CORPORATE SUSTAINABILITY REPORTING AND FINANCIAL PERFORMANCE OF OIL AND GAS INDUSTRY IN NIGERIA (2007 - 2016)

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BEING A DISSERTATION SUBMITTED TO SCHOOL OF POSTGRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (Ph.D) DEGREE IN ACCOUNTANCY
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DECLARATION

I, ERHIRHIE, FELIX ERHINYOJA with the registration number: 2013407004f, do hereby declare that this dissertation work titled: Corporate Sustainability Reporting and Financial Performance of Oil and Gas Industry in Nigeria (2007 - 2016) was carried out by me.

This work to the best of my knowledge has not been presented to any institution for the award of a degree. All quotations are indicated and sources of information specifically acknowledged by means of references.

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This dissertation work titled: Corporate Sustainability Reporting and Financial Performance of Oil and Gas Industry in Nigeria (2007 - 2016) written by Erhirhie, Felix Erhinyoja with registration number: 2013407004F, meets the regulations governing the award of Doctorate Degree of the school of Postgraduate studies, Nnamdi Azikiwe University, Awka for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to God Almighty, the Creator of heaven and earth.

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ABSTRACT

This study examined Corporate Sustainability Reporting and Financial Performance of Oil and Gas Industry in Nigeria (2017 - 2017). Issues regarding corporate sustainability have gained global relevance in recent times owing to the increasing awareness that activities of most organizations may have adverse implicational effects on the ecosystems, societies, and environments of the future. Thus, companies are now being required to extend their strategic policies and information reportage to encompass sustainability reporting practices in order to meet the environmental and social needs of both current and future stakeholders. It is on this light that this study was set out to examine the effect of sustainability reporting on the financial performance of listed oil and gas companies in Nigeria. The main objective of this study was to assess the effect of corporate sustainability reporting on Return on Assets, Return on Equity, and Return on Capital Employed of oil and gas companies listed on the Nigeria Stock Exchange. The population of the study consisted of the entire fifteen oil and gas companies listed in the Nigeria Stock Exchange (NSE) as at 31st December, 2016. The companies are: Anino Internation, Beco Petroleum Product, Capital Oil, Caverton Offshore Support Group, Conoil Plc, Eterna Plc, Forte Oil (AP), Japaul Oil, Mobil Oil Nigeria, Mrs Oil (Formerly Texaco, Chevron), Oando Plc (Formerly Unipetrol), Rak Unity Petroleum, Seplat Petroleum Development, Total Nigeria, Navitus Energy. The sample was made up of ten out of the fifteen oil and gas companies listed in the Nigerian Stock Exchange between years 2007 – 2016. The study utilized secondary data collected via financial ratios and accounts of the individual companies and content analysis. Three multiple regression models were applied in analyzing the data collected. The findings showed that social sustainability reporting exerts negative effect on all three performance proxies, howbeit only its effect on return on equity was statistically significant. Also, environmental sustainability showed overall insignificant positive effect on the three financial performance measures. The study recommends, among others, that existing sustainability reporting standards should be aligned to reflect country-specific social and environmental challenges, while its implementation should rather be obligatory rather than voluntary. The implication of the study is that majority of the oil and gas firms in Nigeria might become more conservative towards social and environmental sustainability reporting and may focus more on maximizing the economic aspect of the organizational goals.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Maximizing shareholders' interests have traditionally dominated the corporate strategy of many organizations in time past. The apparent reason been that since the management (agents) runs the affairs of the organization on behalf of the owners (principals), the major interest of the latter (profit maximization) would often be considered paramount in order for the business to retain its capital. However, happenings in the last decade, such as concerns on global warming and the likes, demand that since the activities of most business organizations may have adverse environmental degradation effect on humans and its environments, companies may need to soft-pedal *on* the narrow version of classical economic theory and embrace sustainable corporate strategies that include goals that go beyond just maximizing shareholders' interests (Lourenco, Branco, Curto, & Eugenio, 2012).

In line with the foregoing, companies world over are increasingly being challenged to extend their accounting information reportage to encompass sustainability reporting practices as part of their corporate strategy and competitive advantage (Nnamani, Onyekwelu, & Ugwu, 2017). Aside adequate financial capital, companies also require strong governance and workplace practice that recognizes environmental and social needs of current and future stakeholders for it to achieve long term sustainability. Recognizing and incorporating such social and environmental factors into the governance and strategic operations of the firm is referred to as Corporate Sustainability (CS). In essence, corporate sustainability entails aligning the competitive activities of the

organization to meeting the short-term needs of the current stakeholders without jeopardizing the long-term ability of future stakeholders in meeting their own needs, thereby adding economic, environmental and social values (PricewaterhouseCoopers, 2016). These three lines of values (Tripple bottom line), according to Asaolu, Agboola, Ayoola and Salawu (2011), are targeted at the economy, society and environment respectively.

Studies on the effect of corporate sustainability on the overall performance of listed corporations have gathered momentum in recent times. The reasons are quite understandable considering the state of the world's environment and the adverse effect of most organizations' activities on the ecology of host communities leading to increased public concern and criticism due to some socially irresponsible firms. Ejoh, Orok and Sackey (2014) note that it was no good having great corporate profits and material well-being if they come at the cost of large scale of ecosystem by which humans and environment are negatively affected. Thus, the tenets of corporate sustainability demand that companies should be responsible for the consequential environmental and social impact which their activity incurs on the environment of host communities and other stakeholders, assuming such responsibilities will go a long way in pacifying the long-run losses likely to be borne by the stakeholders of the immediate environment where the companies operate. As Kwaghfan (2015) puts it, "business is central to the (environmental) problem and must be central to the solution".

In Nigeria for instance, one sector of the economy that has attracted a lot of public outcry on issues relating to environmental concerns is the oil and gas Industry. This sector is a major source of revenue to the Nigerian State. Their activities are often

associated with severe health implications and environmental degradation which in recent past have caused nagging social disputes and disruption of some multinational companies' economic activities (Uwaoma & Ordu, 2016). The concerns are been heightened due to stakeholders and host community's increased awareness of environmental degradation issues such as air and water pollution from heavy industrial machines, lack of clean-fresh water, lack of sea foods due to oil spill, and the likes. The need for sustainable environmental cost management in the oil and gas sector has thus become the concern and focus of most nations and responsible corporate managements the world over. Organisations are now expected to be able to demonstrate that they are aware and addressing the impact of their operations on the environment and society in general (Uwuigbe & Jimoh, 2012).

The justification for corporate sustainability reporting practice is that organization becomes more transparent and accountable to the society by addressing and reporting the consequences of their economic activities and ensuring that such activities are socially and environmentally sustainable to the society on the long-run.

However, since environmental sustainability reporting requirements for public companies are still largely voluntary in most developing countries like Nigeria (Owolabi, Akinwumi, Adetula, & Uwuigbe, 2016; Bassey, Oba & Onyah, 2013), unlike in countries like Germany, United States, Japan, France and South Africa, most multinational companies simply engage in corporate social responsibility (CSR) which is just a sub-set of corporate sustainability and is often considered synonymous with philanthropy (Kwaghfan, 2015). Recent studies such as Owolabi et al (2016) suggests that the level of corporate sustainability reporting in Nigeria, in line with the Global Reporting Initiative

(GRI) guideline, is still relatively low even after the implementation of International Financial Reporting Standards (IFRS) in 2012 which came with the expectation of improving the level of accounting information disclosure among adopting nations. This brings some concern to the fore that even as inadequate environmental laws stare most developing countries in the face, coupled with largely unregulated sustainability reporting practice as acknowledged by Owolabi et al (2016), most companies still fall short of mandatory disclosure requirements, let alone the voluntary ones.

Most school of thoughts suggests that corporate sustainability reporting could be a source of competitive advantage (e.g., Ameer & Othman, 2012; Amacha & Dastane, 2017) with implicational effect on the performance of the firm (e.g. Dembo, 2017; Kwaghfan, 2015; and Eccles, Ioannou, & Serafeim, 2012), while others such as Brown, Hellman, and Smith (2006); Jensen (2001) argue that engaging in sustainability practices have high negative financial implications on the organization's revenue (Ezejiofor, Racheal & Chigbo, 2016) and destroys shareholders wealth (Galaskiewicz, 1997). However, the underlying assumption, in line with environmental best practices, is that when a business activity causes damage and break-down to the environment, such business activities cannot be said to be economically or socially sustainable. Thus, arriving at a consensus on the implication of corporate sustainability practices on the performance of listed oil and gas companies is considered all-important, especially now that corporate sustainability practice is receiving greater attention from the corporate world and has become an integral part of all corporations due to the imperative that companies must create economic values for their shareholders while simultaneously meeting their social responsibilities to other stakeholders in order to ensure a sustainable

environment. It is against this background that the motivation behind this study is rooted. As explained in the previous pages, corporate sustainability comprises of three elements namely; economic, environmental and social sustainability and this study adopted two of the components (social and environmental sustainability). The justification is that economic component has the same proxy with the financial performance used.

1.2 STATEMENT OF PROBLEM

Over the years, deliberations as to whether or not corporate sustainability practice poses any significant effect on firm performance have attracted extensive global relevance in academic literature. However, despite the numerous empirical examinations in that regards - cutting across past five decades internationally (Margolis & Walsh, 2003) and about ten (10) years in Nigeria (Nwobu, 2015), there is still evidence of lack of convergence among the outcomes of most previous studies. This includes both those by foreign authors and their Nigerian counterparts. In respect to the former, recent findings such as Amacha & Dastane (2017) [Malaysia], Albatayneh (2014) [Malaysia], Maletic, Maletic, Dahlgaard, Dahlgaard-Park, & Gomiscek (2015) [Europe], Eccles et al (2012) [US], Ameer & Othman (2012) [Cross-country] suggest that greater engagement in corporate sustainability practices leads to better financial and market performance, implying a positive significant affect. However, other foreign researchers like Karlsson (2015) [Sweden], Kusuma and Koesrindartoto (2014) [Indonesia], Aggarwal (2013) [Indian] and Lourenco et al (2012) [Portugal] found either negative or neutral/non-significant association between corporate sustainability practices and firm financial performance.

With regards to recent studies by Nigerian authors, researchers like Dembo (2017); Nnamani et al (2017), Owolabi et al (2016), Kwaghfan (2015), Ekwueme, Egbunike & Onyali (2013), Okoye and Ezejiofor (2013) and Bassey, Oba, & Onyah (2013) found that sustainability reporting has positive and significant effect on financial performance of listed firms; while others like Ezejiofor et al (2016), Nwobu (2015), Kasum, Osemene, Olaoya, Aliu & Abdulsalam (2011) and Ogundare (2013) found that corporate sustainable development practices of companies are rarely associated (non-significant effect) with profitability of listed companies. Based on these contradictory empirical outcomes, it appears evident that the question of whether or not corporate sustainability practices affect firm performance remains an open question.

Going further, several reasons could be attributed to these observed inconsistencies in prior studies. Excluding the fact that country-specifics and other peculiarities may influence the outcome of studies conducted in both developed and developing countries because of divers ways corporations respond to environmental and social concerns in different climes, a look at the most previous studies particularly those by Nigerian authors shows a large domination of samples comprising only of a single sub-sector and or a sub-set of a particular sector with the most current data being that of 2014 (see Nnamani et al 2017). For example, the recent studies of Dembo (2017) and Ezejiofor et al (2016) focused on just two and one oil and gas companies respectively; while Bassey, Oba & Onyah (2013) focused on the oil and gas industry but adopted a time series data approach. Others Nnamani et al (2017) focused on only three (3) Brewery companies, Owolabi et al (2016) sampled only one industrial company (i.e.

Lafarge Plc), Nwobu (2015) focused on only Nigerian banks, while Okoye and Ezejiofor (2013) limited their sample to just two (2) manufacturing companies, and so on.

Another reason for the lack of convergence identified among the previous studies is the pattern of financial performance measures adopted. Majority of the previous studies, such as Ekwueme, Egbunike and Onyali (2013); Nwobu (2015); and Okafor (2018), employed just one category of financial performance, which may not capture other dimensions of company financial performance indicators. Thus, in line with the recommendations of Nwobu (2015) that future studies should expand the sample size in order to improve the results of existing studies, there is a possibility that conducting an updated research encompasses all listed oil and gas companies in a panel based study using the most current available data with complete information for a period of ten financial years (2007 - 2016), and adopting three (3) different financial performance proxies (ie) Return on Asset, Return on Equity, and Return on Capital Employed would go a long way in reconciling the observed conflicting evidences in prior studies.

1.3 OBJECTIVES OF THE STUDY

The broad objective of the study is to assess the effect of corporate sustainability reporting on financial performance of oil and gas companies listed in the Nigerian Stock Exchange (NSE). Specifically, the study has the following as its objectives:

1. To examine the effect of Corporate Social Sustainability Reporting on Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange;

2. To determine the extent to which Corporate Social Sustainability Reporting affects Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange;
3. To ascertain the effect of Corporate Social Sustainability Reporting on Return of Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange;
4. To establish the effect of Corporate Environmental Sustainability Reporting on Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange;
5. To examine the effect of Corporate Environmental Sustainability Reporting on Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange; and
6. To examine how Corporate Environmental Sustainability Reporting affect Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

1.4 RESEARCH QUESTIONS

The research questions below triggered this study:

1. What is the effect of Corporate Social Sustainability Reporting on Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange?
2. To what extent does Corporate Social Sustainability Reporting affect return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange?
3. How does Corporate Social Sustainability Reporting affect Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange?

4. What is the effect of Corporate Environmental Sustainability Reporting on Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange?
5. To what level does Corporate Environmental Sustainability Reporting affect Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange?
6. To what degree does Corporate Environmental Sustainability Reporting affect Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange?

1.5 RESEARCH HYPOTHESES

The following hypotheses were formulated to guide the study. The hypotheses are expressed in the null form.

1. Ho: Corporate social sustainability reporting does not significantly affect Return on Assets (ROA) of Oil and Gas Companies listed on the Nigerian Stock Exchange.

   Alternate: Corporate social sustainability reporting significantly affect Return on Assets (ROA) of Oil and Gas Companies listed on the Nigerian Stock Exchange.

2. Ho: Corporate social sustainability reporting does not have a significant effect on the Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

   Alternate: Corporate social sustainability reporting have a significant effect on the Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

3. Ho: Corporate social sustainability reporting does not have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

   Alternate: Corporate social sustainability reporting have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

4. Ho: Corporate environmental sustainability reporting does not significantly affect Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange.

   Alternate: Corporate environmental sustainability reporting significantly affect Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange.

5. Ho: Corporate environmental sustainability reporting does not have a significant effect on Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

   Alternate: Corporate environmental sustainability reporting have a significant effect on Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

6. Ho: Corporate environmental sustainability reporting does not have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

   Alternate: Corporate environmental sustainability reporting have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

1.6 SIGNIFICANCE OF THE STUDY

The outcome of the study will be of great importance to the following group of stakeholders in the following way:

Corporate organizations and management: Considering that the issue of sustainability reporting practices has gathered momentum in recent years, especially in developing countries where the issue of environmental degradation is rampant, the outcome of this work will assist management and organizations in determining how the engagement in sustainability practice could affect their performance if they lay their hands on the study. Having such knowledge would facilitate increased investment in environmental sustainability protection among listed companies, thereby improving the eco-efficiency and competitiveness among corporations in all manufacturing sectors of the economy.

Regulatory Bodies and Policy Makers: Since the decision to engage in sustainability reporting practices as well as the extent of engagement and disclosure are still largely voluntary in Nigeria due to the non-existence of legislative requirement, the knowledge gained from this study will be beneficial to regulators and policy makers who possibly will be attracted to the study in understanding the effects of sustainability reporting on the financial performance of firms. As the clamour for possible mandatory provisions on corporate sustainability issues heightens, this work will act as a wake-up call for the regulatory agencies and relevant bodies in putting in place machineries that will encourage mandatory sustainability reporting practices.

Stakeholders and communities: The outcome of the work will equally increase the awareness of the host communities and other stakeholders/non-shareholders who may be interested in the work, on how and the need to hold organizations responsible for effective

sustainability provisions in order to ensure sustainable environment. Besides, the corporate organizations as ethical investors would benefit in the long-run performance as environmentally conscious clients and general public will always watch out for socially/ethically responsible companies.

Scholars: The study will contribute to existing literature on corporate sustainability in term of quelling the conflicting evidences in prior studies especially in developing countries where the issues of sustainability are still largely voluntary. When used as a reference for possible further re-examination, this would enable academics and future researchers further their discussion on the practical relevance or irrelevance of sustainability reporting in developing countries.

1.7 SCOPE OF THE STUDY

This study focuses on the effect of corporate sustainability on financial firm performance in Nigeria. The scope covered all the Oil and Gas companies listed on the floor of the Nigerian Stock Exchange (NSE) as at December 31st 2016. The Oil and Gas sector was chosen because of the nature of their operations in the Nigerian environment. The study covered a time period ranging from 2007 – 2016 (10 years). The choice of ten financial years is to enable the researcher observe the level of sustainability reporting practices among the companies over a long period in order to reach a valid conclusion. The study adopted two of the three elements of sustainability (social and environmental) as its independent variables while the performance proxies (dependent variables) are Return on Assets, Return on Equity, and Return on Capital Employed.

1.8 LIMITATIONS OF THE STUDY

Conducting a research work of this magnitude often comes with some inhibiting factors and limitations, especially in developing countries like Nigeria where a lot of impediments could affect the successful execution of a research endeavour. The nature of these limitations and how the researcher addressed them are stated below:

1. Data availability: Not all the oil and gas companies have comprehensive sustainability reports in their annual reports on all the relevant years studied. In order to address this limitation, the researcher adopted a qualitative content analysis method by developing a scoring index obtained from the GRI-G4 Implementation Guidelines (2015). The proportion of the number of sustainability indicators disclosed by a sampled company was computed based on the total requirement of the GRI standard. By taking the proportion disclosed per year by each of the sampled companies in a panel data approach, the researcher was able to cushion the effect of some which did not fully comply (howbeit voluntarily) with the adopted sustainability reporting guideline.

2. Incomplete Data Record: The researcher observed that not all the fifteen (15) oil and gas companies listed on the Nigerian Stock Exchange (NSE) as at the proposal stage of this study had complete data for the ten-year period (2007 – 2016) earmarked for the study. During the data collection period, it was observed that some were not listed on the NSE as at 2007 - the start year of the study (e.g. Seplat Plc which was only listed in 2014). Incorporating the companies with incomplete record would have distorted the proposed balanced panel data approach that was applied in the study.

In order to overcome this limitation, the researcher visited the library of the NSE and purposively selected all the listed oil and gas companies with complete 10-years

annual reports, thereby achieving a balanced panel data amounting to 100 observations (i.e. for the 10 oil and gas companies eventually sampled).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 CONCEPTUAL REVIEW

2.1.1 Corporate Sustainability

Corporate Sustainability is a concept that recognizes that a viable relationship exists between an organization's economic performance and its environmental and social activities. Sustainability has been primarily used as a dialogue to frame business strategy as a dynamic approach for managers to frame organizational strategies and associated business activities. For managers, sustainability provides them a framework to view the business as having interdependence and intertwined in the local and regional as well as international communities for continued growth and profitability.

Sustainability as an integrated framework encourages managers to reorient their business for new strategy and growth in new areas. It helps link the capabilities of business leadership and employees capabilities/competencies to align them with organizational resources. Sustainability has been used not only to motivate employees, but also to attract new employees who have concern for the environment and for their future lifestyles. When sustainability integrates organizational resources with human resources planning and capabilities, it contributes to increasing shareholders value by keeping organizational operational performance in line with business profitability objectives. In other words, an integrated approach that incorporates sustainability and economic performance has nowadays become prerequisite for business to compete locally, nationally and globally (Petros & Seleshi, 2005).

The first corporate environmental reports were published in 1989, and since then the international interest in environmental reporting has grown steadily (Kolk, 2000). Employees, customers and the public are increasingly interested in other variables than mere financial objectives; the firms publishing environmental reports are responding to this interest.

A clear development away from reporting on environmental issue only, towards including economic as social aspect as well, was seen between 1998 and 2001. During this time the published reports went from 100% concentrating solely on environmental issues to a share of 30% including other issues, where social and economic was the dominating new aspect put into focus (Kolk, 2003).

When environmental reports started to be analyzed, evaluated and ranked there was a development of standard and benchmarks (United Nation Environmental Programmed & Sustainability, 2011). Measures were taken to standardize the environmental reports during the last years of the 1990's. The aim was to increase the usefulness and comparability between sustainability reporting by introducing standardized and globally applicable guidelines on how to prepare a sustainability report (Kolk, 2000).

Engaging in activities to contribute to sustainable development has emerged as an important dimension of corporate voluntary practice. The concept of sustainable development simultaneously integrates the consideration of economic growth, environmental protection, and social equity. Dyllick and Hockerts (2002) define corporate sustainability (CS) as "meeting the needs of a company's direct and indirect stakeholders (employees, clients, pressure groups, communities, etc.), without

compromising its ability to meet the needs of future stakeholders as well." The notion of CS is nowadays related to issues such as environmental protection, health and safety at work, relations with local communities and relations with consumers.

Although other concepts have been proposed over the years to conceptualize business and society relations, such as corporate social responsibility (CSR), CS has become the concept used most widely to address these relationships. Even though some authors propose distinctions between CSR and corporate sustainability (Cheung, 2011; Lo and Sheu, 2007; Lopez, Garcia and Rodriguez 2007; van Marrewijk, 2003), widely acknowledged definitions of CSR relate it with sustainable development. Holme and Watts (2000) have defined CSR as the firm's commitment to contribute to sustainable economic development, working with employees, their families, local communities and society at large to improve the general quality of life. According to the European Commission (2002), these two concepts may be considered as being "intrinsically linked" and CSR can be seen as the business contribution to sustainable development. Firms are seen as contributing to sustainable development "by managing their operations in such a way as to enhance economic growth and increase competitiveness whilst ensuring environmental protection and promoting social responsibility, including consumer interests".

