.8804458 | 1.860211 |
| fsize | -1.567088 | .5697687 | -2.75 | 0.006 | -2.683814 | -.4503618 |
| leverage | -.7938167 | 2.5333 | -0.31 | 0.754 | -5.758993 | 4.171359 |
| _cons | -9.535132 | 2.991875 | -3.19 | 0.001 | -15.3991 | -3.671165 |
| sigma_u | 0 | | | | | |
| sigma_e | .35731449 | | | | | |
| rho | 0 | (fraction of variance due to u_i) | | | | |

```
. xtreg tobinsq socdis envdis econdis  bown bown_soc bown_env bown_eco fsize leverage, fe

Fixed-effects (within) regression               Number of obs      =         63
Group variable: id                              Number of groups   =          7

R-sq:                                           Obs per group:
     within  = 0.4511                                         min =          9
     between = 0.0022                                         avg =        9.0
     overall = 0.1066                                         max =          9

                                                F(9,47)            =       4.29
corr(u_i, Xb)  = -0.6236                        Prob > F           =     0.0004

------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      socdis |   1.657894   .3822959     4.34   0.000     .8888135    2.426974
      envdis |   .0001681   .0032778     0.05   0.959    -.0064259    .0067622
     econdis |   .0001354   .1869968     0.00   0.999    -.3760536    .3763243
        bown |   4.142504   2.854616     1.45   0.153    -1.600242     9.88525
    bown_soc |  -7.979806   1.748995    -4.56   0.000    -11.49833   -4.461281
    bown_env |   .2944697   .2929369     1.01   0.320    -.2948433    .8837828
    bown_eco |   2.344587   1.352579     1.73   0.090    -.3764509    5.065625
       fsize |  -.9339613   .4974509    -1.88   0.067    -1.934703    .0667809
    leverage |   .9513407    2.37714     0.40   0.691    -3.830848     5.73353
       _cons |   1.734867   4.577047     0.38   0.706    -7.472963     10.9427
-------------+----------------------------------------------------------------
     sigma_u |  .54553802
     sigma_e |  .35731449
         rho |   .699793   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(6, 47) = 6.38                     Prob > F = 0.0001
```

Source: Stata output, 2022

## TABLE 36: HAUSMAN TEST

```
. hausman fe re, sigmamore

Note: the rank of the differenced variance matrix (6) does not equal the number of coefficients being tested (9); be sure this is what you
       expect, or there may be problems computing the test.  Examine the output of your estimators for anything unexpected and possibly
       consider scaling your variables so that the coefficients are on a similar scale.

                 ---- Coefficients ----
              |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
              |       fe           re         Difference          S.E.
--------------+----------------------------------------------------------------
      socdis  |   1.657894      1.15117        .5067238        .2214544
      envdis  |   .0001681    -.0003298        .0004979        .0015429
     econdis  |   .0001354     .4709058       -.4707704        .2029469
        bown  |   4.142504    -1.291593        5.434097        3.009086
    bown_soc  |  -7.979806     -5.66473       -2.315076        .9746493
    bown_env  |   .2944697     .0782027        .2162671        .1443719
    bown_eco  |   2.344587     .4898829        1.854704        1.567006
       fsize  |  -.9339613    -1.567088        .6331266        .2713287
    leverage  |   .9513407    -.7938167        1.745157        1.636071
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       23.80
                Prob>chi2 =      0.0006
                (V_b-V_B is not positive definite)

.
```

```
. hausman fe re, sigmamore

Note: the rank of the differenced variance matrix (6) does not equal the number of coefficients being tested (9); be sure this is what you expect, or there may be problems computing the test.  Examine
      the output of your estimators for anything unexpected and possibly consider scaling your variables so that the coefficients are on a similar scale.

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+------------------------------------------------------------
      socdis |    .1007359   -.0023202       .1030561        .0668916
      envdis |    .0038665    .0036929       .0001736         .000466
     econdis |    .2154891    .1746903       .0407987        .0613015
       bown  |   -1.272841   -.5789594      -.6938812        .9089143
    bown_soc |   -37.32214    27.05705      -64.37919        32.08932
    bown_env |    .1224069    .0774347       .0449721        .0436088
    bown_eco |    .6043894   -.1148898       .7192792         .473326
    leverage |    .0351843    1.163163      -1.127979        .4941883
       fsize |   -.1612325    -.207091       .0458585        .0819564
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       12.44
                Prob>chi2 =      0.0529
                (V_b-V_B is not positive definite)
```