2.1.2 Corporate Sustainability VS Corporate Social Responsibility (CSR)

According to Kalsson (2015), corporate social responsibility (CSR) and corporate sustainability (CS) have all been used synonymously to describe the same business practices. However, in many cases these phrases include different aspects of stakeholder

activities, such as social, environmental, and/or economic and governmental factors (Bansal & DesJardine, 2014). Corporate social responsibility (CSR) has long been a popular phrase to describe business activities aimed at stakeholder-interests. However, despite numerous attempts, no consensus has been reached regarding its definition and what the term actually encompasses. For instance, a common division is to only attribute it with social factors, thus disregarding other aspects, such as the environmental impact. This has contributed to criticism against the use of the term, which also extends to its main focus on philanthropic responsibility. Instead, *sustainability* (a successor to 'sustainable development') is rapidly becoming more popular in strategic management. Yet, as with corporate social responsibility, its meaning is often considered as vague and ambiguous, e.g. in some instances it is only associated with environmental issues (Bansal & DesJardine, 2014; White, 2013). However, sustainability and CSR is often conceptualized by the 'triple bottom line' approach which includes environmental, social, and economic/governmental impact of corporations (Elkington, 1998).

The Global Reporting Initiative (GRI) Sustainability Reporting Guidelines acknowledge that sustainability can be equated as CSR and define a sustainability report as "a report published by a company or organization about the economic, environmental, and social impacts caused by its everyday activities. Sustainability report also presents the organization's values and governance model and demonstrates the link between its strategy and its commitment to a sustainable global economy." This definition indicates that sustainability is not a one-time activity; it must be built into an organization's overall philosophy and strategy.

A major difference between sustainability and CSR (as well as corporate citizenship and triple bottom line) is their relation to time. According to Bansal and DesJardine (2014), a sustainable business is one "that manage inter-temporal trade-offs in strategic decision making, so that both the short and long-term is considered" (Bansal & DesJardine, 2014:71). Thus, companies need to decide between either investing less to secure smaller profits faster and or investing more to receive greater profits in the future (Laverty, 1996). Corporate social responsibility on the other hand does not automatically necessitate trade-offs, but is instead often related to ideas, such as 'shared value' and 'win-win'-situations. In these situations businesses and society is believed to gain instant and simultaneous value from a corporation's actions (Porter & Kramer, 2011). Therefore, since sustainability - in comparison with its related terms - to a greater extent considers the complexity of balancing short- and long-term decisions, the following thesis will hereafter use the term sustainability (including environmental, social, and governmental factors) when referring to business stakeholder activities.

2.1.3 Corporate Sustainability Reporting

Corporate sustainability reports are publically released documents detailing the environmental, social, and governance performance of a company. Sustainability reporting began in the late 1980s, and has quickly become an important focus for companies from a wide range of industries (Global Reporting Initiative, 2012). From a financial performance perspective, corporations engage in sustainability in order to reduce costs for the future and help manage change, thus becoming a more sustainable and profitable business in the future.

Additionally, it may be a requirement to release certain environmental information to satisfy local or federal laws regarding emissions or a similar matter. Companies most likely have other reasons to release these reports, such as building superior reputations and meeting informational needs of stakeholders, who are classified as anyone who is impacted by the company's actions (Brian, 2012).

Companies can report about sustainability initiatives using a variety of different methods because no United States of America law or regulation exists regarding the need to release a full sustainability report. The only fe deral regulations regarding environmental reporting stem from the Sarbanes-Oxley Act of 2002. According to Sarbanes-Oxley, environmental costs must be released in a report: "Staff Accounting Bulletin 92 states that, with respect to contingent losses, companies should provide detailed disclosures regarding the facts and assumptions underlying the amounts of environmental liabilities" (McKenna Long & Aldridge, 2005). Firms must now quantify environmental liabilities if they represent an amount that is deemed material to their financial statements. If the environmental liability is not easily quantifiable, then a note must be attached detailing the nature of the environmental cost. Due to increased pressure from stakeholders to release environmental and social initiatives, firms are not only reporting on environmental costs but also providing the public with an adequate representation of their sustainability initiatives and performance. Common frameworks that firms are using to report on their sustainability initiatives include the Global Reporting Initiative (GRI) and International Organization for Standardization (ISO) 14000 frameworks. The GRI Sustainability Framework works in conjunction with the

United Nations, which gives it credibility across the globe. Furthermore, it has grown into one of the most common frameworks (Global Reporting Initiative, 2012).

This is the quantitative basis for the informed management of sustainability. The metrics used for the measurement of sustainability (involving the sustainability of environmental, social and economic domains, both individually and in various combinations) are still evolving: they include indicators, benchmarks, audits, indexes and accounting, as well as assessment, appraisal and other reporting systems (m easures of sustainability index). They are applied over a wide range of spatial and temporal scales.

Some of the best known and most widely used sustainability measures include corporate sustainability reporting, Triple Bottom Line accounting, and estimates of the quality of sustainability governance for individual countries using the Environmental Sustainability Index and Environmental Performance Index. An alternative approach, used by the United Nations Global Compact Cities Programme and explicitly critical of the triple-bottom-line approach is Circles of Sustainability (James, Magee, Scerri, & Steger, 2015).

Conventional financial reporting has been premised on the notion that, although a number of identifiable user group exist, the primary concerns of financial statements are shareholders, prospective investors and financial intermediaries (FEE, 2000). Friedman (1962) claimed that the only responsibility of business is to make profits and traditional financial statements principally report on shareholders at the detriment of other stakeholders.

Sustainability reporting as an outcome of sustainability accounting is promoted by the most important institutions. In a communication, the European Commission (2002)

sets out its strategy for corporate social responsibility for the next three years. It praises the EU for its global leadership in companies providing corporate social responsibility and similar reports. However, the European Commission does not provide guidelines for reporting nor does it prescribe a particular form of the reports. These are the domains of several other institutions and groups, such as, more recently, the International Integrated Reporting Council (IIRC). In a follow-up directive, the European Union (2014) mandates disclosure of non-financial indicators and diversity information by certain large companies to improve consistency and comparability of such information throughout the EU. Among others, it requires the preparation of a "consolidated non-financial statement", which includes a description of the business model, the policies pursued, principal risks, and key non-financial performance indicators (Wagenhofer, 2015). Although sustainability reporting is still voluntary, the practice of this type of disclosure is globally snowballing. Sustainability reporting appears to be reaching a "tipping point", as it moves beyond the realm of the innovators and early adopters into the mainstream. Failure to engage with the reporting process could have a negative impact on performance, reputation, and even the ability to raise capital (Ernst & Young, 2014).

Since sustainability reporting in most countries is not mandatory (such as Nigeria), the form of disclosure is unrestricted and consequently varies among companies even within the same country and same industry. Companies often use their official websites to publish their socially responsible activities through many links or in a comprehensive report. In order to make those reports comparable, several frameworks emerged. Major providers of sustainability reporting guidance include:

1. GRI (GRI's Sustainability Reporting Guidelines),

2. The United Nations Global Compact (the Communication on Progress),
3. The International Organization for Standardization (ISO 26000, International Standard for social responsibility) and
4. The Organisation for Economic Co-operation and Development (OECD Guidelines for Multinational Enterprises).

Among the aforementioned, the GRI Sustainability Reporting Guidelines are the most developed and used outline that enables organizations worldwide to quantify their impact on the environment, society and the economy.

Compiling the literature on sustainability reporting, Schaltegger and Burritt (2010) summed up six reasons that may encourage managers to establish sustainability reporting and accounting:

1. *Green-washing*: one reason for dealing with sustainability accounting can be derived from the motivation of management to signal concern and to collect data for communicating and reporting purposes rather than to improve sustainability performance. In this view, accounting serves as a tool to support cost efficient communication activities regarding sustainability.

2. *Mimicry and industry pressure*: mimicry has relevance as an explanation of management activities and may also be a motivation for management to talk about and deal with sustainability accounting. Mimicry can be seen as a way in which new accounting ideas about sustainability can be introduced, but emulation of methods can also be seen as being uncritical towards associated problems.

3. *Legislative pressure, stakeholder pressure and ensuring the license to operate"*: stakeholder pressure and the introduction of mandatory information and reporting

requirements through governmental legislation is another possibility. In the case of enforced information requirements on sustainability, institutional compliance and stakeholder communication, dialogues can become necessary for the continuation of corporate activities.

4. *Self-regulation*: self-regulation is a voluntary activity where a company or an industry association restrains its actions or commits itself to certain nonmarket actions. The corporation or industry seeks to improve its performance and reputation in a voluntary way, set within a framework whereby commercial or profit making considerations may be important, but are not necessarily the main driver. Self regulation on an industry level is often introduced in order to impede further mandatory government regulations, to maintain social acceptance and reputation, or to prevent competing companies from free riding.

5. *Corporate responsibility and ethical reasons*: corporate responsibility is a contested notion as it is frequently attributed to individuals rather than institutions, although the notion of responsibility accounting recognizes the practical importance of both. For an individual to be held responsible, the process begins with the perception of phenomena, then proceeds towards identification of certain morally significant features, such as impact on others, harm, or pain. From the perspective of corporate responsibility, the corporate information gathering system provides it with a way of perceiving, the first step in acting responsibly, prior to the identification of the morally significant features of corporate activities. If the information system is incomplete, lacks relevance, or does not assist with comparability of different alternatives the likely outcome is irresponsible corporate activity and impacts. The centrality of accounting information in the process of

promoting and maintaining responsible corporations is linked with the view that accounting is concerned with individual's behaviour or the behaviour of individuals in groups, such as in departments, divisions or corporations. Ethical motivation and legitimation for accounting to address sustainability issues is of uncontested importance. The focus of accounting information will direct and guide corporate decision makers. For managers who aim to improve corporate sustainability, sustainability accounting thus plays a crucial role.

6. *Managing the business case for sustainability*: one reason to introduce sustainability accounting is to identify and realize the economic (e.g. cost reduction or sales revenue increasing) potential of voluntary social and environmental activities. Corporate management will be motivated by this reason if it has some inkling that the company may have a business case for pursuing sustainability, but which would only be more transparent with better information.

2.1.4 Sustainability Reporting in Nigeria

Sustainability reporting emerged in an attempt to respond to the demands for interdisciplinary reporting. Nigeria is not an exception to the introduction of sustainability reporting in the business community with particular reference to quoted companies. However, sustainability reporting is not a listing requirement in Nigeria and is largely based on voluntary initiatives of firm managers (Owolabi, 2010). Most of the firms caught up in the social and environmental reporting system are within the manufacturing sectors (Uwuigbe, 2011). This is with the exception of countries like South Africa where sustainability reporting is included in annual reports.

A survey conducted by KPMG Nigeria in 2011 shows that out of 100 top companies in Nigeria, 68% practice Sustainability Reporting. According to KPMG (2013), the highest growth rates of corporate responsibility reporting since 2011 were seen in India, Chile, Singapore, Australia, Taiwan, Romania, China (incl. Hong Kong) and Nigeria. Year 2013 saw an increase in the reporting rate in Nigeria to 82 percent from the earlier reported 68 percent. These statistics have since been updated as the KPMG survey of sustainability reporting of 2017 classified Nigerian top rated companies as among the countries with sustainability reporting rate higher than the global average with 85% in 2015 and 88% in 2016 (KPMG, 2017). Howbeit, Nigeria is still being classified in the corporate sustainability reporting quadrant tagged "starting behind" apparently owing to not having a mandatory environmental or social reporting requirement for public companies, and there are no significant initiatives which encourage such disclosure. It is worthy of note that the KPMG evaluation and reports are largely based on Corporate Responsibility Reporting and less on the new popularized GRI. This can be corroborated by an earlier report by the British American Tobacco Nigeria (2010), which observes that the practice of social reporting is largely not widespread in Nigeria and corporate social responsibility is often considered synonymous with philanthropy. The Companies and Allied Matters Act does not make any mention of environmental or social reports requirements among the financial statements required to be published by public companies. The KPMG sustainability report (2013) shows that less than 50% of Nigerian companies refer to the GRI Guidelines in their corporate reporting.

The coordinator of GRI, Tendai Matika, notes that while Nigeria is critical to African economies, the country needs to embrace reporting standard using the new GRI yardstick, G4, which is an improvement on G3 to measure the impact of its social investment as well as enhance ethical corporate behaviour in the operating environment. A recent survey reported by Ademigbuji, (2014) shows that Nigeria accounts for only two per cent (2%) of GRI-based reports in Africa - with South Africa leading with about 96 per cent (96%) and the other two per cent scattered around the rest of the continent. A Nigerian bank, Zenith, was rated the first Nigerian company and first African financial institution to adopt the Global Reporting Standards on sustainability of the Global Sustainability Standards Board. The standalone sustainability report as tagged "Creating Wealth Sustainability" was released in Zeniths 2015 report, became the first GRI Standard report in Nigeria and the first in Africa's financial services industry. Similarly, the Nigerian Stock Exchange (NSE) also released its 2016 Sustainability Report using GRI G4 Reporting Guidelines. The report was titled "Ushering in a new era of sustainability in the Nigerian market place" and represents the second edition of GRI-G4 patterned sustainability report by the NSE. Other organizations are still keying in – with the "GRI Standard" of 2016 that superseded the existing GRI Guideline still about take-off as the 2018 projected date approaches.

Generally, the drive towards Nigeria's Environmental Policies and consciousness is a product of the incident of the dumping of toxic waste in Koko village in Delta State in 1987. "The country was before this incident, ill equipped to manage such environmental crisis, as there were no institutional capacity and legislations to address such matters" (Fasu, 2011:85). In the aftermath of the Koko incident, Nigeria developed a

comprehensive national policy on the environment. The Federal Environmental Protection Agency 1988 (FEPA) was created and charged with the administration and enforcement of the environmental law. Earlier, the government enacted the Harmful Waste (Special Criminal Provisions) Act, 1988, to deal specifically with illegal dumping of harmful waste (Ogbodo, 2010; Fasu, 2011). Environmental Law Research Institute (2009) maintains that the role of legislation in inducing responsible attitudes and behaviours towards the environment cannot be overlooked. Legislation serves as an effective instrument for environmental protection, planning, pollution prevention and control. Thus Nigeria has passed several legislations in this direction the latest being the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act 2007. There is also the Environmental Impact Assessment (EIA) Act 2004. Other regulatory agencies with oversight over specific industries have also issued guidelines to regulate the impact of such industries on the environment such as the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN) 2002, published by the Department of Petroleum Resources (DPR). Unfortunately, standardize environmental and social accounting practices and norms in preparation of statutory financial statements for public companies are not given attention in these laws. Similarly there is no pronouncement from the accounting standard body in Nigeria on the issue of Sustainability Reporting, just as the professional accountancy bodies in the country are yet to give Sustainability Reporting the attention it deserves.

Researchers like Owolabi et al (2016) assess the sustainability reporting practices of industrial goods sector in Nigeria and showed evidence that out of thirty-three (33) disclosures required by the GRI-G4 index on environmental impacts, Most

manufacturing companies disclosed only 5 which represented a mere 15%. This suggests that the practice is still at the developing stage. The researchers also noted that organizations embrace reporting standards when they perceive incentives, otherwise, they dump them especially where it is not mandatory. Isa (2014) also assessed sustainable reporting among food and beverage firms in Nigeria and found that the firms exhibited some level of sustainability reporting though not significant because it only comprised of approximately two percent (mostly environmental activities and less on product and rights disclosures) of the total disclosures of the annual reports. Nwobu (2015) also studied the annual reports of some banks in Nigeria for the presence or absence of sustainability reporting and found that sustainability reporting has received substantial attention over the past four (4) years in the Nigerian banking sector and found a linkage between it and profit performance. Asaolu et al (2011) equally assessed sustainability reporting in the Nigerian oil and gas sector in order to ascertain the level of reporting with global best practices using the GRI G3 reporting guidelines. They found incompatible difference in the sustainable reporting indicators of all companies studied when compared with their counterparts. It could also be that the technicalities involved in the reporting guidelines are not properly understood and may require more time to grasp the details. This goes to show that majority of the Nigerian companies take sustainability and social responsibility and philanthropy reportage which explains why they are rated high in corporate responsibility reporting, as earlier seen, and significantly lower using the GRI rating. There are three major components of sustainability reporting - environmental, economic and social dimensions; each of the categories are discussed below in relation to sustainability:

2.1.4.1 Sustainability and Environmental Issues

The environmental dimension of sustainability concerns an organization's impact on living and non-living natural systems, including ecosystems, land, air, and water. Environmental indicators cover performance related to inputs (e.g., material, energy, water) and outputs (e.g., emissions, effluents, waste). They also encompass performances related to biodiversity, environmental compliances, and other relevant information such as environmental expenditure and the impacts of precuts and services (GRI, 2013).

According to Jaggi and Freedman (1992), business organizations should be interested in their environmental performance because it directs their financial performance. In Ngwakwe (2009), a significant relationship was found between environmentally responsible and irresponsible firms. 'Environmental responsibility' was determined using disclosure on environmental and social issues above 50%.

Traditionally, accountants prepare corporate reports based on financial performance. However, for many years now, there are advancements into the role of accountants in social and environmental accounting, proposing the argument that accountants can improve social justice (Tilt, 2009). Social justice issues are preoccupied with firm's contribution to social and environmental benefits to the society. In tracing the relationship between the accounting profession and environmental issues, Owolabi (2010) asserts that accountants perceive that environmental responsibility is important.

Previous studies have measured environmental performance in terms of preservation and conservation of natural resources such as conducting recycling activities, noise reduction or action plan to pursue noise improvement initiatives, water and process treatment, pollution prevention and control, phasing out the use of ozone

depleting substances and compliance with authority in buildings regulations and requirements. It also includes liaising with suppliers to develop environmental best practices in supply chain and encouraging staff to support initiative towards local, national or global environment in a positive way by raising and maintaining staff awareness on environmental issues. Environmental performance can be achieved by implementing Environmental Management Systems (EMS) by organizations. The system enables an organization to reduce its environmental impact and increase its operating efficiency (U.S EPA, 1995).

Clarkson, Fang, Li, & Richardson (2010) stated that voluntary environmental disclosure was positively and significantly associated with share price/market value of equity. Similarly, Gozali, How, & Verhoeven (2002) found that there are economic consequences of voluntary environmental information disclosure. Companies with positive environmental disclosure perform significantly better in the market than companies that disclose negative environmental information. They noted that the empirical research into the relationship between corporate social responsibility and economic performance is far from conclusive. Positive environmental disclosures are the information which presents the company as operating in harmony with the environment. Negative environmental disclosures are the information that present the company as operating to the detriment of the natural resources.

According to Marsat and Williams (2011) a business organization's ethical actions are bound to generate additional costs which in a competitive environment may not lead to maximization of shareholder value. This may lead to more unethical behaviors being condoned by the investors. Also, investments in ethical actions could provide financial

benefits. For example, avoiding environmental disasters, reducing waste, financial lawsuits may reduce future costs. The latter argument has been affirmed by Khaveh, Nikhashemi, Yousefi and Haque (2012) who noted that companies with higher level of sustainability disclosure have higher share price and net profit.

Rennings, Ziegler and Zwick (2002) suggested that there are two measures for sustainability performance. "The first measure evaluates the environmental and/or social risks of the industry to which a company belongs (compared with other industries). The second measure evaluates the environmental and social/or social activities of a corporation relative to the industry average". These social activities become sources of social awareness to minimize the negative environmental consequences that include emission or other harmful substance that would result in suits or regulatory penalties due to non-compliance. They found that companies that showed a "higher environmental sector performance (i.e. a lower degree of environmental risks) has significantly positive effect on the average monthly stock returns. According to this result, the stock market rewards investments in stock corporations of clean sectors (with otherwise similar economic characteristics, e.g. concerning financial variables) with a premium" when compared to companies with high social performance.

Many companies have followed an environmental business strategy with success (Jeucken, 2001); and academic surveys have identified a positive correlation between environmental performance and financial performance (King & Lenox, 2001).

Today, the positive correlation between environmental performance and financial performance is widely accepted, even though the strength of the correlation and its genesis are still often unclear. Furthermore, not only does the influence of environmental

business strategies on financial performance need to be analyzed, but so, too, does the influence of environmental business strategies on environmental performance.

According to the Nigerian Stock Exchange (NSE) sustainability disclosure guidelines of December 2016, the core elements of Environmental performance include:

1. Businesses should utilize natural and manmade resources in an optimal and responsible manner and ensure the sustainability of resources by reducing, reusing, recycling and managing waste.

2. Businesses should take measures to check and prevent pollution. They should assess the environmental damage and bear the cost of pollution abatement with due regard to public interest.

3. Businesses should ensure that benefits arising out of access and commercialization of biological and other natural resources and associated traditional knowledge are shared equitably.

4. Businesses should continuously seek to improve their environmental performance by adopting cleaner production methods, promoting use of energy efficient and environment friendly technologies and use of renewable energy.

5. Businesses should develop Environment Management Systems (EMS) and contingency plans and processes that help them in preventing, mitigating and controlling environmental damages and disasters, which may be caused due to their operations or that of a member of their value chain.

6. Businesses should report their environmental performance, including the assessment of potential environmental risks associated with their operations, to their stakeholders in a fair and transparent manner.

7. Businesses should proactively persuade and support their value chain to adopt this principle.

2.1.4.2 Sustainability and Economic Issues

The economic dimension of sustainability relates to the organisation's impact on the economic conditions of its stakeholders and the interaction or relationship with the economic systems at local, national, and global levels. It does not merely focus on the financial conditions of organisations. Corporate disclosure is an attempt by firms to report on their economic performance to interested users (usually shareholders), whose funds are directly involved in the financing of the firm's business. Economic reporting is based on the financial aspects of the firm and it is concerned with the value added to the shareholders.

Within the capital market, economic performance is depicted by the amount of profit a firm makes. However, this information may be biased, since it is based on manager's accounting choices. Moreover, the ranking of companies which is usually based on accounting performance may be affected by environmental risks or inefficient corporate governance (Hejazi & Hesari, 2012). Economic performance in the future may also be improved if proper investments are made towards reducing social and environmental impacts or accepting responsibility for them. By so doing, future liabilities arising from such impacts are greatly reduced. More so, firms are exposed to pressures exercised from other agents (stakeholders) in addition to the shareholders directly involved with the provision of capital and finance for business operations.

In traditional accounting parlance, a business organization is judged by the amount of earnings it is able to generate. This amount is what determines tax to be paid to

government and ultimately the dividend that will be paid to the firm's shareholders. However, within the context of corporate disclosure, social and environmental issues have increasingly become a recurrent decimal. This is evidenced by the capital market reaction to these issues, incorporation of these issues as into fundamental analysis in buying or holding a stock and information contribution of these issues to shareholders (Kaspereit & Lopatta, 2011).

Studies on the value relevance of non-financial information (which includes corporate sustainability reporting) assert that other information could be significant enough to overshadow the significance of accounting earnings. Thus, sustainability disclosures are receiving attention around the world and corporate reporting is now tilting towards the interest of business stakeholders. While reporting this information can increase transparency with stakeholders, it may also affect the market performance of a firm's shares. Traditional disclosure theory posits that the more information a firm discloses, the lower that firm's cost of equity capital (Dhaliwal, Li, Tsang and Yang, 2011) and ultimately the increase in its share price. Also, by reducing investor risk and information asymmetry between the firm and outside owners in the capital market, investors will be able to make better decisions based on these disclosures.

However, investors are primarily interested in public or private information that can assist them in assessing the value of the firm for the purpose of making informed economic choices. There are myriad factors responsible for changes in the value of a firm, causing it to show wide fluctuations (Pandey, 2004). Accounting information is one of such factors. This information has long been criticized for its historical nature. Apart from accounting information, there are a number of sustainability disclosures that could

be used to assess a business organization. This is where the issue of the other two (2) major components of sustainability (environment and social performance) comes into play as discussed in the next sub-headings.

According to the NSE sustainability disclosure guidelines of December 2016, the core elements of Economic performance include:

1. Businesses should assure safety and optimal resource use over the life-cycle of their product – from design to disposal – and ensure that everyone connected with it-designers, producers, value chain members, customers, consumers and recyclers-are aware of their responsibilities.

2. Businesses should ensure relevant and informative product labeling, appropriate and helpful marketing communication, full details of contents and composition, and promotion of safe usage and disposal of their products and services.

3. In designing the product, businesses should ensure that the manufacturing processes and technologies required to produce it are resource efficient and sustainable.

4. Businesses should regularly review and improve upon the process of new technology development, deployment and commercialization, incorporating social, ethical, and environmental considerations.

5. Businesses should recognize and respect the rights of people who may be owners of traditional knowledge, and other forms of intellectual property.

6. Businesses should recognize that over-consumption of resources results in unsustainable exploitation of our planet's resources, and they should therefore promote sustainable consumption, including recycling of resources.

7. Responsible procurement practices which address transparency, confidentiality, fairness, child labour, corruption, conflict of interest, and support for SME and women owned businesses, forced labour, social responsibility and Health & Safety should be maintained.

2.1.4.3 Sustainability and Social Issues

The social dimension of sustainability concerns the impacts an organisation has on the social systems such as labour practices, human rights and relationship with communities within which it operates. The indicators surround around labour practices and decent work, human rights, society and product responsibility (GRI, 2013).

Profit is considered as the primary motive of profit-oriented business organizations operating especially in the private sector. In actualizing this objective, companies usually minimize the costs associated with business activities and maximize their profits. Even though scarce resources are used by businesses for production, 'sustainability' is a call for consideration of social good in carrying out production activities. Responsibility towards social justice issues is the ability of a firm to take actions and be accountable for its social and environmental impacts on the society. One of the ways through which this accountability is communicated is through sustainability reporting. With the multi-dimensional role of a corporation to the shareholders (providing them with a reasonable return on investment), state (payment of taxes), people (being socially responsible) and environment (reducing environmental impacts as a result of daily operations); it also connotes community development i.e. effort of the company to develop its immediate environment via community developmental policies, and involvement in issues such as sports, education, social amenities, infrastructural facilities and community health

matters. Accountability for these roles is revealed through disclosures by firms in their corporate communication media. As long as a firm continues to exist, it will do so within the confines of the people who make up the society and the planet.

There are different opinions about the interaction between social performance (as a component of sustainability) and financial performance. The empirical research has not reached at a consensus. Earlier scholars such as Friedman (1970) submit that social responsibility involves costs and therefore can worsen firms' performance, while Preston and O'Bannon (1997) and Jensen (2001) argue that social responsibilities might constrain firms' value maximization and lead to poorer financial performance. Murray (2010) argues that the practice of sustainable development by firms signal reduction in future earnings and erosion of investor's short-run returns. Kwanbo (2011) also found that corporate social disclosure is an insignificant tool to maximizing corporate objectives. A foremost corporate objective is the maximization of firm earnings. His study deduced that social disclosure has no impact on earnings per share. The implication of this finding is that business organizations may not be obliged to be responsible for issues pertaining to social justice. Hamilton, Jo and Statman (1993) noted that it is possible that markets do not value corporate social responsibility at all or markets value corporate social responsibility efficiently or markets do not value corporate social responsibility efficiently.

McWilliams, Siegel and Wright (2006) contend that "firms should pursue green management practices only when it is in their self-interest to do so". In this perspective, decisions regarding CS are considered as a form of strategic investment (McWilliams et al, 2006). Preston and O'Bannon (1997) attempt to discover if social and financial

performance is positively correlated, negatively correlated, or not correlated at all. Additionally, they wish to determine if a casual relationship behind these factors exists. This means that social performance may drive financial performance, financial performance may influence social performance, or there is a synergistic relationship between the two. They discovered that there was not a single negative relationship between social and financial performance in large U.S. companies, which is consistent with the stakeholder theory. The strongest evidence indicated that social-financial performance is a positive synergy, meaning that available funds drive positive social performance and that positive social performance also drives financial performance (Preston & O'Bannon, 1997).

Waddock and Graves (1997) also argue that attention to corporate social performance builds effective and lasting relationships with stakeholder groups, which causes better overall financial performance. They attempt to discover if "there is a positive relationship between CSP and financial quality performance and whether slack resources and good management theory may be operating simultaneously" (Waddock and Graves, 1997). The slack resources theory means that financially prosperous companies have available resources to invest in social sustainability initiatives, meaning that better financial performance is an indicator of better corporate social performance. After an empirical analysis, Waddock and Graves concluded that corporate social performance influences financial performance and strong financial performance also drives increased corporate sustainability practices. Their concluding theory is in line with Preston and O'Bannon, stating that this relationship is a virtuous cycle where firms perform well, increase corporate sustainability, and then performs even better.

According to NSE sustainability disclosure guidelines of December 2016, the core elements of Social performance include:

1. Businesses should respect the right to freedom of association, participation, collective bargaining, and provide access to appropriate grievance redress mechanisms.

2. Businesses should provide and maintain equal opportunities at the time of recruitment as well as during the course of employment irrespective of caste, creed, gender, race, religion, or disability.

3. Businesses should not use child labour, forced labour or any form of involuntary labour, paid or unpaid.

4. Businesses should take cognizance of the work-life balance of its employees, especially that of women.

5. Businesses should provide facilities for the wellbeing of its employees including those with special needs. They should ensure timely payment of fair living wages to meet basic needs and economic security of the employees.

6. Businesses should provide a workplace environment that is safe, hygienic humane, and which upholds the dignity of the employees. Business should communicate this provision to their employees and train them on a regular basis.

7. Businesses should ensure continuous skill and competence upgrading of all employees by providing access to necessary learning opportunities, on an equal and non-discriminatory basis. They should promote employee morale and career development through enlightened human resource interventions.

8. Businesses should create systems and practices to ensure a harassment free workplace where employees feel safe and secure in discharging their responsibilities.

9. Businesses should systematically identify their stakeholders, understand their concerns, define purpose and scope of engagement, and commit to engaging with them.

10. Businesses should acknowledge, assume responsibility and be transparent about the impact of their policies, decisions, product and services, and associated operations on the stakeholders.

11. Businesses should give special attention to stakeholders in areas that are underdeveloped.

12. Businesses should resolve differences with stakeholders in a just, fair and equitable manner.

2.1.5 Sustainability Reporting (SR) in Africa

Sustainability reporting is primarily issued by companies based in developed countries and is largely a voluntary initiative of firms in most developing countries (Junior, Best, & Cotter, 2014). However, this is not so in several emerging economies such as China, Brazil and South Africa, to name a few, where sustainability reporting is included in annual reports (Nwobu, 2015). According to GRI (2013), less than 13% of SRs produced on a global scale were from African firms. The African context of financial reporting is complex and characterized by problems unique to the region. Weak accounting and legal systems, difficulties in implementing international accounting standards, incompetence of accounting professionals and inadequate audit infrastructures are difficulties experienced by firms operating in Africa. Though the region's economic momentum is widely recognized, social and environmental welfare is also largely regressive. With the exception of South Africa, sustainability reporting in Africa is a voluntary activity and is not standardized or regulated at the national level.

The Johannesburg Stock Exchange (JSE) requires listed South African companies to provide sustainability information on a "report or explain" basis (Tankiso, 2014). Till date, South Africa is taking the lead in Africa with respect to issues bothering on corporate sustainability (which includes social and environmental performance). Currently, South Africa boasts of a high rate of reporting (98 percent) which is consistent with 2011 of 96% (KPMG, 2013). In particular, the Johannesburg Stock Exchange (JSE) requires that listed firms should produce an integrated report which incorporates economic, social and environmental disclosures into a single comprehensive report (Ioannou & Serafeim, 2014; Tankiso, 2014). The origin of integrated reporting in South Africa is rooted in corporate governance reform (Andreasson, 2011). The country's King Reports (King I, II and III) on corporate governance are reflections of the South African government's emphasis on neo-social aspects and economic growth of listed businesses (Abeysekera, 2013; Andreasson, 2011; Tankiso, 2014). The first King report-King I was mandated in 1994 with the main aim of safeguarding public interest and ensuring accountability of business entities in South Africa (Kevany, Huisingh, Garcia, & Africa, 2014; Tankiso, 2014). King II was a modified version of King I that necessitated disclosure of environmental, social and governance (ESG) information in addition to conventional financial reports (Serafeim, 2015). Both King I and II reports did not require mandatory compliance from listed firms, however their principles were adopted by the Johannesburg Stock Exchange (JSE).

The latest report-King III Report on Corporate Governance, introduced in 2009 and enforced by the JSE requires publicly listed entities to develop integrated reports on a "report or explain" basis Outside South Africa, institutional initiatives encouraging

sustainability disclosures are few and far between (Kell & Rodin, 2013). Firstly, only 26 countries in Africa have registered and functioning security markets, a large number of which remain underdeveloped due to poor legal infrastructure and limited financial services (Odhiambo, 2012). For example, Zambia's agricultural commodities exchange (ZAMACE) has faced problems of high transaction costs, food price volatility and weak regulatory frameworks (Sitko & Jayne, 2012). Thus, creating stock exchanges that can enforce SR is a difficult task that would require a great deal of effort and collaboration from both the regulators and the players in the markets.

Though the African context of financial reporting is riddled by multiple challenges as aforementioned, some nations (apart from South Africa) have taken deliberate steps to encourage companies to issue sustainability reports on a voluntary basis. The Nigerian Stock Exchange and the Nairobi Securities Exchange (Kenya) are active members of the sustainable stock exchanges (SSE) initiative launched by UNCTAD. The initiative is meant to encourage stock exchanges to support sustainability and integrated reporting. The Mauritian government has also developed a nationwide sustainability strategy entitled "Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of SIDS (Small Island Development States)". However, the discourse on sustainable development and sustainability is also closely tied to African cultural models that encourage balance between the individual, the community and the natural environment (Edozien, 2007).

2.1.6 Sustainability Reporting (SR) in other Foreign Countries

During the 1960s and 1970s, both in the U.S. as well as in Europe, what may now be identified as a form of *voluntary* sustainability reporting was driven by a renewed

awareness of responsibility towards society and the environment, which remained unfulfilled by governmental institutions, and some that were directly attributable to business organizations. Early attempts with voluntary social reporting, primarily in the Netherlands and France, paved the way for the introduction of environmental reports in countries such as Germany, Austria, and Switzerland. During the 1980s, ethical investment funds in the UK and the U.S. started implementing an investment approach – broadly known as "negative screening" – excluding firms from their investment universe based on the firms' social and ethical performance. Towards the end of the 1980s and following the 1989 Exxon Valdez disaster, the U.S.-based Coalition for Environmentally Responsible Economies (CERES) developed the "CERES/Valdez Principles" on behalf of the Social Investment Forum (SIF), and subsequently introduced a set of environmental reporting guidelines (Bansal, 2005). In 1997, CERES and the United Nations Environment Program (UNEP) launched the Global Reporting Initiative (GRI) with the goals of developing and establishing reporting guidelines for the "triple bottom line": accounting for economic, as well as environmental and social performance by corporations. The main objective was to gradually establish sustainability reporting at par with financial reporting in terms of rigor, credibility and comparability. Later on, in the 1990s, the increased societal pressures, demands and expectations on companies for more transparency and accountability, led to a significant growth in the issuance of voluntary corporate sustainability reports.

In more recent years, growing social (e.g., poverty, deteriorating social equality, and corruption) and environmental (e.g., climate change, water usage, and waste) challenges have generated renewed pressures on companies by investors, shareholders

and a range of non-shareholding stakeholders to adopt a more systematic approach towards risk management and sustainability reporting. In fact, companies were increasingly expected to disclose how they are utilizing, developing (or depleting) and, more generally, affecting human capital, natural resources and society at large. Moreover, as a result of several high-profile corporate scandals and the recent global financial crisis (which caused the Great Recession of 2007-09), a general feeling of distrust has developed around companies' ability to self-regulate and a concern that current company disclosures primarily provide information about past performance rather than future prospects (e.g. Kaplan & Norton, 1992). Meanwhile, investors and information intermediaries in capital markets (e.g. sell-side analysts) began to integrate ESG data in their valuation models, creating additional demand for sustainability reporting (Ioannou & Serafeim, 2015). As a direct consequent of such demands, not only by the investment community but also numerous non-shareholding stakeholders; an increasing number of countries around the world began to *mandate* the disclosure of ESG information, either through laws and regulations or through stock exchange listing requirements.

Both Denmark (including South Africa) are countries in which sustainability reporting has been relatively widespread prior to the regulation, at least among the larger firms in the economy. In Denmark, the Minister for Economic and Business Affairs introduced an Act that amended the Danish Financial Statements Act, in October 2008. Large companies, meaning businesses that satisfy two out of the three criteria of either a) total assets more than DKK 143 million, or b) net revenues of DKK 286 million, or c) an average number of full-time employees of 250, were required to supplement their annual management's review with a report on social responsibility. Corporate social

responsibility was defined in the legislation as *"voluntarily include considerations for human rights, societal, environmental and climate conditions as well as combatting corruption in their business strategy and corporate activities."* It was not therefore mandated that companies adopt or implement such policies *per se (Herzig, 2006).* Nevertheless, if companies did not have any such policies, they were required to disclose this fact in their management's review. The amendment entered into force and applied for the financial years commencing on the 1st of January 2009 or later.

In Denmark's Act – that required disclosure of ESG issues in a supplementary and non-integrated way – King III stated that reporting on sustainability issues was to be interwoven with financial reporting (Eccles, Ioannon, & Serafeim, 2012). Therefore, the integrated report would describe the value creation process, critically putting the company's economic performance into a broader context. In so doing, companies would have to discuss the environment in which they operated as well as their impact on stakeholders, and the strategies for mitigating any negative impacts on society. The JSE made integrated reporting mandatory for all listed companies on an "apply or explain" basis, thus allowing those companies that did not issue an integrated report to explain why this was the case. Similar to a company in Denmark therefore, a company in South Africa could either disclose on ESG issues or alternatively, explain why it would not make any ESG disclosures. While in both countries companies were mandated to disclose the policies that they had in relation to a series of ESG issues, as well as to report on the actions that they had taken to achieve the objectives of their policies, no specific guidelines were provided or standards were set, to require disclosure along a specific group of metrics (Wagner, 2010).

Companies in China as well as companies in Malaysia had very low levels of ESG reporting prior to their respective regulations. Thus, in China, the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) mandated certain listed firms to disclose ESG information starting in financial year end December 2008. Specifically, SHSE mandated sustainability reporting for firms included in the SHSE Corporate Governance Index, firms with overseas listed shares, and firms in the financial industry. SZSE mandated sustainability reporting for firms included in the Shenzhen 100 Index. In fact, in 2006 the Chinese government revised Article 5 of the Company Law requiring companies to *"undertake social responsibility"* in the course of business. In January of 2008, the State-Owned Assets Supervision and Administration Commission of the State Council released the Guide Opinion on the Social Responsibility Implementation for the State-Owned Enterprises controlled by the government. Both the reporting regulations and the prior government actions emphasized the economic benefits of Corporate Social Responsibility (CSR), how CSR could be a driver for a "harmonious society" and growth, and how it could help enhance organizational creativity, reputation, and employee engagement.

In Malaysia, the stock exchange Bursa Malaysia made sustainability disclosure a listing requirement for all listed firms starting on 31st of December 2007. This followed the Malaysian Prime Minister's speech announcing the requirement for listed companies to report on their CSR initiatives. Specifically, according to this requirement, there is an obligation for firms to disclose a description of their CSR activities or, if they have none, to issue a statement publicly acknowledging the absence of such activities. Importantly, similar to the regulation adopted for Danish and South African companies, no specific

guidelines were provided to require disclosure on specific metrics in either China or Malaysia (Mohammad, Sutrisno, Prihat, & Rosid, 2013).

In *India*, there is no mandatory environmental or social reporting requirement for public companies, but there are initiatives which encourage such disclosure. The Securities and Exchange Board of India (SEBI) does not make any mention of environmental or social reports requirements in its 'Disclosure and Investor Protection' guidelines. India's National Environmental Policy (NEP) 2006, scripted by the Ministry of Environment and Forests has recommended the use of 'standardize environmental accounting practices and norms in preparation of statutory financial statements for large industrial enterprises.' However, no such standards have been introduced. In addition, there are several other laws that influence reporting. Under the Environment (Protection) Act of 1986, each organization covered by the law should submit an annual Environmental Audit Report to its local State Pollution Control Board (SPCB). The environmental report covers items such as water and raw material consumption, and although it does not mandate reporting this information to the public, it forces companies to collect it. Similarly the India Factories Act mandates social reporting on issues such as working hours for every factory to State governments, though not for public reporting. The Companies Act (section 217) also requires companies to report on energy conservation (measure taken, metric and results) in the Board of Directors Report. The latest corporate governance code (2007) for public sector companies requires them to make environmental social disclosures in the directors report or management discussion and analysis section (Yahya & Ghodratollah, 2014).

There are several local organizations that are promoting sustainability reporting in India. The Institute of Chartered Accountants of India (ICAI) gives out annual 'Awards for Excellence in Financial Reporting.' The criteria for the award include criteria for environmental and social reporting. In addition, ICAI has also published a handbook on sustainability reporting, which is available for sales to members. The Confederation of India Industry (CII) has established the Centre of Excellence for sustainable Development, as well as a Centre on Sustainable Reporting. This centre assists companies to initiate or improve their environmental and social reporting. There have been some recent developments in the Indian financial markets. Standard and Poor's (in partnership with the International Finance Corporation) launched in January 2008, an investible Environmental Social and Governance (ESG) index. The index is comprised of the top 50 sustainability performances, chosen from a universe of the 500 largest listed companies in India. The desire to be included on the index, both for reputation as well as for access to capital, should spur more Indian companies to improve their environmental and social performance and reporting and yet had a discernable impact. The index should also help advance the idea that good environmental and social performance translates into good financial performance, and underscore the link between the two (Soderstrom, 2012).

In *Indonesia*, the new corporate responsibility law was passed in July 2007 despite protests from local companies. This law which focuses on the extractive industries will mandate a certain level of corporate spending and reporting on environmental and social programs, is the first mandatory corporate sustainability reporting (CRS) law in the world. There is still resistance to it among companies, business groups and even NGOs

promoting CRS in the country (Hui, Chan, & Pun 2001). In addition to this new CSR law, there are other legal drivers that encourage sustainability reporting. Indonesian companies are required to report about their sustainability activities to a variety of different bodies (varies depending on the sector), including the Directorate General of Taxation. Indonesia began an innovative public environmental reporting program in 1995; The Program for Pollution Control Evaluation and Rating (PROPER). The first phase of this voluntary program (though companies were asked to participate by the regulators) started with 187 companies, mainly large water polluters but more companies joined over the years. The program monitored and rated regulatory compliance level and results were published in the media. The program had a positive impact on corporate environmental behaviour and reporting in Indonesia.