Source: Stata output, 2022

## TABLE 37: AUTO/SERIAL CORRELATION

```
. xtserial tobinsq socdis envdis econdis  bown bown_soc bown_env bown_eco fsize leverage

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
    F(  1,       6) =       6.821
           Prob > F =       0.0400


. xtserial stockret socdis envdis econdis bown bown_soc bown_env bown_eco leverage fsize

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
    F(  1,       6) =      14.753
           Prob > F =       0.0085

. xtserial roa socdis envdis econdis bown bown_soc bown_env bown_eco leverage fsize

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
    F(  1,       6) =      19.559
           Prob > F =       0.0045


. xtserial roa socdis envdis econdis bown bown_soc bown_env bown_eco leverage fsize

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
    F(  1,       6) =      19.559
           Prob > F =       0.0045
```

```
. xtserial roe socdis envdis econdis bown bown_soc bown_env bown_eco leverage fsize

Wooldridge test for autocorrelation in panel data
H0: no first order autocorrelation
    F(  1,       6) =      1.377
          Prob > F =      0.2852

.
```

Source: Stata output, 2022

## TABLE 38: PANEL CORRECTED STANDARD ERROR (MODEL ONE)

```
. xtpcse roa socdis envdis econdis bown bown_soc bown_env bown_eco fsize

Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:   id                          Number of obs      =        63
Time variable:    year                        Number of groups   =         7
Panels:           correlated (balanced)       Obs per group: min =         9
Autocorrelation:  no autocorrelation                         avg =         9
                                                             max =         9
Estimated covariances      =        28        R-squared          =    0.8945
Estimated autocorrelations =         0        Wald chi2(8)       =    285.16
Estimated coefficients     =         9        Prob > chi2        =    0.0000
```

| roa | Panel-corrected Coef. | Std. Err. | z | P>\|z\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| socdis | .2303497 | .0812423 | 2.84 | 0.005 | .0711176 | .3895817 |
| envdis | .0016593 | .0009524 | 1.74 | 0.081 | -.0002073 | .003526 |
| econdis | .0237174 | .0218571 | 1.09 | 0.278 | -.0191217 | .0665564 |
| bown | -.7369478 | .4988115 | -1.48 | 0.140 | -1.7146 | .2407048 |
| bown_soc | 62.26004 | 41.41746 | 1.50 | 0.133 | -18.91669 | 143.4368 |
| bown_env | .3889122 | .087738 | 4.43 | 0.000 | .2169489 | .5608756 |
| bown_eco | .2487479 | .08464 | 2.94 | 0.003 | .0828565 | .4146393 |
| fsize | .1900008 | .0880716 | 2.16 | 0.031 | .0173837 | .362618 |
| _cons | .4519445 | .5179671 | 0.87 | 0.383 | -.5632523 | 1.467141 |

Source: Stata output, 2022

## TABLE 39: FEASIBLE GENERALIZED LEAST SQUARE FOR ROE (MODEL TWO)

```
. xtgls roe socdis envdis econdis bown bown_soc bown_env bown_eco fsize

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1        Number of obs      =        63
Estimated autocorrelations =         0        Number of groups   =         7
Estimated coefficients     =         9        Time periods       =         9
                                              Wald chi2(8)       =     57.63
Log likelihood             =  36.80807        Prob > chi2        =    0.0000
```