There are several active organizations offering support services and encouragement. Beginning in 2003, the Indonesian Institute of Accountants-Management Accountants Compartment (IAI-KAM) has been active in promoting corporate sustainability reporting, with a focus on transparency and best practices. In 2005, it launched the Sustainability Reporting Award, which rewards companies for the best sustainability reporting. It is also a founder of the National Centre for Sustainability Reporting (NCSR), whose main purpose is to support and promote sustainability reporting in Indonesian. The NCSR's activities include translating the Global Reporting Guidelines to Indonesian. Another active local organization is the Forum for Corporate Governance in Indonesian (FCGI), which is also working towards improving corporate sustainability and responsibility (in addition to corporate governance) practices in Indonesia. It offers an information depository, covering relevant article in the media, as

well its own publications. Its most influential activity in relation to reporting is its workshops and seminars. In addition to other sustainability related topics, it offers training workshop that enable participants to become a Certified Sustainability Reporting Specialist (CSRS) or a Certified Sustainability Reporting Assurer (CSRA) (SIRAN, 2008).

In *Philippines*, there have had several developments in corporate sustainability reporting (CSR), although legal corporate reporting requirements are very minimal. In august 2007, the Philippine Board of Investment adopted a new CSR policy that is mandatory for companies that registered under the 2007 Investment Priorities Plan. This policy requires registered companies to implement CSR programs to ensure that the fiscal incentives granted them also benefit local communities. This may have a positive influence on encouraging more reporting of social activities. The Philippine Securities and Exchange Commission (PSEC) is the main supervisory body for public corporations. It also governs the rules and regulations of the Philippine Stock Exchange (PSE).The PSEC required public companies to make a statement regarding their compliance with environmental laws and regulations in their reporting. The Philippines Institute of Certified Public Accountants (PICPA) has been active in encouraging sustainability reporting and has established a special committee on 'Sustainability Reporting and Assurance'. The committee activities include training in environmental accounting (for internal reporting) and triple bottom line reporting and trying to promote the Global Reporting Initiative. The Philippines is also in the process of aligning its accounting standards with international accounting standards issued by the International Accounting Standards Board (IASB). In terms of other initiatives that promote sustainability

reporting, the Management Association of the Philippines recognizes the 'best annual report' each year, which display transparency in reporting both financial and non-financial information.

Countries like *Thailand* do not have any regulations requiring companies to report on their environmental or social performance. The Stock Exchange of Thailand's guideline on disclosure for listed companies do not have any specific environmental or social reporting requirements; although, it does mention the environment briefly (Willis, 2003). The 'Listed companies Handbook' states that, in order to stay listed on the stock exchange; companies shall establish an effective internal control system, which includes appropriate environmental controls. However, this statement does not holds companies to any standard of external disclosure about such controls. In the updated 2006 corporate governance code (which all listed companies must adhere to), there is mention of environmental and social disclosure. It stipulates that the board of directors should set clear policies on environmental and social issues, which, once in place, should be disclosed. There is no requirement that supports further Sustainability Reporting beyond disclosure of policies. Unlike other countries, it is not evident that there are initiatives to promote environmental and social public disclosure by influential organizations such as Federation of Accounting Professions (FAP). However there is a general lack of information provided in English by these organizations themselves, so it is difficult to draw concrete conclusions about the full scope of their activities. Thailand has been focused on building capacity in corporate governance over the past decade since the country's financial crisis, which has perhaps taken some attention away from the need to build capacity in other types of non-financial reporting (Zimara, Eidam, 2015).

Also in *Vietnam*, there are no relevant laws that compel companies to report on environmental and social issues. The local stock exchange only provides information regarding its regulations for listed companies in Vietnamese. Indeed, information regarding the relevant activities of key reporting players, such as the Vietnam Accounting & Auditing Association (VAA), is difficult to find. There is no evidence of organizations working to improve voluntary Sustainability Reporting.

In *Australia*, regulators and financial markets are also beginning to recognize the importance of corporate sustainability issues. For example, Principle 3 of the ASX Corporate Governance Council Guidelines recommends that companies 'Promote ethical and responsible decision-making', while Principle 7 requires companies to disclose 'a summary of the company's policies on risk oversight and management of material business risk. These risks may include but are not limited to: operational, environmental, sustainability, compliance, strategic, ethical conduct, reputation or brand, technological, product or service quality, human capital, financial reporting and market-related risks' (ASX Corporate Governance Council, 2010).

Australia has three main sustainability indices, which are much smaller than their international counterparts due to their voluntary nature. The Corporate Responsibility Index (CRI) was launched in 2004 by St James Ethics Center in partnership with the Sydney Morning Herald and The Age, and supported by Ernst and Young. The CRI is open to all Business Council of Australia members and Australia's top 250 companies to participate through an online survey. In 2005, Sustainable Assets Management Australia (SAM) launched the Australian SAM Sustainability Index (AUSSI) in cooperation with the Victorian Environment Protection Authority (EPA). The compilation of the AUSSI

involves undertaking a corporate sustainability assessment on voluntary participants and publicly available information of companies from 21 industry sectors. The leading 10 per cent of companies in each industry are then chosen as sustainability leaders in their sector and aggregated to form the AUSSI. In January 2008, the AUSSI comprised of 70 corporations.

There are also guidelines developed specifically for the Australian market. The Department of Environment and Heritage (now the Department of Environment, Water, Heritage and the Arts) released Triple bottom line reporting in Australia - a guide to reporting against environmental indicators in June 2003. The group of 100 (which represents the Chief financial officers of large business enterprises in Australia) released in 2003 Sustainability - a guide to trip bottom line reporting. Additionally, foreign owned companies operating in Australia voluntarily report at a rate more than twice that of Australian owned companies, with 43 per cent and 18 per cent respectively. Even government departments have low reporting rates, with only 3 per cent of departments reporting in 2005, the Department of Environment and Heritage (DEH) and the Department of Family, Community services, and Indigenous affairs (FACSIA) voluntarily reported (Faisal, Tower, & Rusmin 2012). However, there is growth in Australian reporting rates with the Centre for Australian Ethical Research (CAER) report estimating that, if current growth rates continue, all of Australia top 500 companies would be voluntarily reporting by 2035. Sustainability reporting in Australia is dominated by a number of key sectors such as manufacturing, mining, wholesale trade, finance and utilities. Mining and manufacturing account for 55 per cent of report, whilst in 2005 hospitality, health and community service were yet to have completed a sustainability

report. A major reason for the low rates of reporting is the lack of engagement from mainstream financial markets. If financial analysts are not using sustainability information then there is a low drive for companies to produce it. However, financial analysts do not demand the information because it is not in a format they can use. As a result, the nonfinancial risk management activities that companies are undertaking are being undervalued in the market. Ernst and Young undertook a report in 2003 analyzing this trend in Australia. However, it must be remembered that Australia's low occurrence of sustainability reporting does not reflect on strong or poor corporate performance, but merely that it is unreported therefore hard to measure.

According to Adam & Zutshi, (2004), Australia's low rate of reporting led to the Joint Committee on Corporation and Financial Services inquiry into corporate responsibility and triple bottom-line reporting in 2005, with the report Corporate Responsibility - managing risk and creating value published in June 2006. In labours supplementary report to the inquiry they suggested a framework for strategic direction and engagement to encourage more companies to integrated sustainable business practices. This framework involves six recommendations to improve corporate responsibility responses, including:

1. Better coordination of government initiatives.
2. Demonstration of sustainable, responsible behaviors by government agencies.
3. Monitoring of legitimate environmental and social impacts by directors and trustees.
4. Support and resources for business.
5. Improving business sustainability reporting.
6. Engaging the investment sector.

Labour also recommended setting up a National Sustainability Council to recommend and monitor sustainability targets. Other initiatives mentioned in the report to encourage more sustainability practice included promoting research and development into innovative corporate responsibility partnerships, a carbon tax or an emissions trading scheme; a fee on plastic bags; and container deposit legislation. In February 2006, the centre for integrated sustainability analysis at the University of Sydney completed its sustainability reporting pilot program. The program saw to the development of triple bottom line accounting software and training programs on sustainability reporting for corporations.

In the *UAE (United Arab Emirates)*, there is a rapid growing emphasis on challenging the climate change and adopting a Green Economy. In fact, the UAE is developing many initiatives to diversify its energy sources by the integration of the environmental and ecological dimensions. The overall level of sustainability disclosure based on sustainability reporting for banks listed in the UAE financial markets is at a low level. The results also show that the degree of the corporate sustainability disclosure of the conventional banks is higher than the Islamic banks. In addition, our empirical results reveal that the sustainability disclosure affects positively and significantly the banking performance of the conventional banks while it has no significant effect on the Islamic banks performance (Baumgartner & Ebner 2010)

2.1.7 Measures of Sustainability Index

There is no universal standard method for calculating the Triple Bottom Line (TBL). Neither is there a universally accepted standard for the measures that comprise each of the three TBL categories. This can be viewed as a strength because it allows a

user to adapt the general framework to the needs of different entities (businesses or nonprofits), different projects or policies (infrastructure investment or educational programs), or different geographic boundaries (a city, region or country) (Slaper & Hall, 2011).

Both a business and local government agency may gauge environmental sustainability in the terms, say reducing the amount of solid waste that goes into landfills, but a local mass transit might measure success in terms of passenger miles, while a for-profit bus company would measure success in terms of earnings per share. The TBL can accommodate these differences.

The level of the entity, type of project and the geographic scope will drive many of the decisions about what measures to include. That said, the set of measures will ultimately be determined by stakeholders and subject matter experts and the ability to collect the necessary data. While there is significant literature on the appropriate measures to use for sustainability at the state or national levels, in the end, data availability will drive the TBL calculations. Many of the traditional sustainability measures, measures vetted through academic discourse, are presented below.

1. Economic Sustainability Measures

Economic sustainability forms an important component of sustainable development. Economic sustainability is the maintenance and sustenance of a high real growth rate of the economy to achieve the development or economic objectives. Despite the huge resources in Nigeria, the country ranks low in economic performance.

Nigeria has not been able to maintain the growth rate necessary to reduce poverty. Nigeria suffers from lack of balanced development where economic, social and environmental dimensions are given due consideration for long term sustainable development.

Measuring and managing Nigeria's sustainable development is key to achieving the Post-2015 Development Agenda. The multiple challenges to development in Nigeria necessitate the use of a holistic approach that integrates economic, social and environmental dimensions. As stated under the economic objectives of Nigeria, the State shall harness the resources of the nation and promote national prosperity, and an efficient, a dynamic and self-reliant economy; control the national economy in such manner as to secure the maximum welfare, freedom and happiness of every citizen on the basis of social justice and equality of status and opportunity; manage and operate the major sectors of the economy; and protect the right of every citizen to engage in economic activities. The State also pledge to direct its policy towards ensuring the promotion of a planned and balanced economic development; that the material resources of the nation are harnessed and distributed as best as possible to serve the common good; that the economic system is not operated in such a manner as to permit the concentration of wealth or the means of production and exchange in the hands of few individuals or of a group; and that suitable and adequate shelter, suitable and adequate food, reasonable national minimum living wage, old age care and pensions, and unemployment, sick benefits and welfare of the disabled are provided for all citizens. The fulfillment of these objectives requires a sustainable economic development (Ayuba, Achuenu, & Musa 2014).

Economic variables ought to be variables that deal with the bottom line and the flow of money. It could look at income or expenditures, taxes, business climate factors, employment, and business diversity factors. Specific examples include:

1. Personal income
2. Cost of underemployment
3. Establishment sizes
4. Job growth
5. Employment distribution by sector
6. Percentage of firms in each sector
7. Revenue by sector contributing to gross state product

2. Environmental Sustainability Measures

Sustainability is a characteristic of dynamic systems that maintain themselves over time; it is not a fixed endpoint that can be defined. Environmental sustainability refers to the long-term maintenance of valued environmental resources in an evolving human context. The best way to define and measure sustainability in the environmental viewpoint is to focus on natural resource depletion and whether the current rates of resource use can be sustained into the distant future. The over arching importance of sustainable development is geared towards the improvement of the quality of life in all its ramifications, provided that environmentally sound policies are pursued vigorously, and adhered to by society (Ademola, 2013).

The World Commission on Environment and Development (WCED, 1987) defined sustainable development as “a development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

Theoretically, the long-term result of environmental degradation would result in local environments that are no longer able to sustain human populations to any degree.

Ugochukwu, Ertel and Schmidt (2008), stated that such degradation on a global scale would, if not addressed, of course mean extinction for humanity. In the short-term, environmental degradation leads to declining standards of living, the extinctions of large numbers of species, health problems in the human population, conflicts, sometimes violent, between groups fighting for a dwindling resource, water scarcity and many other major problems, all these are evident in the Niger Delta region of Nigeria.

The issue of sustainable development in Nigeria is still far fetch, although most of the foundations have been laid by government, for example: the formation of local Agenda 21 committees at the federal and state levels; inauguration of Environmental Action Plan committees at all levels of government; being a signatory to the Kyoto Protocol and other international Treaties involved in environmental management; upgrading an environmental agency (Federal Environmental Protection Agency – FEPA) into a full fledge ministry (Federal Ministry of Environment – FMENV); introduction of poverty eradication programs; and the commitment of the government to investing in environmental management strategies. Nigeria will start reaping the dividends of sustainable development only when the above programs and strategies are fully implemented (Ugochukwu, Ertel & Schmidt, 2008).

Environmental variables should represent measurements of natural resources and reflect potential influences to its viability. It could incorporate air and water quality, energy consumption, natural resources, solid and toxic waste, and land use/land cover. Ideally, having long-range trends available for each of the environmental variables would

help organizations identify the impacts a project or policy would have on the area. Specific examples include:

1. Sulfur dioxide concentration
2. Concentration of nitrogen oxides
3. Selected priority pollutants
4. Electricity consumption
5. Fossil fuel consumption
6. Solid waste management
7. Hazardous waste management
8. Change in land use/land cover

The total solid waste generation in Nigeria is rising steadily due to increase in population while scarcity of reliable data has made the per capita waste generation trend inconclusive. The estimate of waste generated per person in a day is 0.49 kg with households accounting for 90% of the urban waste (Solomon, 2009). The generation per person in cities at particular time intervals vary from 0.13 to 0.25 kg/day in Maiduguri to 0.47 kg and at the top of the range Abuja with 0.57 average (Wilson, Araba, Chinwah, Cheeseman, 2009). This is within the range of per person waste quantities in developing countries of 0.1 kg/day to 1.2 kg/day. Solid waste generation is strongly influenced by time of year, traditions, personal income (Solomon, 2009), household size and environmental awareness and concern. A study by Sridhar, Bammeke, & Omishakin (1985) found that individuals with higher income generated more waste than lower income people and respondents that were concerned about the environment generated less waste.

It is considered pertinent to examine what environmental sustainability entails. As noted by Harris (2000), the need to achieve environmental sustainability is rooted in the recognition of the fact that the benefits of development have been distributed unevenly and there have been major negative impacts of development on the environment and on the existing social structure. It is recognized that many traditional societies have been devastated by depletion of forests, disruption of water systems, and intensive fisheries while urban centers in many developing countries suffer from extreme pollution and inadequate transportation, water and sewer infrastructure.

The fear is that if the trend continues, the achieved benefits of development may be eroded. There may also be a collapse of the ecosystem while the present and future development may be jeopardized (Ademola, 2013). Out of this grievous concern, there was global effort at addressing the problem of conflicts between environment and development goals by formulating a definition of sustainable development which has to do with meeting the needs of the present without compromising the ability of future generations to meet their own needs.

As further elaborated by Harris (2000), there are three aspects of Sustainable Development – economic, environmental and social. The bottom line is that a concept of sustainable development should be concerned with finding solutions to social inequities and environmental damage and at the same time ensuring a sound economic base. Thus, according to Harris, sustainable development approach recognizes that:

1. The conservation of natural capital is essential for sustainable economic production and intergenerational equity;

2. Again from the point of view of neo-classical economic theory, sustainability has to do with maximization of human welfare which includes food, clothing, housing, transportation, health and education services, etc.;
3. From an ecological perspective, both population and total resource demand must be limited in scale and the integrity of ecosystems and diversity of species must be maintained;
4. With respect to social equity, the fulfillment of basic health and educational needs, and participatory democracy are crucial elements of development and are interrelated with environmental sustainability.

From the foregoing, it could be discerned that achieving environmental sustainability (MDG7) requires a holistic and multi - sectoral approach which must also recognize the need for wider participation in terms of policy formulation and design of projects and programmes as well as their implementation and monitoring (Ademola, 2013).

3. Social Sustainability Measures

Social variables refer to social dimensions of a community or region and could include measurements of education, equity and access to social resources, health and well-being, quality of life, and social capital. The examples listed below are a small snippet of potential variables (Helg, 2017):

1. Unemployment rate
2. Female labor force participation rate
3. Median household income
4. Relative poverty

5. Percentage of population with a post-secondary degree or certificate
6. Average commute time
7. Health-adjusted life expectancy

CSR entails giving back to the society some of the benefits and gains realized from the society. The desire of most organizations is to have a positive impact on the society where they are generating revenue. Helg (2007) stated that CSR has the potential to make positive contributions to the development of society and businesses. Onwuegbuchi (2009) maintain that "CSR is the deliberate inclusion of public interest into corporate decision making and the honouring of a triple bottom line of people, planet and profit". In other words, CSR policy entails self-regulation, adherence to rules and regulations, ethical standards, environmental responsibility and sustainability, consumers' satisfaction, employee welfare, communities and stakeholders benefits. Dabbas and Al-rawashdeh, (2012) opine that Corporate Social Responsibility was not known clearly in the first half of the twentieth century, where corporations were trying to maximize their profits by all means Alkababji (2014) states that Corporate Social Responsibility developed because of the expansion and globalization of the world economy which led to the emergence of multinational companies with economic power greater than the gross domestic product of many small or developing countries. Therefore, business activities correspondingly have a more extensive effect on society than ever before. In addition, with many developed countries recently experiencing severe financial crisis, society increasingly requires that companies take responsibility for environmental conservation, employment, safety, and local community development—areas that previously were primarily the responsibility of national governments (Alkababji, 2014).

Many of these measures are collected at the state and national levels, but are also available at the local or community level. Many are appropriate for a community to use when constructing a TBL. However, as the geographic scope and the nature of the project narrow, the set of appropriate measures can change. For local or community-based projects, the TBL measures of success are best determined locally.

2.1.8 Environmental, Social and Governance (ESG) Overview

Most of the analyses of CSR appear in corporate sustainability reports. However, relying on the individual corporate CSR report has intrinsic shortcomings, such as a biased disclosure problem due to the deficiency of the firm's revelation mechanism, viz. revealing only the firm's favorite interpretation of its CSR and its operationalization (Buys, Oberholzer, & Andrikopoulos 2011). Thus, to investigate the relationship between CSR and Financial Performance (FP) unbiased, several studies examined the relationship based on third party ratings of environmental, social and corporate governance.

Practically, the ESG disclosure score is used as one of the major indexes in the identification of CSR effort. It is used to gain an understanding of the overall CSR activities; how corporations develop CSR issues with respect to their objectives and strategies for long-term growth, how they manage risks and other organizational characteristics in terms of general management practices, and so on. Originally, ESG terminology first appeared in the United Nations Principles of Responsible Investment and then in a number of companies' CSR reports (Barnett, & Salomon, 2012). Although there is no clear understanding of this concept yet, ESG score has been practically used by major business consulting firms. Bassen and Kovacs (2008) argued that ESG score monitoring is important to implant CSR practically, as well as delivering ESG

information in order for investors to assess a corporation's risks and opportunities. Particularly, scoring indicators such as the environment activity (environmental scores and environmental factors), social responsibility (number of employees, employee turnover ratio, employee unionized, women in management, women in employees) and governance mechanisms (size of the board, independent directors, board duration, board meetings per year, women on board) is important.

Meanwhile, because ESG issues are extra-financial attributes, ESG scores could lack the consistency and standardized definitions necessary for their comparison (Peiris & Evans 2010). Even with quantified data, it is difficult to compare them with the information delivered by peers and across periods. The ESG disclosure scores used in other studies faced the problem, particularly in terms of their objectivity. As a matter of fact, there are companies which are uncooperative in providing the information necessary to assess the impact of their ESG factors on FP (financial performance) or cases where the ESG score provided by the company lacks consistency. In order to resolve these problems or minimize the ESG measurement bias, this study uses the ESG scores provided by Bloomberg, which is a third-party data collecting institution that cares very much about its own reputation for accumulating accurate data.

2.1.9 Financial Performance

There are several aspects of performance, each of which contributes to the overall performance in an organization. Despite the evolution of various available benchmarks and performance measurement, the answer to what is performance may still be hard to pin down. The banking sector aims for strong performance, but few banks worry about what constitutes such performance. The current run up of the stock market, at a time

when corporate profits are fast declining, raises the question of whether or not banks are doing satisfactory good job for their shareholders.

Hansen and Mowen (2005), state that firm performance is very essential to management as it is an outcome which has been achieved by an individual or a group of individuals in an organization related to its authority and responsibility in achieving the goal legally, not against the law, and conforming to the morale and ethic. Performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage.

The main objective of financial performance measuring is to determine the operating and financial characteristics and the efficiency and performance of economic unit management, as reflected in the financial records and reports (Amalendu, 2010). Akinsulire (2008) and Pandey (2003) point out that no performance review is beyond dispute, for instance, reported profit is a matter of opinion. If income is to be measured in terms of the increase or decrease in the wealth of an enterprise, obviously some definitions of that stock of wealth is required. Akinsulire (2008) and Pandy (2003) measures wealth in three categories; as financial capital – the equity stake in an enterprise in money terms; real financial capital, the equity stake in an enterprise in real terms (the proprietary concept); operating capacity capital, the ability of the enterprise to maintain its ability to provide goods and services (the entity concept). Wheelen, & Hunger (2001) suggest performance as the end result of activity and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated and the objectives to be achieved through that evaluation.

In addition, measuring performance is very important because it builds on the results, make different decisions in economic units. According to Benjalux (2006) performance measures are the life blood of economic units, since without them no decisions can be made. Financial performance Measure is one of the important performance measures for economic units. Financial performance measures are used as the indicators to evaluate the success of economic units in achieving stated strategies, objectives and critical success factors (Katja, 2009).

Performance measurement is therefore the process whereby an organization establishes the parameters within which programmes, investments, outputs and acquisitions are reaching the desired results (Wheelen, & Hunger 2001). They further explain that performance measurement involves ongoing data collection to determine if a program is implementing activities and achieving objectives, the ongoing monitoring and reporting of program accomplishments, particularly progress toward pre-established goals (This is typically conducted by program or agency management) and a system for assessing performance of development interventions against stated goals. From the above, it could be affirmed that performance measurement is a measure or evaluation of achievement with predetermined or expected target of an organization. It can also be looked at as the process whereby a company establishes the parameters within which achievements, programmes, investments, outputs and acquisitions are reaching the desired results.

2.1.10 Environmental Evaluation and Financial Performance

Achieving the corporate goal of eco-efficiency requires firms to evaluate the internal and external benefits and costs of their activities. Understanding the

environmental costs and benefits of processes and products can promote more accurate costing and pricing of products and can aid companies in the design of more environmentally preferable processes, products, and services for the future (US EPA, 1995). The evaluation exercise requires technical skills and equipment to formulate implement and monitor strategies, policies.

The United Nations Division for Sustainable Development (UNDSD) (2003) recommends that an accurate analysis of the investment's sensitivity to the environmental costs should be carried out. The analysis need to use appropriate time-lines and indicators that do not discriminate against long-term savings and benefits. It also needs to recognize the impact of input price changes and future changes in the regulatory regime (fees, fines, and penalties).

According to Albatayneh, (2014), governments and the private enterprises in the developing world (and certainly Nigeria) have the challenge to strengthen their industries performance and capabilities to be able to maximize their contribution made by the industrial sector to productivity and economic growth. The factory machinery in some industries in Nigeria is obsolete and dilapidated, leading to inefficient production and heavy pollution (UNEP, 2012). Serious effort has been made to revitalize the industry. New low-cost producers are entering global markets and tightening competition. Developing economies must face up to this challenge or get off the global shelves.

The realization of the above is premised on the ability by the various actors to formulate, evaluate, implement and monitor strategies, policies and programmes that can ensure attainment of international and market standards.

A profitability analysis should be done using appropriate time-lines and indicators that do not discriminate against long-term savings and benefits. An accurate analysis of the investment's sensitivity to the environmental costs should be carried out, which takes into consideration the impact of input price changes and future changes in the regulatory regime (fees, fines and penalties) (UNDSD,2003).

2.1.11 Corporate Sustainability Reporting and Financial Performance

Studies on financial performance in relation to sustainability disclosures are of two types. The first uses the event study methodology to assess the short-run financial impact (abnormal returns) when firms engage in either socially responsible or irresponsible acts. The second examines the relationship between corporate sustainability disclosures and financial performance by using accounting measures of profitability. The latter is the focus of this study. This sub-section discusses each of the three performance measures adopted for the study (Return on Assets (ROA), Return on Equity (ROE), and Return on Capital Employed (ROCE) - in relation to sustainability:

A. Return on Assets (ROA) and Sustainability

ROA gives profitability on assets of the firm after meeting all expenses and taxes. It measures the profit of the firm after tax for each dollar invested in assets (Horne & Wachowicz 2005). It is an indicator of managerial performance. When assessing a business's financial fitness, it is important to know how successful it is at turning what it already has into additional profits for owners and shareholders. The ROA formula is a straightforward calculation, and its component parts are easily located on a company's financial statements. So, higher value of this ratio means better managerial performance

(Ross, Westerfield & Jaffe 2005). ROA can be increased by increasing profit margin or asset turnover. This thesis uses the return on assets (ROA) as one of the proxies to measure financial performance. ROA is not only a standard measurement of corporate performance within corporate sustainability literature; it is also commonly used in the majority of strategy research (Barnett & Salomon, 2012). ROA is calculated as the net profit in relation to total assets. This outcome gives an idea of what the company can do with what it has, *i.e.* how many additional earnings they derive from each amount of assets they control. It gives an indication of the capital intensity of the company, which will depend on the industry; companies that require large initial investments will generally have lower return on assets. ROAs over 5% are generally considered good.

Over the years, studies have been carried out to examine the association between corporate sustainability reporting and financial performance. According to Lopez, Garcia and Rodriguez (2007), changes in management practices and disclosure should reflect in the profit and loss statement, produced by an increase in business volume, implying an increase in assets only in those companies which have adopted sustainable practices. Epps and Cereola (2008) stated that the operating performance of a business organization can be measured using Return on Asset (ROA) which shows the amount of earnings generated from the resources owned by them. According to Gozali et al (2002), results linking profitability to ethical behavior are mixed. Buys, Oberholzer and Andrikopoulos (2011) found that the economic performances of companies that voluntarily submit sustainability reports are better than those who do not support Global Reporting Initiatives (GRI) sustainability reporting guidelines. Accounting based studies appear to have a stronger positive link between sustainability reporting and financial performance

than market based ones. According to Gregory, Tharyan and Whittaker (2011), this may be due to the inefficiency of stock markets or because accounting measures do not sufficiently account for risk. A study of 60 manufacturing firms in Nigeria using Return on Total Assets (ROTA) as measure of performance showed a significant relationship between community development (CD) and performance., the result revealed a statistically significant relationship (at 5 percent level) between CD and ROA (Ngwakwe, 2009). On the contrary, Eccles et al (2012) examined the impact of corporate sustainability on organizational processes and performance using ROA as proxy for financial performance. Their outcome shows that the coefficients sustainability on ROA is insignificant, howbeit positive. This corroborates most previous arguments that engagement in sustainability may likely not lead to significant increase in financial performance.

B. Return on Equity (ROE) and Sustainability

One of the measures of financial performance includes Return on Equity (ROE). The ROE indicates the overall firm profitability or how much earnings are generated from the investment of shareholders (stockholders' money) in the equity of a business organization. Return on equity represents profitability of shareholders of the firm after meeting all expenses and taxes (Horne & Wachowicz 2005). Higher ROE means better managerial performance. But higher ROE can be due to financial leverage. So higher levered firms may have higher ROE which increases risk too (Ross, Westerfield & Jaffe 2005). Usually ROE is higher for high growth companies; ROEs of 15-20% are generally considered good.

ROE is especially used for comparing the performance of companies in the same industry or firms in similar competitive environment. Roberts and Dowling (2002) argue that companies with good corporate reputation in their communities are better able to sustain their superior outcomes over other firms because their intangible character makes replication by competing firms considerably more difficult. Adam and Zutshi (2004) suggest that firms' adoption of sustainable strategies should grant them competitive advantages over other firms where no such implementation occurs. According to marketing literature, a stronger inimitable competitive advantage enhances product innovation and introductions and sales force effectiveness, thus increasing profitability and shareholders' funds (Dowling 2001).

Previous studies such as Olayinka and Temitope (2011) empirically examined the relationship between corporate social responsibility and financial performance in Nigeria using Return on Equity (ROE) as profit performance. The result shows that CSR has a positive and significant relationship with the financial performance measure. Yahya and Ghodratollah (2014) also investigated the impact of corporate social responsibility disclosure (CSRD) on the financial performance of companies listed on the Tehran stock exchange, employing multiple-linear regression analysis. The CSRD was the independent variable as measured by economic, social and environmental while Return on Equity (ROE) and Price Earnings Ratio were used in measuring financial performance. The analysis though produced inconsistent results, suggesting that the impact of sustainability of ROE can go either way.

C. Return on Capital Employed and Sustainability

Return on capital employed (ROCE) is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed. ROCE is calculated as: ROCE = Earnings Before Interest and Tax (EBIT) / Capital Employed. "Capital Employed" as shown in the denominator is the sum of shareholders' equity and debt liabilities; it can be simplified as (Total Assets – Current Liabilities). Instead of using capital employed at an arbitrary point in time, analysts and investors often calculate ROCE based on "Average Capital Employed," which takes the average of opening and closing capital employed for the time period. A higher ROCE indicates more efficient use of capital. ROCE should be higher than the company's capital cost; otherwise it indicates that the company is not employing its capital effectively and is not generating shareholder value.

ROCE is especially useful when comparing the performance of companies in capital-intensive sectors such as utilities and telecoms. This is because unlike return on equity (ROE), which only analyzes profitability related to a company's common equity, ROCE considers debt and other liabilities as well. This provides a better indication of financial performance for companies with significant debt. Adjustments may sometimes be required to get a truer depiction of ROCE. A company may occasionally have an inordinate amount of cash on hand, but since such cash is not actively employed in the business, it may need to be subtracted from the "Capital Employed" figure to get a more accurate measure of ROCE. For a company, the ROCE trend over the years is also an important indicator of performance. In general, investors tend to favor companies with

stable and rising ROCE numbers over companies where ROCE is volatile and bounces around from one year to the next (Pandey, 2004).

Kurucz, Colbert, & Wheeler (2008) identify four categories of benefits that firms may attain from engaging in corporate social responsibility activities: (1) cost reduction; (2) competitive advantage; (3) developing reputation and legitimacy; and (4) seeking win–win outcomes. Efficient and reliable contracting with suppliers, employees, and creditors should also lead to lower contracting and monitoring costs for the sustainable firm compared to other firms, thereby increasing the return on capital employed (Roberts & Dowling 2002). Margolis, Elfenbein, & Walsh (2007) in their meta-analysis of 167 studies found evidence of a link between environmental dimension of CSR and firm performance. The result has also been confirmed in a study of the value relevance of environmental performance of eighteen environmentally sensitive firms in Nigeria (Oba, Fodio & Soje, 2012), which using logistic regression, found that there is a positive significant association between environmental and financial performance (Return on Capital Employed).

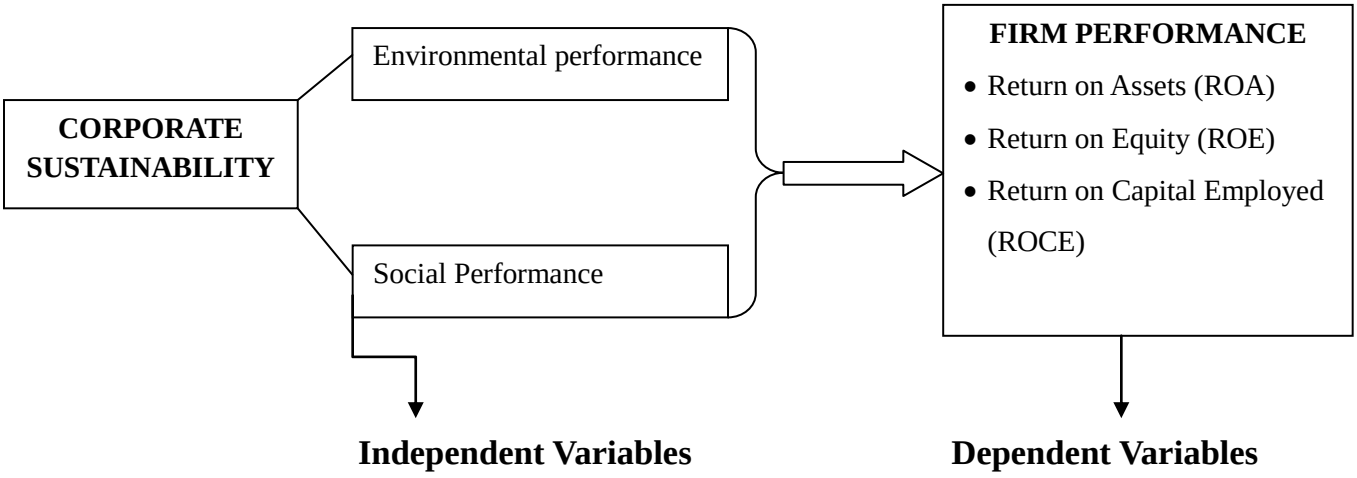


Figure 2.1: Relationship between Corporate Sustainability and Firm Performance

The conceptual framework in Fig 2.1 above depicts the schematic representation of the expected causal relations among the dependent variable (firm performance) proxied using (i) Return on Assets, (ii) Return on Equity, and (iii) Return on Capital Employed; and the independent variables (Corporate Sustainability) which consists of Environmental, and Social performance proposed for this study.

2.1.12 An Overview of the Oil and Gas Industry

The advent of the oil industry in Nigeria can be traced back to 1908, in the Araromi area, West of Nigeria when a German entity, the Nigerian Bitumen Corporation, commenced exploration activities.

Shell Darcy (Shell Petroleum Development Company) was awarded the only concessional rights covering the entire territory of Nigeria in 1937. Its activities were interrupted by World War II, but resumed in 1947. Several years later, concerted efforts led to the first commercial discovery in 1956 in Olobiri, in the current state of Bayelsa in the Niger Delta. Nigeria joined the ranks of oil producers in 1958 when the first batch of oil began to produce 5,100 barrels per day.

Nigeria , attained the status of a major oil producer, ranking 7th in the world in 1972 following the issuance of exploration rights to other multinational oil companies such as Mobil, Agip, Safrap (now Elf), Tenneco and Amoseas (Texaco and Chevron respectively) . Daily production then exceeded over 2 million barrels per day. The oil and gas companies of the country are accounts for 75 percent of government revenue (Pearson, 2005).

The industry can now be broadly classified into three arms:

a. Upstream sector which is saddled with the responsibility of exploration and production of crude oil and natural gas.

b. The downstream sector has key segments which include transmission and conveyance, refining, distribution and marketing.

c. The oil service is involved in exploration support services, drilling service, production support services, downstream services (KPMG, 2014).

The oil and gas industry can also be subdivided into Exploration & Production, Drilling/Subsurface Services, Operations and Maintenance, Construction & Installation, Engineering/Project Management,

Information & Communications Technology (ICT), Training Services/Soft Skills, HSE & Security, Quality Audit/Quality Assurance, Professional Institutions/ Organisations, Logistics, Procurement & Supply Chain, Marine Services. Local participation was boosted with the implementation of the Nigerian Content Directives issued by the Nigerian National Petroleum Corporation (NNPC) about a decade ago, and eventually, by the promulgation of the Nigerian Oil and Gas Industry Content Development (NOGIC) Act (The Act) in 2010. The Act seeks to promote the use of Nigerian companies/resources in the award of oil licenses, contracts and projects (Obara and Nangih, 2017).

According the National Bureau of Statistics (NBS) the Nigerian economy slid into recession path in first quarter (Q1) of 2016 (since 2004) with real GDP of -0.36 percent with pipeline vandalism attributed to be one of the causes.

Pipeline vandalism has been attributed to be a consequence of perceived maltreatment of host communities by oil and gas companies.

Table 2.1: Major Events in the history of the Nigerian Oil and Gas

1908	Nigerian Bitumen Co. & British Colonial Petroleum commenced operations around Okitipupa
1955	Mobil Oil Corporation started operations in Nigeria
1956	First successful well drilled at Oloibiri by Shell D'Arcy
1956	Changed name to Shell-BP Petroleum Development Company of Nigeria Limited.
1958	First shipment of oil from Nigeria.
1961	Shell's Bonny Terminal was commissioned. Texaco Overseas started operations in Nigeria.
1962	Elf started operations in Nigeria. (As Safrap) Nigeria Agip Oil Company started operations in Nigeria
1963	Elf discovered Obagi field and Ubata gas field Gulf's first production
1965	Agip found its first oil at Ebocha Phillips Oil Company started operations in Bendel State
1966	Elf started production in Rivers State with 12,000 b/d
1967	Phillips drilled its first well (Dry) at Osari –I Phillips first oil discovery at Gilli-Gilli -I
1968	Mobil Producing Nigeria Limited) was formed. Gulf's Terminal at Escravos was commissioned
1970	Mobil started production from 4 wells at Idoho Field Agip started production Department of Petroleum Resources Inspectorate started.
1971	Shell's Forcados Terminal Commissioned Mobil's terminal at Qua Iboe commissioned
1973	First Participation Agreement; Federal Government acquires 35% shares in the Oil Companies. Ashland started PSC with then NNOC (NNPC) Pan Ocean Corporation drilled its first discovery well at Ogharefe –I
1974	Second Participation Agreement, Federal Government increases equity to 55%. Elf formally changed its name from "Safrap"

	Ashland's first oil discovery at Ossu –I
1975	First Oil lifting from Brass Terminal by Agip DPR upgraded to Ministry of Petroleum Resources
1976	MPE renamed Ministry of Petroleum Resources (MPR) Pan Ocean commenced production via Shell-BP's pipeline at a rate of 10,800 b/d
1977	Government established Nigerian National Petroleum Corporation (NNPC) by Decree 33, (NNOC & MPR extinguished).
1979	Third Participation Agreement (throughout NNPC) increases equity to 60% Fourth Participation Agreement; BP's shareholding nationalised, leaving NNPC with 80% equity and Shell 20% in the joint Venture. Changed name to Shell Petroleum Development Company of Nigeria (SPDC)
1984	Agreement consolidating NNPC/Shel1 joint Venture.
1986	Signing of Memorandum of Understanding (MOU)
1989	Fifth Participation Agreement; (NNPC=60%, Shell = 30%, Elf=5%, Agip=5%).
1991	Signing of Memorandum of Understanding & joint Venture Operating Agreement (JOA)
1993	Production Sharing Contracts signed -SNEPCO Sixth Participation Agreement; (NNPC=55%, Shell=30%, Elf= 10%, Agip=5%). The coming on-stream of Elf's Odudu blend, offshore OML 100.
1995	SNEPCO starts drilling first Exploration well. NLNG's Final Investment Decision taken
1999	NLNG's First shipment of Gas out of Bonny Terminal
2000	NPDC/NAOC Service Contract signed
2001	Production of Okono offshore field.
2002	New PSCs agreement signed. Liberalisation of the downstream oil sector. NNPC commences retail outlet scheme

Source: (www.oilandgasforum.com.ng/oil-gas)

2.1.13 Global Reporting Initiative (GRI): An Overview

Global Reporting Initiative (GRI) is an international, independent, non-profit, network-based organization working in the public interest towards a vision of a sustainable global economy where organizations manage their economic, environmental, social and governance performance and impacts responsibly. It is a multi-stakeholder effort to provide a comprehensive sustainability reporting framework which can be widely used by all companies around the world (GRI, 2014a). Researchers like Finch (2005) believed that the GRI builds upon the foundations of triple bottom line to provide a framework for reporting and social accounting. The Sustainability Reporting Guidelines are the basis and spine of GRI's Framework. They promote transparent disclosure of company performance along key sustainability aspects. The GRI suggests reporting on nearly 80 sustainability activities known as "indicators," spread across six (6) different categories referred to as "dimensions." The dimensions includes: labour and decent work, economic, environment, human rights, society, and product responsibility (GRI, 2014b).

Historically, the GRI was formed in Boston by the United States-based non-profits Ceres (formerly the Coalition for Environmentally Responsible Economies) and Tellus Institute, with the support of the United Nations Environment Programme (UNEP) in 1997 (GRI, 2015a). In 2002 GRI moved its Secretariat to Amsterdam, Netherlands and was formally inaugurated as a UNEP collaborating organization in the presence of then-UN Secretary General Kofi Annan. Although the GRI is independent, it remains a collaborating centre of UNEP and works in cooperation with the United Nations Global Compact. As at 2016, at its 5th Global Conference, more than 7,500 organizations have used the GRI Guidelines for their sustainability reporting across more than 95 member

countries. More than 24,000 reports have been registered in GRI's Sustainability Disclosure Database and 73 countries reference the Guidelines in policies. Nigeria, as a member of United Nation, has impliedly adopted the UN global compact on global reporting initiative (GRI) which provided sustainability reporting guideline in 2000 to design and build acceptance of a common framework for reporting on the linked aspects of sustainability (Nnamani et al, 2017). GRI's activities are two-fold: firstly the provision of sustainability reporting guidelines and secondly, the development of engagement activities, products and partnerships to enhance the value of sustainability reporting for organizations. The GRI's Sustainability Disclosure Database was launched in 2011, cataloging all GRI-based and non-GRI-based sustainability reports of which GRI is aware.

The GRI committee released the first "exposure draft" version of the Sustainability Reporting Guidelines in 1999; the first full version of sustainability reporting guidelines was delivered in June 2000. The second version (G2) was released in 2002 at the World Summit for Sustainable Development in Johannesburg—where the organization and the Guidelines were also referred to in the Plan of Implementation signed by all attending member states. Later that year it became a permanent institution. The third version (G3) came in 2006, followed by G3.1 in 2011. The fourth generation version of its sustainability reporting guidelines: – the GRI G4 Sustainability Guidelines (the Guidelines) was launched at GRI's 2013 Global Conference held on 22nd May, 2013 (GRI, 2015b). The GRI-G4 Guidelines took more than two-and-a-half years to develop based on consultations ranging from a broad range of stakeholders, expert Working Groups and public comments. It is more user-friendly and more accessible for new

reporters. Moreover, it harmonizes with other major and significant global frameworks. The Guidelines have been operational and effective for reports published after 31 December 2015, which is about two years as it stands. This gives reporters two reporting cycles to complete their transition to G4. Earlier adoption is permitted, and first-time reporters are encouraged to use the guideline, even though they may be unable to claim compliance with them in their first reporting cycle (Aggarwal, 2013).