| roe | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| socdis | .0038737 | .0011491 | 3.37 | 0.001 | .0016215 | .0061259 |
| envdis | .0615318 | .1209907 | 0.51 | 0.611 | -.1756055 | .2986692 |
| econdis | .202945 | .0346905 | 5.85 | 0.000 | .1349529 | .2709372 |
| bown | .4500787 | .5857022 | 0.77 | 0.442 | -.6978766 | 1.598034 |
| bown_soc | .1014592 | .1008241 | 1.01 | 0.314 | -.0961525 | .2990709 |
| bown_env | .0541622 | .0525965 | 1.03 | 0.303 | -.0489251 | .1572494 |
| bown_eco | .1215847 | .2080472 | 0.58 | 0.559 | -.2861802 | .5293497 |
| fsize | .0517287 | .1316794 | 0.39 | 0.694 | -.2063581 | .3098155 |
| _cons | 4.985509 | .8365612 | 5.96 | 0.000 | 3.345879 | 6.625139 |

.

Source: Stata output, 2022

## TABLE 40: FEASIBLE GENERALIZED LEAST SQUARE FOR STOCK RETURN (MODEL THREE)

```
. xtgls stockret socd envdis econdis bown bown_soc bown_env bown_eco fsize

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1          Number of obs      =        63
Estimated autocorrelations =         0          Number of groups   =         7
Estimated coefficients     =         9          Time periods       =         9
                                                Wald chi2(8)       =     38.71
Log likelihood             =  -30.6966          Prob > chi2        =    0.0000
```

| stockret | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| socdis | .000751 | .0033552 | 0.22 | 0.823 | -.005825 | .007327 |
| envdis | .6820365 | .3532641 | 1.93 | 0.054 | -.0103485 | 1.374421 |
| econdis | .415047 | .1012881 | 4.10 | 0.000 | .216526 | .613568 |
| bown | .0861967 | .106882 | 0.81 | 0.420 | -.1232882 | .2956816 |
| bown_soc | .6616357 | .2943827 | 2.25 | 0.025 | .0846562 | 1.238615 |
| bown_env | .2973777 | .1535694 | 1.94 | 0.053 | -.0036127 | .5983682 |
| bown_eco | .0680493 | .6074486 | 0.11 | 0.911 | -1.122528 | 1.258627 |
| fsize | .0944154 | .0240295 | 3.93 | 0.000 | .0473184 | .1415124 |
| _cons | -8.945224 | 2.442561 | -3.66 | 0.000 | -13.73256 | -4.157893 |

Source: Stata output, 2022

## TABLE 41: PANEL CORRECTED STANDARD ERROR (MODEL FOUR)

```
. xtpcse tobinsq socdis envdis econdis bown bown_soc bown_env bown_eco fsize

Linear regression, correlated panels corrected standard errors (PCSEs)

Group variable:   id                          Number of obs      =        63
Time variable:    year                        Number of groups   =         7
Panels:           correlated (balanced)       Obs per group: min =         9
Autocorrelation:  no autocorrelation                         avg =         9
                                                             max =         9
Estimated covariances      =        28        R-squared          =    0.3839
Estimated autocorrelations =         0        Wald chi2(8)       =     45.73
Estimated coefficients     =         9        Prob > chi2        =    0.0000
```

| | Panel-corrected | | | | | |
|---|---|---|---|---|---|---|
| tobinsq | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. | Interval] |
| socdis | .0003423 | .0045736 | 0.07 | 0.940 | -.0086218 | .0093064 |
| envdis | 1.196461 | .4046294 | 2.96 | 0.003 | .4034019 | 1.98952 |
| econdis | .4587611 | .1161644 | 3.95 | 0.000 | .231083 | .6864391 |
| bown | 1.427045 | 2.305566 | 0.62 | 0.536 | -3.091781 | 5.945871 |
| bown_soc | .0625724 | .4582573 | 0.14 | 0.891 | -.8355953 | .9607402 |
| bown_env | .5555609 | .1770276 | 3.14 | 0.002 | .2085931 | .9025287 |
| bown_eco | .4934489 | .42972 | 1.15 | 0.251 | -.3487868 | 1.335685 |
| fsize | 1.679574 | .4549608 | 3.69 | 0.000 | .7878673 | 2.571281 |
| _cons | 9.214057 | 2.788658 | 3.30 | 0.001 | 3.748387 | 14.67973 |

Source: Stata output, 2022