However, the most recent release of "GRI Standards" on 19 October 2016 has superseded the G4 Guidelines of 2013. The use of the GRI Standards will be required for all reports or other materials published on or after 1 July 2018, while the G4 Guidelines remain available and operational until this date.

The GRI Sustainability Reports are prepared on the basis of certain principles which define the contents and quality of report. These include: Materiality, Stakeholder Inclusiveness, Sustainability Context, Completeness, Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability. The standard disclosures under GRI Sustainability Reporting Guidelines include - Strategy and Analysis, Organizational Profile, Report Parameters, Governance, Stakeholder Engagement, and Management Approach and Performance Indicators, i.e. Economic, Environmental, and Social Performance Indicators. Social indicators are further divided into four categories: Labor Practices and Decent Work, Human Rights, Society, and Product Responsibility.

According to GRI (2015c), the benefits of implementing their sustainability guidelines are various. An effective sustainability reporting cycle, which includes a regular program of data collection, communication, and responses, should benefit all reporting organizations, both internally and externally. GRI points out several internal

benefits for companies like: i) increased understanding of risks and opportunities, emphasizing the link between financial and non-financial performance, ii) influencing long term management strategy and policy as well as business plans, streamlining processes, iii) reducing costs and improving efficiency, iv) benchmarking and assessing sustainability performance with respect to laws, norms, codes, performance standards, and voluntary initiatives, v) avoiding being implicated in environmental, social and governance failures; and vi) comparing performance internally as well as between organizations and sectors. Also, external benefits of sustainability reporting are important and they include: i) mitigating – or reversing – negative environmental, ii) social and governance impacts, iii) improving reputation and brand loyalty, iv) enabling external stakeholders to understand the organization's true value and tangible and intangible assets, and v) demonstrating how the organization influences, and is influenced by expectations about sustainable development. Zimara and Eidam (2015) state that transparent and detailed reports can lead to an improved reputation among stakeholders and, although the benefits are non-monetary in the short-term, sustainability reporting enables companies to expand and secure their social and human capital and provides an enhanced competitive position.

The practice of using the GRI Guidelines has encouraged companies to disclose a standalone sustainability report although a significant number of companies still publish the results of their CSR activities in an annual report. There are some arguments for an integrated report. Bouten and Hoozée (2015) point out that "the future communication of companies will certainly be characterized by the integration of their financial and non-financial (societal and environmental) strategies and the accompanying results". The

integrated report is essential for organizations to make more sustain-able decisions, and for investors and other stakeholders to understand how well a company is performing. Moreover, it generates a more complete picture of the organization within the boundaries of the materiality criteria. They conclude that in contrast to standalone sustainability reporting, integrated reporting explicitly links material issues to the organization's financial performance.

On the other hand, there are many proponents of standalone sustainability/CSR reports (Faisal et al., 2012). Also, some critique on separate reporting emerged in the literature. Although stand-alone sustainability reports can contain a wealth of information about the organization's social and environmental policies, practices, and impacts, it is difficult for its readers to systematically link these pieces of information (Bouten & Hoozée, 2015). Hence, the GRI Guidelines are now presented in two parts to facilitate the Identification of the reporting requirements and the related guidance. Part 1, *Reporting Principles and Standard Disclosures*, in addition to containing the reporting principles and standard disclosures, also sets out the criteria to be applied by an organization to prepare its sustainability report in accordance with the Guidelines. Part 2, *Implementation Manual*, contains reporting and interpretative guidance that an organization should consult when preparing its sustainability report. The Guidelines are designed to align and harmonize as much as possible with other internationally recognized standards. G4 is also intended to be compatible with a range of different reporting formats. In addition to enhancing the relevance and quality of standalone sustainability reports, G4 also offers a widely recognized global standard for sustainability information to be included in integrated reports. The GRI framework enables sustainability reporting harmonization

and comparison so it can be used as a basis for CSR performance measurement (de Villiers & Marques, 2016).

The GRI Focal Point in Africa is South Africa as it was launched in on February 26, 2013. Though based in South Africa, the focus of its outreach and engagement according to Head, Focal Point, Douglas Kativu, is the broader Southern Africa region and key priority target markets on the continent namely: Ghana, Nigeria, Kenya and Mauritius.

2.1.14 Sustainability Reporting Standards (GRI Standards)

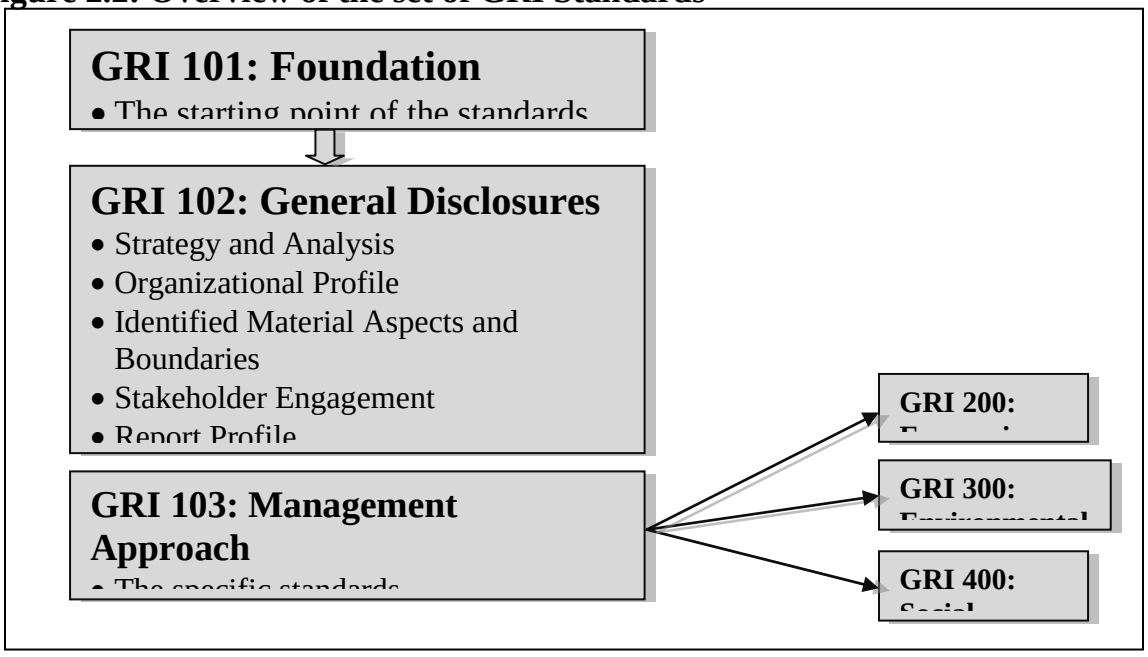
Several reporting standards exist as guidelines and frameworks for reporting sustainability. However, the Global reporting initiative (GRI) sustainability reporting standards is among the most widely accepted reporting standard for listed companies. The GRI Sustainability Reporting Standards (GRI Standards) are designed to be used by organizations to report about their impacts on the economy, the environment, and/or society. Among its mandate is to enhance the global comparability and quality of information on these impacts, thereby enabling greater transparency and accountability of organizations.

There are two different types of Standard Disclosures: i) general standard disclosures and ii) specific standard disclosures. Under the General Standard Disclosures, we have: i) Strategy and Analysis, ii) Organizational Profile, iii) Identified Material Aspects and Boundaries, iv) Stakeholder Engagement, v) Report Profile, vi) Governance, and vii) Ethics and Integrity. Under the Specific Standard Disclosures, we have: i) Disclosures on Management Approach, and ii) Indicators and Aspect-specific Disclosures on Management Approach. There are four major sub-categories under the *Specific Standard Disclosures:*

1. *Sub-Category:* Labor Practices and Decent Work (employment, labour/management relations, occupational health and safety, training and education, diversity and equal opportunity, equal remuneration for women and men, Supplier assessment for labor practices, Labor Practices Grievance Mechanisms).
2. *Sub-Category*: Human Rights (Investment, Non-discrimination, Freedom of Association and Collective Bargaining, Child Labor, Forced or Compulsory Labor, Security Practices, Indigenous Rights, Assessment, Supplier Human Rights Assessment, Human Rights Grievance Mechanisms)
3. *Sub-Category*: Society (Local Communities, Anti-corruption, Public Policy, Anti-competitive Behavior, Compliance, Supplier Assessment for Impacts on Society, Grievance Mechanisms for Impacts on Society)
4. *Sub-Category*: Product Responsibility (Customer Health and Safety, Product and Service Labeling, Marketing Communications, Customer Privacy, Compliance)

The figure below shows an overview of the new GRI Standards:

Figure 2.2: Overview of the set of GRI Standards



Source: Researcher - as drafted from GRI 103: Management Approach (2016)

As shown in figure 2.1, there are three universal Standards that apply to every organization preparing a sustainability report: GRI 101: Foundation; GRI 102: General Disclosures; and GRI 103: Management Approach.

GRI 101: Foundation is the starting point for using the GRI Standards. It has essential information on how to use and reference the Standards. It applies to any organization that wants to use the GRI Standards to report about its economic, environmental, and/or social impacts. Therefore, this Standard is applicable to: an organization that intends to prepare a sustainability report in accordance with the GRI Standards; or an organization that intends to use selected GRI Standards, or parts of their content, to report on impacts related to specific economic, social, and/or environmental topics (e.g., to report on emissions only). GRI 101 can be used by an organization of any size, type, sector, or geographic location.

GRI 102: General Disclosures set out reporting requirements on contextual information about an organization and its sustainability reporting practices. This Standard can be used by an organization of any size, type, sector or geographic location to report on contextual information about itself and its sustainability reporting practices. The guide on what to be disclose on the general disclosures are presented in more detail in Table 3.1 in the following chapter.

GRI 103: Management Approach sets out reporting requirements about the approach an organization uses to manage a material topic. This Standard can be used by an organization of any size, type, sector or geographic location. Management approach disclosures enable an organization to explain how it manages the economic, environmental and social impacts related to material topics. This provides narrative

information about how the organization identifies, analyzes, and responds to its actual and potential impacts. This Standard includes general requirements and disclosures for reporting the management approach for material topics. These are set out in the Standard as follows:

1. General requirements for reporting the management approach
2. Disclosure 103-1 Explanation of the material topic and its Boundary
3. Disclosure 103-2 The management approach and its components
4. Disclosure 103-3 Evaluation of the management approach

2.1.15 GRI (G4) Sustainability Disclosure Index

The disclosure of sustainability reporting is obtained from the annual data disclosed by listed companies. In the GRI Standard performance indicators, under disclosures on management approach, there are three (3) major categories namely; Economic, Environmental and Social. The Social category are further categorized into four (4) sub-categories namely; i) Labor Practices and Decent Work, ii) Human Rights, iii) Society; and iv) Product Responsibility. There are ninety-one (91) disclosures requirements in the entire three (3) categories put together.

The *Environmental Category* has thirty-four (34) items. The environmental dimension of sustainability concerns the organization's impact on living and non-living natural systems, including land, air, water and ecosystems. The environmental category covers impacts related to inputs (such as energy and water) and outputs (such as emissions, effluents and waste). In addition, it covers biodiversity, transport, and product and service-related impacts, as well as environmental compliance and expenditures. The *Economic Category* has nine (9) items and sub-divided into four (4) aspects: i) economic

performance, ii) market presence, iii) indirect economic impact, and iv) procurement practices. The economic dimension of sustainability concerns the organization's impacts on the economic conditions of its stakeholders, and on economic systems at local, national, and global levels. The economic category illustrates the flow of capital among different stakeholders, and the main economic impacts of the organization throughout society. The *Social Category* has forty-eight (48) items across four (4) sub categories: Labor Practices and Decent Work (16 items), Human Rights (12 items), Society (11 items), and Product Responsibility (9 items).The social dimension of sustainability basically concerns the impacts the organization has on the social systems within which it operates. Most of the content in the sub-categories are based on internationally recognized universal standards or other relevant international references.

Each of the major categories includes a disclosure of management approach and a corresponding set of core and additional performance indicators (see Table 3.2 in the next chapter). The core options contain the essential elements of a sustainability report. It also provides a background against which an organization communicates the impact of its economic, environmental, social and governance performance; and can be applied by any organization regardless of their size, sector and location. An organization should report on the core indicators unless they are deemed not material on the basis of the GRI reporting principles.

In terms of measuring the sustainability reporting disclosure in cognizance of the three major categories, the maximum core index for economic, environmental and social performance disclosures are 34, 9 and 48 respectively. Thus, if company *i* discloses any of the items in accordance with the GRI indicators in year *t*, it will be scored 1, while

companies that did not disclose will be given a score of zero (0) against the particular indicator item they did not disclose in that particular year.

Thus, Index score – n/k

Where: n = number of index fulfilled by the company

k = the maximum index ought to be fulfilled by the company

2.2 THEORETICAL FRAMEWORK

This sub-section explores the various theories that can explain the effect of corporate sustainability reporting on the financial performance of listed firms. Several theories were advanced; these include; Stakeholder theory, Resource based perspective (RBP), and The Theory of Social Costs.

2.2.1 Stakeholder Theory

The stakeholder theory is a theory of organizational management and business ethics that addresses morals and values in managing an organization. It was propounded by Edward Freeman in 1984. Stakeholders refer to those individuals, groups, or organizations that are likely to influence, or be influenced by the operations and decisions of a firm. According to Argandona (1998), the stakeholder theory upholds that firms have accountability towards a broad range of stakeholders, apart from shareholders, i.e. creditors, customers, suppliers, employees, government, community, environment, future generations, etc. King, & Lenox (2001) recognized the significance of integrated sustainability reporting in strengthening the relationship between firm and society in which it operates. Ignoring the stakeholder interests may taint firm's public image, which would unfavorably affect its financial performance. The purpose of the firm is to create

wealth or value for its stakeholders by converting their stakes into goods and services (Clarkson, et al, 2010) or to serve as a vehicle for coordinating stakeholder interests.

Stakeholder theory was first presented as managerial theory. Accordingly, the corporation ought to be managed for the benefit of its stakeholders: its customers, suppliers, owners, employees and local communities, and to maintaining the survival of the firm. The decision making structure is based on the discretion of the top management and corporate governance, and frequently it is stated such governance should incorporate stakeholder representatives. Stakeholder theory of CSR is related to the belief that corporations have an obligation to constituent groups in society other than stockholders and beyond that prescribed by law or union contact (Barnett, 2007). Thus, stakeholder theory takes into account individuals or groups with a stake in the company including shareholders, employees, customers, supplier and local community.

The power of stakeholders and their expectations can change over time, so that companies have to continually adapt their operating and reporting behaviors (Bendheim, Waddock, & Graves,1998). In summary, stakeholder theory views corporations as part of a social system while focusing on the various stakeholder groups within society. According to Gray, Javad, Power,& Sinclair (2001), stakeholders are identified by companies to ascertain which groups need to be managed in order to further the interest of the corporation. Stakeholder theory suggests that companies will manage these relationships based on different factors such as the nature of the task environment, the salience of stakeholder groups and the values of decision makers who determine the shareholder ranking process.

Buchholz & Rosenthal (2004), define the stakeholders of a company as the "individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers." A company's stakeholders are seen as those who supply critical resources, place something of value "at risk," and have sufficient power to affect its performance. The principal means of sustaining and enhancing a company's wealth-creating capacity are the linkages between the company and its stakeholders. Stakeholders have three roles: they are the sources of expectations about what constitutes desirable and undesirable company performance, defining the norms for corporate behaviour; they experience the effects of corporate behaviour; and they evaluate the outcomes of companies' behaviours in terms of how they have met expectations and have affected the groups and organizations in their environment (Wood & Jones, 1995). From a stakeholder theory perspective, CSR can be assessed in terms of a company meeting the demands of its multiple stakeholder groups, and companies must seek to satisfy their demands "as an unavoidable cost of doing business" (Donaldson & Preston, 1995).

2.2.2 The Theory of Social Costs

The theory of social costs was developed by K. William Kapp as outlined in his book " The Social Costs of Private Enterprise" (Sebastian, 2013). The focus on corporate non-economic effects on the socio-economic system is the basis for responsibility allocation. In other words, problems of modern corporate responsibility deal with the fair allocation of social costs. Moreover, the social costs literature influences indirectly attempts at measuring social performance. The terms 'social cost' point out, at a very

basic level of analysis, the same concept. Problems arise in the literature with regard to the study of 'external economies'.

This dimension assumes importance in welfare economics, as it can be social revenues or losses. The fact that we can distinguish between social and private profits or losses implies a series of problems in terms of evaluation. The issue of social costs relates to the organization originating the costs and to their coverage. Of the two, the latter produces a huge debate (Stabile, 1993). Based on the fact that the problem is of justifying state intervention in the economy and making it easier to reach a 'natural' equilibrium, this assumption has important consequences in terms of social responsibilities.

The state's role in the economic system aims to cover social costs and may be intended as the state assuming responsibilities in order to preserve the national product and citizens' welfare. Thus, its natural counterpart should be that of leaving no responsibilities to the corporation that produces the cost even if indirectly or involuntarily. This issue makes it clear that paying for social costs is a matter of contracting and that it has to be assumed by either the firm or by the state (Coase, 1960). From a different perspective, Coase (1960) tries to shift the issue to corporate production factors. The main thesis is that the costs of the transaction between citizens and government determine whether the state intervenes in the economy or not but paying for social costs is a matter of contracting.

From the two theories examined above (i.e. Stakeholders and Social Costs), the study is anchored on the stakeholders theory.

2.2.3 Relationship between Corporate Sustainability and Stakeholders Theory

According to Dibia & Onwuchukwa (2015), stakeholders include stockholders, creditors, managers, employees, customers, suppliers, local communities (communities in the vicinity of the company's operations) and the general public. The general idea of the stakeholder concept is a redefinition of the organization.

Stakeholder theory explains specific corporate actions and activities using a stakeholder-agency approach, and is concerned with how relationships with stakeholders are managed by companies in terms of the acknowledgement of the society where they operates. In general the concept is about what the organization should be and how it should be conceptualized. In the stakeholder concept, if corporate managers are there to maximize the total wealth of the organisation, they must take into account the effects of their decisions on all stakeholders. This theory is consistent with the view of corporate sustainability. Moreover, if management decisions do not take into account the interests of all stakeholders by way of practice and disclosure, the firm cannot maximise its value. Sihotang and Effendi (2010) indicate that the practice of stakeholder management will result in higher profitability, stability and growth, and will thus affect, investment and firm performance.

2.3 EMPIRICAL REVIEW

Quite numbers of studies have been carried out on sustainability practices in different countries in relation to corporate performance. This sub-sector is intended to review the existing previous empirical studies related to this study of discuss.

2.3.1 Studies outside Nigeria

Amacha and Dastane (2017) examined the relationship between sustainability practices and firm performance in the Malaysian Oil and Gas sector. Their specific objectives were to conduct a data analysis to understand the relationship between environmental, social and governance performance and financial performance which was measured using EBIT, EPS and PE ratio. Secondary data sources as sourced from a sample size of 21 oil and gas firms from 2011 – 2013. With the aid of a multiple regression model run via SPSS 21, there result shows that the majority of oil and gas companies in Malaysia had poor performance in terms of sustainability disclosure. On all three chosen profitability parameters (EBIT, EPS and PE ratio), the companies that practiced sustainability performed better than their counterparts that did not. Thus they conclude that a strong and significant relationship exists between sustainability practices and better financial performance.

Nobanee and Ellili (2017) investigated the impact of economic, environmental, and social sustainability reporting on financial performance of UAE Banks in Abu Dhabi Securities Exchange and the Dubai financial market during the period 2003-2013. The study employed three sustainability disclosure dimensions including i) economic, ii) environmental and iii) social dimensions against banking performance which they measured using ROE. Employing a panel data analysis technique, their results reveal that sustainability disclosures as well as economic, environmental and social disclosures have no significant effects on the banking performance of UAE banks, whether they are conventional or Islamic banks.

Karlsson (2015) analyzed the relationship between corporate sustainability performance and financial performance in Sweden. It also looked at the mediating effect of board diversity on the relationship between sustainability and firm performance. The study adopted a deductive approach using a multivariate regression method of analysis. The sample cumulatively amounted to 1,015 observations in a five-year period (2009-2013). His findings showed an incomplete positive relationship between corporate sustainability and financial performance as there are indications that the positive relationship is only true for low and moderate sustainability performers, and not for high sustainability performers. On the mediating effect of board diversity, he found that only educational board diversity have an impact on the relationship between sustainability and firm profitability.

Albatayneh (2014) explored the effect of corporate sustainability performance on the relationship between corporate efficiency strategy and corporate financial performance in Jordan. He measured corporate sustainability performance through two dimensions, namely corporate social performance and corporate environmental performance, while corporate financial performance was proxied based on ROI (return on investment), ROA (return on asset), sales growth and profit growth. The study sourced for data by means of a mail survey sent directly to company managers involved in social and environmental performance. The questionnaires were sent to 232 service and industry companies listed on the Amman Stock Exchange in 2011, and 101 or 43.5 percent of them responded. The study used the linear and multiple regressions of analysis of the data obtained. From his results, corporate sustainability performance was found to be partially mediating the relationship between efficiency strategy and the financial performance

model meaning that sustainability practices can be used to gauge and predict performance.

Yahya and Ghodratollah (2014) investigated the impact of corporate social responsibility disclosure (CSRD) on the financial performance of companies listed on the Tehran stock exchange, employing multiple-linear regression analysis. The CSRD was the independent variable as measured by economic, social and environmental while Return on Assets, Return on Equity and Price Earnings Ratio were used in measuring financial performance. The analysis produces inconsistent results.

Kipruto (2014) studied the effect of corporate social responsibility on financial performance of commercial banks in Kenya. Financial performance was measured by use of net profits before taxes obtained from audited statements of comprehensive income. For uniformity purposes, net profits before taxes was chosen since some commercial banks had treated expenses on CSR as tax exempt while others had not. Investments were measured by considering loans to customers (except to other banks and corporations), investment in treasury bonds and government securities, investment in shares for trading purposes and investment in subsidiaries. Investment in CSR was measured using monetary spending on social activities. Data were obtained from commercial banks audited financial statements, websites, publications and annual reports. Commercial institutions that did not participate in CSR activities or that had not kept data pertaining to CSR were excluded. Secondary data from the year 2009 to 2013 was used for analysis. Using descriptive research design, the study tested for linear relationship between financial performance and corporate social responsibility. The study used multiple regression analysis and the five years secondary data to analyze the effect of corporate

social involvement on financial performance. Financial performance was the dependent variable while corporate social responsibility and investments were the independent variables in the multi linear regression. The study revealed that not all commercial banks report their CSR involvement. Out of the 44 commercial banks studied, only eight provided the necessary and complete data that was appropriate for the study. The study findings were that expenses on social course have an effect on financial performance of commercial banks in Kenya.

Aggarwal (2013) examined impact of sustainability rating of company on its financial performance in an Indian context using secondary data. The study also separately analyzes impact of four key components of sustainability (i.e. Community, Employees, Environment and Governance) on financial performance. They find no significant association between overall sustainability rating and financial performance. However, further analysis reveals that four components of sustainability have significant but varying impact on financial performance.

Ameer and Othman (2012) conducted an empirical study on the influence of sustainability practices on corporate financial performance of top global corporations in Malaysia. They proxied performance using sales/revenue growth, ROA, profit before tax and cash flows from operations. Using a quantitative and qualitative research design methods on a target population consisting of top 100 sustainable global companies in 2008 as selected from a universe of 3,000 firms from the developed countries and emerging markets; they find significant higher mean sales growth, return on assets, profit before taxation, and cash flows from operations in some activity sectors of the sample companies compared to the control companies over the period of 2006–2010. Their

findings also show that the higher financial performance of sustainable companies has increased and been sustained over the sample.

Isabel, Manuel, Jose, Teresa (2012) provided empirical evidence on how corporate sustainability performance (CSP), as proxied by membership of the Dow Jones Sustainability Index, is reflected in the market value of equity. Using a theoretical framework combining stakeholder theory and resource-based perspectives, they develop a set of hypotheses that relate the market value of equity to CSP. For a sample of North American firms, their preliminary results show that CSP has significant explanatory power for stock prices over the traditional summary accounting measures such as earnings and book value of equity. Their findings suggest that what investors really do is to undervalue large profitable firms with low level of CSP. Firms with incentives to develop a high level of CSP not engaging on such strategy are, thus, penalized by the market.

In a study of Cortez & Cudia (2011), they explored the impact of environmental innovations on financial performance of Japanese electronics companies following the growing literature linking corporate social performance with profitability. Using sample electronics companies listed in the Tokyo Stock Exchange, this industry study focuses on the global manufacturing leaders as they play a significant role in advancing environmental reporting due to their supplier networks and subsidiaries. Their findings point to risk minimization efforts of electronics companies in spite of declining profitability.

Cheung (2011) analyzed the impacts (measured in terms of stock returns, risks and liquidity) of index inclusions and exclusions on corporate sustainable firms by studying a

sample of US stocks that are added to or deleted from the Dow Jones Sustainability World Index over the period 2002–2008. Findings suggest that US investors do value CS, but in a temporary way.

Wagner (2010) analysed the link between CSP and economic performance. He uses the KLD ratings as a CSP proxy and the Tobin's q was chosen as the variable measuring economic performance. Findings suggest a positive association of CSP with economic performance, as measured by Tobin's q, and that advertising intensity moderates the association of CSP and economic performance.

Surroca, Tribo, & Waddock, (2010) used an international database provided by Sustainalytics Responsible Investment and analyzed 599 companies from 28 countries. Their results indicate that there is no direct relationship between CS and financial performance, rather an indirect relationship that relies on the mediating effect of a firm's intangible resources.

Consolandi, Jaiswal-Dale, Poggiani, & Vercelli, (2009) examined whether inclusion in, or deletion from, the Dow Jones Sustainability Stoxx Index (DJSSI), an index for European corporations, results in a stock market reaction. Their results, which namely show positive (negative) excess returns for companies included in (deleted from) the DJSSI over the period considered, suggest that the evaluation of the CSR performance of a firm is a significant criterion for asset allocation activities.

Lo and Sheu (2007) examined whether corporate sustainability has an impact on market value using large US non-financial firms from 1999 to 2002. They used listing in the DJSGI USA as the proxy for corporate sustainability and the Tobin's q as the proxy

for firm value. Their key finding is that sustainable firms are rewarded with higher valuations in the market place.

Van Dijken (2007) analyzed performance of 90 shares of the US Dow Jones Sustainability Index by comparing their return with the relevant indexes, with the respective industry and on a risk-adjusted basis, for the six years and the ten years ended 30 June 2006. She found that stocks from companies with high CSP outperformed the market and their peers over extensive periods of time, with reasonably low risk.

Another study by Bansal (2005) focused on 45 firms in Canadian oil and gas, mining, and forest industries from 1986 to 1995; found ROE to be negatively correlated to sustainable corporate development. This new research finding was not consistent with that of other studies (e.g., Klassen & McLaughlin, 1996; Russo & Fouts, 1997; Waddock and Graves, 1997) that established a positive relationship between environmental and firm performance. However, the result of the study underscores the lack of attention to the composite nature of other resource-based factors as well as deficiency of a single measure of corporate performance.

On the study Mehenna and Vernon (2004) on environmental accounting: an essential component of business strategy. The paper examining the integration of environmental policy with business policy is the focus of this research. The paper found that the business firm's strategy includes responding to capital and operating costs of pollution control equipment. This is caused by increasing public concerns over environmental issues, and by a recent government-led trend to incentive-based regulation.

Mohammad, Sutrisno, Prihat and Rosidi (2013) examined stakeholder theory and legitimacy as well as eco-efficient related to effect of environmental accounting

implementation and environmental performance and environmental disclosure as mediation on company value. Samples are 59 companies that selected with purposive sampling technique. Analysis technique used is the Partial Least Square (PLS). Research results indicate that environmental accounting implementation is able to affect on company value, environmental information disclosure and on environmental information disclosure. However, environmental accounting implementation has not been able to affect on company value through environmental information disclosure, as well as environmental performance has not been able to affect company value through environmental information disclosure.

Schneider, Ghettas, Merdaci, Brown, Martyniuk, Alshehri, & Trojan (2013) evaluated the maturity of environmental, health and safety (EHS) efforts and progress toward sustainability in the oil and gas sector. Ten major oil companies have been analyzed based on public information including their published annual reports. Companies refer to voluntary initiatives when reporting their performance yet the assessment suggests that the sector overall continues to make progress and is maturing in its sustainability efforts. Many management system gaps were found that leave companies within this sector far from sustainable production and from being leaders in EHS Management. Most companies are still using lagging metrics and this is reflected in the activities implemented by companies. The sector's EHS management status is found to be in the high middle/medium level of maturity but with significant gaps in performance. This means that the sector has made progress from simply embracing sustainability towards a commitment to addressing sustainability issues, but still has

progress to make particularly in compliance with the Clean Air Act, spill and process management.

Juhmani (2014) studied Corporate Social and Environmental Disclosure on Website. This study was centered on examining and information disclosure of companies and website. The study made use of historical research design and secondary data was used. The findings shows that 57.57% of the samples listed companies provided social and environmental information in their 2012 annual reports and their websites. Commercial banks and insurance companies made most disclosure of social and environmental accounting, while companies in the hotels and tourism sectors and industrial sector made the least disclosure.

Bewley and Li (2000) examined factors associated with the environmental disclosures in Canada from a voluntary disclosure theory perspective. The authors measure environmental disclosures by 188 Canadian manufacturing firms in their 1993 annual reports using the Wiseman index. A firm's pollution propensity (i.e., environmental performance) is proxied by their industry membership and by whether they report to the Ministry of Environment under the National Pollution Release Inventory program. The study finds that firms with more news media coverage of their environmental exposure, higher pollution propensity, and more political exposure are more likely to disclose general environmental information, suggesting a negative association between environmental disclosures and environmental performance.

Belal (2001) surveyed CSR disclosure practices in Bangladesh. Imam found that the level of such disclosures was very poor and inadequate. Belal examined the annual reports of 30 companies listed on the Dhaka Stock Exchange. He found that though 97 percent of

companies made some form of CSR disclosure, the volume disclosed was very low. The disclosures were largely descriptive in nature, and emphasized 'good news'. Only one instance of 'bad news' disclosure was found.

Brian (2012) used a normalized sustainability scoring system to examine the effects of sustainability reporting on firm value. In particular, this paper analyzes these effects during the Great Recession to note if there was any change in the effects on a year-by-year basis due to macroeconomic differences. This study finds that not only is superior corporate sustainability reporting positively correlated with increased firm value, but also that the degree of the impact greatly drops during the recession. These findings suggest that sustainability could be an advantageous business tool during stable economic times but not nearly as important in terms of increasing firm value during times of recession. Therefore, the results of this thesis have important practical uses and serve as a basis for analyzing the financial effects of corporate sustainability initiatives as this type of reporting becomes more prevalent in the future.

Lars, Henrik, & Siv (2005) investigated the effect of environmental information on the market value of listed companies in Sweden using a residual income valuation model. The results show that environmental responsibility as disclosed by sampled companies has value relevance, since it is expected to affect the future earnings of the listed companies. Their finding has implications for companies that pollute the environment – their future solvency may be eroded with gradual depletion in earnings.

Seetharaman, Mohamed and Saravanan (2007) reviewed the relationship of environmental accounting and environmental management system in order to determine the sustainability of organization. It also identified the lack of awareness and interest by

organization about environmental preservation distinguish the context for environmental management needs in developing and newly industrialized countries compared to western countries. However, the growing awareness and pressure by community, customer, and stakeholders has forced the organization to accept the introduction of environmental protection measures into their organization. The paper, also discusses number of pollution prevention strategies. It concludes with an emphasis on the use of environmental accounting for continuous improvement in environmental corporate policies and programs by taking into account the regulatory, technical developments, scientific developments, and it must be fully integrated into EMS along with other functional area.

2.3.2 Studies within Nigeria

Nnamani, Onyekwelu, & Ugwu (2017) evaluated the effect of sustainability accounting and reporting on financial performance (ROA) of listed manufacturing firms in Nigeria. They used secondary data sourced from the financial statements of three Nigerian brewery companies from 2010 – 2014. The study adopted the ex post –facto research design and used the ordinary linear regression for analysis. The result showed that sustainability reporting has positive and significant effect on financial performance of sampled firms.

Nwobu (2015) examined the relationship between corporate sustainability reporting and profitability and shareholders fund in Nigerian Banks. The study sampled the annual reports of eight (8) banks in Nigeria for the presence or absence of sustainability reporting. The study adopted a content analysis methodology. The

independent variables were proxied using Profit after Tax (PAT) and Shareholders Fund (SHF). Using a Pearson movement correlation matrix, the results of this study indicated that a small (weak) positive correlation (r=0.28) between sustainability reporting index and Profit after Tax (PAT). The study also found a small (weak) positive correlation (r=0.18) between sustainability reporting index and shareholders fund.

Enahoro (2009) assessed the level of independence of tracking of costs impacting on the environment; level of efficiency and appropriateness of environmental costs and disclosure reporting. The research instruments utilized in the study were primary data survey and secondary data elucidation. For this purpose, cross-sectional and longitudinal content analyses were carried out. The test statistics applied in the study were the t-test statistics, Pearson Product-Moment correlation tests, ANOVA, and Multivariate Linear Regression Analysis. The study investigated best practice of environmental accounting among companies currently operating in Nigeria. Findings are that environmental operating expenditures are not charged independently of other expenditures. There is also, absence of costing system for tracking of externality costs. Environmental accounting disclosure does not however, take the same pattern among listed companies in Nigeria.

Ezejiofor, John-Akamelu, and Chigbo (2016) assess the effect of sustainability accounting measure on the performance of corporate organizations in Nigeria. Ex post facto research design and time series data were adopted. Data for study was collected from annual reports and accounts of the company in Nigeria. Formulated hypotheses were tested using Regression Analysis with aid of SPSS Version 20.0. Based on the analysis, the study found that environmental cost does not impact positively on revenue

of corporate organizations in Nigeria, also that environmental cost impacted positively on profit generation of corporate organizations in Nigeria.

Ajayi and Ovwarhe (2016) examined how Nigeria LNG uses CSR as a key strategy in creating an enabling environment that fosters support from all her stake holders which has led to good performance and growth of the company. This paper brought out CSR initiatives taken by NLNG in Nigeria that made her stands out as role model with regards to CSR in Nigeria. An exploratory research design was chosen in order to develop a profound understanding of the research topic and to obtain in-depth data about the research objectives. All main elements of the research paper, comprising theory, findings and analysis were incorporated in a cohesive and expository manner and structured in order to address and evaluate the central research objectives and hypotheses appropriately. The study conclude that the Corporate Social Responsibility of the Nigeria Liquefied Natural Gas has significant impact on the Nigerian Economy and employee organizational commitment and performance.

Owolabi, Akinwunmi, Adetula & Uwuigbe (2016) examined the extent of sustainability reporting practiced by Lafarge Africa Plc. Content analysis was used to analyze the data extracted from their annual reports and the Global Reporting Initiative (GRI) G4 sustainability reporting guideline was used as a basis of assessment. The study found no disclosures on human rights issues, 3% environmental disclosures and an aggregate of 30% disclosure based on one hundred and sixty-nine indicators used.

Nze, Okoh & Ojeogwu (2016) examined the effect of corporate social responsibility on earnings of quoted firms in Nigeria. Data for the study were secondary and were sourced from firms' financial statements and the fact book of Nigerian Stock

Exchange. The two firms studied were chosen from the oil and gas industry in Nigeria using the simple random sampling technique. The study covered a ten year period. Data were analyzed using the ordinary regression analysis. The results show that CSR has a positive and significant effect on earnings of firms studied.

Kwanghfan (2015) examined the impact of sustainability reporting on corporate performance of selected quoted companies in Nigeria. The specific objectives were to ascertain how sustainability reporting affects ROE, ROA, EPS, and NPM. Using the ex-post facto design, the study sampled a total of 64 companies selected from a population of 76 non-financial companies quoted on the Nigerian Stock Exchange from 2002 to 2012. Using a multiple regression model analysis, the study finds that sustainability reporting impacted positively on all financial performance measures investigated.

Dibia and Onwuchekwa (2015) empirical analyzed of the determinants of environmental disclosures using oil and gas companies in Nigeria. Specifically, the study objectives are to examine the effect of Firm size, Profit, Leverage and Audit firm type on environmental disclosures. The cross-sectional research design was utilized in undertaking the study. A sample of 15 companies drawn from the oil and gas sectors of the Nigerian stock exchange for 2008-2013 financial years was used for the study. Secondary data was sourced from the annual reports of the sampled companies while the Binary regression technique was used as the data analysis method. The finding of the study shows that firstly; there is a significant relationship between company size and corporate social responsibility disclosures. Secondly there is no significant relationship between Profit and corporate social responsibility disclosures. Thirdly, there is no significant relationship between Leverage and corporate social responsibility disclosures.

Finally, there is no significant relationship between audit firm type and corporate social responsibility disclosures.

Olanyinka & Oluwamayowa (2014) carried out a research on Corporate Environmental Disclosure and market value of Quoted Companies in Nigeria. The broad objective of this study was focused at ascertaining the aggregate and individual impact of Corporate Environmental Disclosure were regressed on market value. Descriptive research design was adopted and secondary data only was used. A sample size of fifty firms quoted in Nigeria Stock Exchange (NSE) was purposively selected for analysis based on the availability of environmental disclosures in their annual reports. The hypothesis was tested using correlation coefficient. The findings review that the inclusion of environmental disclosure will enhance market value. The study recommends that business should take caution in areas where environmental activities impacts negatively on the value of the firm and also invest in areas that enhance value for the firm.

Onyekwelu & Uche (2014) carried out a research on Corporate Social Accounting and Enhancement of Information Disclosure among Firms in Nigeria. The broad object of this study was aimed at ascertaining if the inclusion of social accounting information in the financial statements will significantly enhance information disclosure. They adopted survey research design; primary and secondary data were used. A sample size of 108 was drawn from a total population of 148 using Taro Yamane formula. The research hypothesis was tested using chi square(X2). Finding reviews the inclusion and separate presentation of social costs incurred by organizations in the financial statements will enhance information disclosure in the statement.

Onyekwelu and Ekwe (2015) examined whether corporate social responsibility predicate good financial performance using the banking sector in Nigeria. The study adopted the ex-post facto as it made use of historical research design and secondary data used. Analysis was done using the Ordinary Least Square Regression. The findings shows that the amount committed to social responsibility vary from one bank to the other. The data further revealed that the sample banks invested less than ten percent of their annual profit to social responsibility. The researchers recommended that companies. Nigeria particularly profitable one should give greater priority to Corporate Social Responsibility because this has the tendency to assist them to survive and maintain their profitability and also diffuse the tensions and hostilities usually experienced by companies in their localities.

Ekwueme, Egbunike and Onyali (2013) examined the connection between such reporting practices and corporate performance from a stakeholder perspective. The study used a sample of 141 respondents, comprising 21 corporate managers; 55 corporate employees and 65 consumers and investors. Four hypotheses were formulated and tested in the study. In addition to descriptive statistics, Kolmogorov-Smirnov (K-S), One Sample t-test and Multiple Regression Technique (MRT) were used in analyzing the primary data. The results of the data analysis showed a positive connection between sustainability reporting and corporate performance. Both consumers and investors were inclined to product purchase of green corporations.

In a study by Okoye and Ezejiofor (2013), their paper assesses the sustainability environmental accounting in enhancing corporate performance and economic growth. This study reviewed various forms including journal papers, articles and other relevant

materials. This paper analyzed and tested two hypotheses with Pearson Product Movement Correlation Co-efficient. The study discovered that sustainable environmental accounting has significant impact on corporate productivity in order to enhance corporate growth.

Bassey, Oba and Onyah (2013) critically analyzed the extent of implementation of environmental cost management and its impact on output of oil and gas companies in Nigeria from 2001 to 2010. The paper was aimed at ascertaining the extent to which implantation of environment cost management has impacted on the oil and gas industries in Nigeria. The study used multiple regression analytical technique. Findings revealed that there is a significant relationship between the parameters that influence environmental cost management and output of oil and gas produced in Nigeria. Also, it was discovered that there are no established standards in Nigeria guiding environmental cost management in the oil and gas industries in Nigeria.

Beredugo and Mefor (2012) evaluated the relationship between environmental accounting and reporting and sustainable development in Nigeria. Pearson correlation coefficient and OLS were used for data analyses, and was discovered that there is a significant relationship between environmental accounting and reporting and sustainable development; that with environmental accounting encourage organizations to track their greenhouse gas (GHG) emissions and other environmental data against reduction targets, and there are consequences for noncompliance with environmental accounting and reporting.

In another paper by Lee, Pati and Roh (2011) on the relationship between corporate sustainability performance and tangible business performance: evidence from Oil and Gas industry. Hierarchy regression analysis was utilized to study the relationship between a firm's business performance with respect to various dimensions of accounting and marketing based performance as well as the sustained growth rate. Although the focus of this study was on the significant relationships between the CSP measured in terms of PSI and TBP, it also explored how other business strategic factors, such as firm size, manufacturing cost efficiency, capital intensity, debt leverage and labor productivity are linked to the firm's economic performance. The study concludes that PSI and Research and Development (R&D) Intensity are major determinants of business performance in the Oil and Gas Industries across countries.

Kasum and Osemene (2010) assessed the Sustainable Development and Financial Performance of Nigerian Quoted Companies. The study was against the background that sustainable development practices usually involve financial outflows and hence, may be an unattractive investment to managers. They evaluated the impact of corporate compliance to accounting standards that are deemed to enforce sustainable development practices and can, therefore, imply sustainable development practices by companies, on the result of operations of companies. The study discovered that sustainable development practice of companies is rarely associated with financial performance over the years studied.

Okafor (2018) ascertaining the effect of environmental costs on firm performance. To achieve this objective, the study made use of financial reports of Oil and Gas

Companies quoted in the Nigerian Stock Exchange Market from years 2006-2015. Regression analysis was employed with the aid of Statistical Package for Social Sciences (SPSS). The results of the statistical analysis indicate that better environmental performance positively impact business value of an organization. Moreover, environmental accounting provides the organization an opportunity to reduce environmental and social costs and improve their performance.

Ijeoma (2015) determined the role of environmental cost accounting towards environmental sustainability in Nigeria. The source of data for this study is primary source of data collection with the aid of questionnaire. The research instrument was randomly administered to 200 respondents from organizations in Nigeria: Agricultural/Agro-Allied, Breweries, Chemical and Paints, Health Care/Pharmaceutical and Oil Marketing companies. The findings of the study revealed that majority of the respondents agreed that business organizations in Nigeria have not being aware of environmental policies. It was also found that that there exists no significant difference on business organizations in Nigeria not being aware of environmental policies.

Onyali, Okafor and Onodi (2015) examined the effectiveness of triple bottom line disclosure practice of corporate firms in Nigeria by focusing on the perspective of corporate stakeholders. In achieving the above objective, three research questions were raised and two hypotheses were also formulated. The descriptive method of research design was employed to generate the required data. The population of the study was made up of three distinctive groups: Investors, Customers/Consumers and Accountants.

The primary data were summarized using tables and the formulated hypotheses were analyzed using one-sample z test procedure done with the aid of SPSS version 22. Our findings indicated that investors and consumers expressed dissatisfaction with the extent of firms TBL disclosure practice in Nigeria. In their own view, most Organizations' reports were often vague and far from the expression of actual performance. Also, Accountants' were negative on the level of rigour and transparency exerted in the preparation of triple bottom line report by corporate firms in Nigeria.

Onyali, Okafor and Egolum (2014) assessed the extent, nature and quality of environmental information disclosure practices of manufacturing firms in Nigeria. Content analysis was adopted in analyzing the annual report of the selected firms with regards to their environmental disclosure practices. Furthermore, a survey was carried out in order to ascertain whether the environmental disclosure practices of firms in Nigeria have improved. This was done with the aid of questionnaire administered to 40 Chartered accountants. The study adopted one sample t-test in testing the formulated hypothesis. The findings of the study indicated that the environmental disclosure practices of firms in Nigeria is still ad hoc and contains little or no quantifiable data.

2.3.3 (Table 2.2): SUMMARY OF EMPIRICAL REVIEW

s/n	Author (s)	Objective	Country	Methodology	Major findings
1	Bewley and Li (2000)	Examine factors associated with the environmental disclosures in Canada from a voluntary disclosure theory perspective.	Canada	Measure environmental disclosures by 188 Canadian manufacturing firms in their 1993 annual reports using the Wiseman index.	The study finds that firms with more news media coverage of their environmental exposure, higher pollution propensity, and more political exposure are more likely to disclose general environmental information.
2	Belal (2001)	examined the annual reports of 30 companies listed on the Dhaka Stock Exchange	Dhaka	Surveyed CSR disclosure practices in Bangladesh.	He found that though 97 percent of companies made some form of CSR disclosure, Imam found that the level of such disclosures was very poor and inadequate.
3	Mehenna & Vernon (2004)	He examined the integration of environmental policy with business policy.	US	They used sample of 670 Companies in 3 sectors.	They found that the business firm's strategy includes responding to capital and operating costs of pollution control equipment.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
4	Bansal, (2005)	Examined the relationship between Return on Equity (ROE) and sustainable corporate development.	Canadian	He used 45 firms in Canadian oil and gas, mining, and forest industries from 1986 to 1995	He found ROE to be negatively correlated to sustainable corporate development.
5	Lars, Henrik, & Siv (2005)	Investigated the effect of environmental information on the market value of listed companies in Sweden using a residual income valuation model.	Sweden	The results show that environmental responsibility as disclosed by sampled companies has value relevance, since it is expected to affect the future earnings of the listed companies.	Their finding has implications for companies that pollute the environment – their future solvency may be eroded with gradual depletion in earnings.
6	Lo, & Sheu (2007)	examine whether corporate sustainability has an impact on market value	US	They used large US non-financial firms from 1999 to 2002.	Their key finding is that sustainable firms are rewarded with higher valuations in the market place.
7	Seetharaman, Mohamed & Saravanan (2007)	Review the relationship of environmental accounting and environmental management system in order to determine the sustainability of organization.	Western Countries	Content analysis	It concludes with an emphasis on the use of environmental accounting for continuous improvement in environmental corporate policies and programs by taking into account the regulatory, technical developments, scientific developments, and it must be fully integrated into EMS along with other functional area.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
8	Van Dijken (2007)	analyzed performance of 90 shares of the US Dow Jones Sustainability Index.	US	He compared their return with the relevant indexes, with the respective industry and on a risk-adjusted basis, for the six years and the ten years ended 30 June 2006.	She found that stocks from companies with high CSP outperformed the market and their peers over extensive periods of time, with reasonably low risk.
9	Consolandi, Jaiswal-Dale, Poggiani, & Vercelli (2009)	examine whether inclusion in, or deletion from, the Dow Jones Sustainability Stoxx Index (DJSSI) results in a stock market reaction.	European Corporations	Used sample of 450 companies	Their result suggest that the evaluation of the CSR performance of a firm is a significant criterion for asset allocation activities.
10	Enahoro (2009)	Assessed the level of independence of tracking of costs impacting on the environment; level of efficiency and appropriateness of environmental costs and disclosure reporting.	Nigeria	T-test statistics, Pearson Product-Moment correlation tests, ANOVA, and Multivariate Linear Regression Analysis. Were used.	Findings are that environmental operating expenditures are not charged independently of other expenditures.
11	Kasum and Osemene (2010)	Assess the Sustainable Development and Financial Performance of Nigerian Quoted Companies.	Nigeria	Regression analysis	The study was against the background that sustainable development practices usually involve financial outflows and hence, may be an unattractive investment to managers.
12	Surroca, Tribo, & Waddock (2010)	Examined the relationship between Corporate Sustainability and Financial performance	Western countries	used an international database provided by Sustainalytics Responsible Investment and analyzed 599 companies from 28 countries	Their results indicate that there is no direct relationship between CS and financial performance

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
13	Wagner (2010)	analyses the link between CSP and economic performance		Uses the KLD ratings as a CSP proxy and the Tobin's q was chosen as the variable measuring economic performance	Findings suggest a positive association of CSP with economic performance, as measured by Tobin's q, and that advertising intensity moderates the association of CSP and economic performance.
14	Cheung (2011)	analyzes the impacts (measured in terms of stock returns, risks and liquidity) of index inclusions and exclusions on corporate sustainable firms	Us	Studying a sample of US stocks that are added to or deleted from the Dow Jones Sustainability World Index over the period 2002–2008.	Findings suggest that US investors do value CS, but in a temporary way.
15	Cortez, & Cudia (2011)	they explore the impact of environmental innovations on financial performance of Japanese electronics companies	Japanese	Using sample electronics companies listed in the Tokyo Stock Exchange, this industry study focuses on the global manufacturing leaders	Their findings point to risk minimization efforts of electronics companies in spite of declining profitability.
16	Lee, Pati, & Roh (2011)	They examined the relationship between corporate sustainability performance and Tangible business performance.	Nigeria	Hierarchy regression analysis was utilized to study the relationship between a firm's business performance with respect to various dimensions of accounting and marketing based performance.	The study concludes that PSI and Research and Development (R&D) Intensity are major determinants of business performance in the Oil and Gas Industries across countries.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
17	Ameer and Othman (2012)	conducted an empirical study on the influence of sustainability practices on corporate financial performance of top global corporations in Malaysia	Malaysia	They proxied performance using sales/revenue growth, ROA, profit before tax and cash flows from operations. Using a on a target population consisting of top 100 sustainable global companies in 2008	Their findings show that the higher financial performance of sustainable companies has increased
18	Beredugo and Mefor (2012)	Evaluated the relationship between environmental accounting and reporting and sustainable development in Nigeria.	Nigeria	Pearson correlation coefficient and OLS were used for data analyses,	Was discovered that there is a significant relationship between environmental accounting and reporting and sustainable development.
19	Brian (2012)	Examined the effects of sustainability reporting on firm value.	Western Europe	Used normalised sustainability scoring system.	The study finds out that not only is superior corporate sustainability reporting positively correlated with increased firm value, but also that the degree of the impact greatly drops during the recession
20	Isabel, Manuel, Jose, & Teresa (2012)	Provides empirical evidence on how corporate sustainability performance (CSP), as proxied by membership of the Dow Jones Sustainability Index.	North American	Accounting measures such as earnings and book value of equity. For a sample of North American firms.	Their findings suggest that what investors really do is to undervalue large profitable firms with low level of CSP.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
21	Aggarwal (2013)	Examine impact of sustainability rating of company on its financial performance in an Indian context using secondary data.	Indian	The study also separately analyzes impact of four key components of sustainability (i.e. Community, Employees, Environment and Governance) on financial performance. Regression analysis	They find no significant association between overall sustainability rating and financial performance. However, further analysis reveals that four components of sustainability have significant but varying impact on financial performance
22	Bassey, Oba and Onyah (2013)	Critically analyze the extent of implementation of environmental cost management and its impact on output of oil and gas companies in Nigeria from 2001 to 2010.	Nigeria	The study used multiple regression analytical technique.	Findings revealed that there is a significant relationship between the parameters that influence environmental cost management and output of oil and gas produced in Nigeria
23	Ekwueme, Egbunike and Onyali (2013)	examines the connection between such reporting practices and corporate performance from a stakeholder perspective.	Nigeria	Using a sample of 141 respondents, comprising 21 corporate managers; 55 corporate employees and 65 consumers and investors. Kolmogorov-Smirnov (K-S), One Sample t-test and Multiple Regression Technique (MRT) were used in analyzing the primary data	. The results of the data analysis showed a positive connection between sustainability reporting and corporate performance.
24	Okoye and Ezejiofor (2013)	Assesses the sustainability environmental accounting in enhancing corporate performance and economic growth.	Nigeria	Analyzed and tested two hypotheses with Pearson Product Movement Correlation Co-efficient.	The study discovered that sustainable environmental accounting has significant impact on corporate productivity in order to enhance corporate growth.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
25	Mohammad, Sutrisno, Prihat and Rosidi (2013)	Examine stakeholder theory and legitimacy as well as eco-efficient related to effect of environmental accounting implementation and environmental performance and environmental disclosure as mediation on company value.	Nigeria	Samples are 59 companies that selected with purposive sampling technique. Analysis technique used is the Partial Least Square (PLS).	Research results indicate that environmental accounting implementation is able to affect on company value, environmental information disclosure and on environmental information disclosure.
26	Schneider, Ghettas, Merdaci, Brown, Martyniuk, Alshehri,& Trojan (2013)	Evaluate the maturity of environmental, health and safety Nigeria (EHS) efforts and progress toward sustainability in the oil and gas sector.	Nigeria	Ten major oil companies have been analyzed based on public information including their published annual reports	That the sector has made progress from simply embracing sustainability towards a commitment to addressing sustainability issues, but still has progress to make particularly in compliance with the Clean Air Act, spill and process management.
27	Albatayneh (2014)	Explored the effect of corporate sustainability performance on the relationship between corporate efficiency strategy and corporate financial performance in Jordan.	Jordan	The questionnaires were sent to 232 service and industry companies listed on the Amman Stock Exchange in 2011,The study used the linear and multiple regressions of analysis	Results, found to be partially mediating the relationship between efficiency strategy and the financial performance model meaning that sustainability practices can be used to gauge and predict performance.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
28	Juhmani (2014)	This study was centered on examining and information disclosure of companies and website.	Nigeria	The study made use of historical research design and secondary data was used.	The findings shows that 57.57% of the samples listed companies provided social and environmental information in their 2012 annual reports and their websites. Commercial banks and insurance companies made most disclosure of social and environmental accounting, while companies in the hotels and tourism sectors and industrial sector made the least disclosure.
29	Kipruto (2014).	Determine the effect of corporate social responsibility on financial performance of commercial banks in Kenya.	Kenya.	used of net profits before taxes obtained from audited statements of comprehensive income The study used multiple regression analysis	The study findings were that expenses on social course have an effect on financial performance of commercial banks in Kenya.
30	Olayinka and Oluwamayowa (2014)	Focused at ascertaining the aggregate and individual impact of Corporate Environmental Disclosure was regressed on market value.	Nigeria	Descriptive research design was adopted and secondary data only was used. A sample size of fifty firms quoted in Nigeria Stock Exchange (NSE) was purposively selected for analysis. The hypothesis was tested using correlation coefficient.	The findings review that the inclusion of environmental disclosure will enhance market value.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
31	Onyali, Okafor and Egolum (2014)	Assessed the extent, nature and quality of environmental information disclosure practices of manufacturing firms in Nigeria.	Nigeria	Content analysis was adopted; furthermore, a survey was carried out in order to ascertain whether the environmental disclosure practices of firms in Nigeria has improved. The study adopted one sample t - test in testing the formulated hypothesis.	The findings of the study indicated that the environmental disclosure practices of firms in Nigeria is still ad hoc and contains little or no quantifiable data.
32	Onyekwelu & Uche (2014)	The broad object of this study was aimed at ascertaining if the inclusion of social accounting information in the financial statements will significantly enhance information disclosure.	Nigeria	Survey research design was adopted; A sample size of 108 was drawn from a total population of 148 using Taro Yamane formula. The research hypothesis were tested using chi square(X2)	Finding reviews the inclusion and separate presentation of social costs incurred by organizations in the financial statements will enhance information disclosure in the statement.
33	Yahya and Ghodratollah (2014)	Investigated the impact of corporate social responsibility disclosure (CSRD) on the financial performance of companies listed on the Tehran stock exchange, employing multiple-linear regression analysis.		Employing multiple-linear regression analysis. The CSRD was the independent variable as measured by economic, social and environmental while Return on Assets, Return on Equity and Price Earnings Ratio were used in measuring financial performance.	The analysis produce inconsistent results.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
34	Dibia and Onwuchekwa (2015)	Empirical analyzed of the determinants of environmental disclosures using oil and gas companies in Nigeria.	Nigeria	A sample of 15 companies drawn from the oil and gas sectors of the Nigerian stock exchange for 2008-2013 financial years and regression analysis was used.	The finding of the study shows that firstly; there is a significant relationship between company size and corporate social responsibility disclosures.
35	Ijeoma (2015)	Determine the role of environmental cost accounting towards environmental sustainability in Nigeria.	Nigeria	The source of data for this study is primary source of data collection with the aid of questionnaire. The research instrument was randomly administered to 200 respondents from organizations in Nigeria: Agricultural/Agro-Allied, Breweries, Chemical and Paints, Health Care/Pharmaceutical and Oil Marketing companies.	The findings of the study revealed that majority of the respondents agreed that business organizations in Nigeria have not being aware of environmental policies. It was also found that that there exists no significant difference on business organizations in Nigeria not being aware of environmental policies.
36	Karlsson (2015)	Analyzed the relationship between corporate sustainability performance and financial performance in Sweden.	Sweden.	The sample cumulatively amounted to 1,015(2009-2013). The study adopted a deductive approach using a multivariate regression method of analysis.	Findings showed an incomplete positive relationship between corporate sustainability and financial performance as there are indications that the positive relationship is only true for low and moderate sustainability performers, and not for high sustainability performers.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
37	Kwanghfan (2015)	Examined the impact of sustainability reporting on corporate performance of selected quoted companies in Nigeria.		ROE, ROA, EPS, and NPM. Using multiple regression	The study finds that sustainability reporting impacted positively on all financial performance measures investigated.
38	Nwobu (2015)	Examined the relationship between corporate sustainability reporting and profitability and shareholders fund in Nigerian Banks.	Nigeria	The study sampled the annual reports of eight (8) banks in Nigeria Using a Pearson movement correlation matrix,	Results of this study indicated that a small (weak) positive correlation (r=0.28) between sustainability reporting index and Profit after Tax (PAT).
39	Onyali, Okafor and Onodi (2015)	examined the effectiveness of triple bottom line disclosure practice of corporate firms in Nigeria by focusing on the perspective of corporate stakeholders	Nigeria	The descriptive method of research design was employed to generate the required data. The population of the study was made up of three distinctive groups: Investors, Customers/Consumers and Accountants. The primary data were summarized using tables and the formulated hypotheses were analyzed using one-sample z test procedure done with the aid of SPSS version 22.	Their findings indicated that investors and consumers expressed dissatisfaction with the extent of firms TBL disclosure practice in Nigeria. Also, that Accountants' were negative on the level of rigour and transparency exerted in the preparation of triple bottom line report by corporate firms in Nigeria.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
40	Onyekwelu and Ekwe (2015)	Examined whether corporate social responsibility predicate good financial performance using the banking sector in Nigeria.	Nigeria	The study adopted the ex-post facto as it made use of historical research design and secondary data used. Analysis was done using the Ordinary Least Square Regression.	The findings shows that the amount committed to social responsibility vary from one bank to the other. The data further revealed that the sample banks invested less than ten percent of their annual profit to social responsibility.
41	Ajayi and Ovwarhe (2016)	Examined how Nigeria LNG uses CSR as a key strategy in creating an enabling environment that fosters support from all her stake holders which has led to good performance and growth of the company.	Nigeria	An exploratory research design was chosen in order to develop a profound understanding of the research topic and to obtain in-depth data about the research objectives.	The study found out that corporate social responsibility of the Nigeria Liquefied Natural Gas has significant impact on the Nigeria economy and employee organizational performance and commitment
42	Ezejiofor, John-Akamelu and Chigbo (2016)	Assess the effect of sustainability accounting measure on the performance of corporate organizations in Nigeria.	Nigeria	Ex post facto research design and time series data were adopted. Data were collected from annual reports and accounts and were tested using Regression Analysis with aid of SPSS Version 20.0.	The study found that environmental cost does not impact positively on revenue of corporate organizations in Nigeria, also that environmental cost impacted positively on profit generation of corporate organizations in Nigeria.
43	Nze, Okoh & Ojeogwu (2016)	Examined the effect of corporate social responsibility on earnings of quoted firms in Nigeria. Data for the study were secondary and were sourced from firms' financial statements and the fact book of Nigerian Stock Exchange.	Nigeria	The study covered a ten year period. Data were analyzed using the ordinary regression analysis.	The results show that CSR has a positive and significant effect on earnings of firms studied.

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
44	Owolabi, Taleatu, Adetula and Uwuigbe (2016).	examined the extent of sustainability reporting practiced by Lafarge Africa Plc.	Nigeria	Content analysis was used to analyze the data extracted from their annual reports and the Global Reporting Initiative (GRI) G4 sustainability reporting guideline was used	The study found no disclosures on human rights issues, 3% environmental disclosures and an aggregate of 30% disclosure based on one hundred and sixty-nine indicators used.
45	Amacha and Dastane (2017)	Examined the relationship between sustainability practices and firm performance in the Malaysian Oil and Gas sector.	Malaysian	Using EBIT, EPS and PE ratio from a sample size of 21 oil and gas firms from 2011 – 2013. Multiple regression model run with the aid of a SPSS 21.	Result shows that the majority of oil and gas companies in Malaysia had poor performance in terms of sustainability disclosure.
46	Nnamani, Onyekwelu, & Ugwu (2017)	Evaluated the effect of sustainability accounting and reporting on financial performance (ROA) of listed manufacturing firms in Nigeria.	Nigeria	Data sourced from the financial statements of three Nigerian brewery companies from 2010 – 2014. Ex post – facto research design and used the ordinary linear regression for analysis.	The result showed that sustainability reporting has positive and significant effect on financial performance of sampled firms.
47	Nobanee and Ellili (2017)	investigated the impact of economic, environmental, and social sustainability reporting on financial performance of UAE Banks in Abu Dhabi Securities Exchange	Abu Dhabi	The study employed three sustainability disclosure dimensions including i) economic, ii) environmental and iii) social dimensions using ROE. Employing a panel data analysis technique.	Their results reveal that sustainability disclosures as well as economic, environmental and social disclosures have no significant effects on the banking performance of UAE banks,

SUMMARY OF EMPIRICAL REVIEW (CONTINUES)

s/n	Author (s)	Objective	Country	Methodology	Major findings
48	Okafor (2018).	The study ascertaining the effect of environmental costs on firm performance	Nigeria	To achieve this objective, the study made use of financial reports of Oil and Gas Companies quoted in the Nigerian Stock Exchange Market from years 2006-2015. Regression analysis was employed with the aid of Statistical Package for Social Sciences (SPSS).	The results of the statistical analysis indicate that better environmental performance positively impact business value of an organization. Moreover, environmental accounting provides the organization an opportunity to reduce environmental and social costs and improve their performance

Source: Researcher's Compilation, 2017

2.4 SUMMARY OF REVIEW OF RELATED LITERATURE

This chapter explores the conceptualization of both the dependent (firm performance proxies) and independent (corporate sustainability dimensions) variables by analyzing the literature on the relationships between both categories of variables. The studies were reviewed in line with the title, scope, methodology and results from whence the research gap is identified. The review of the empirical studies indicates that the results of most of these researches are either inconclusive or contradictory with some reporting positive relationships (see Amacha & Dastane, 2017; Dembo, 2017; Nnamani et al, 2017, Owolabi et al, 2016; Kwaghfan, 2015; Ekwueme et al 2013; Okoye and Ezejiofor, 2013; Albatayneh, 2014; Eccles et al, 2012; Ameer & Othman, 2012), others show negative and or no significant impact of sustainability reporting on financial performance (see Ezejiofor et al, 2016; Nwobu, 2015; Dibia and Onwuchekwa, 2015; Karlsson, 2015; Kusuma and Koesrindartoto, 2014; Aggarwal, 2013; Brian, 2012; Kasum

et al, 2011; Lourenco et al, 2012; Surroca et al., 2010). The evidences from these previous studies show that the relationship between corporate sustainability and firm performance have been grounded on empirical and theoretical arguments ranging from those that opine that sustainability practice reduces organizational profits, and those that suggest that it could be deployed for competitive advantage. The majority of the previous studies have been carried out in developed countries with far little attention been paid to such studies in developing countries like Nigeria. This study is therefore justified by assessing the impact of two of the three major dimensions of corporate sustainability (environment, and social) and firm's performance (using three different performance indicators) in the entire listed oil and gas companies in the Nigerian Stock Exchange. It is expected that the outcome would contribute in reconciling the inconsistencies in extant studies especially in the Nigerian context. This observed lack of convergence cumulating to the observed mixed results is an indication that this topic of study is far from been settled empirically, hence the need for more studies.

2.5 GAP IN LITERATURE

From the review of the empirical studies, it appears evident that the results of most sustainability and firm performance studies are either inconclusive or contradictory - with some reporting positive relationships (see Amacha & Dastane, 2017; Dembo, 2017; Nnamani et al, 2017, Owolabi et al, 2016; Kwaghfan, 2015; Ekwueme et al 2013; Okoye and Ezejiofor, 2013; Albatayneh, 2014; Eccles et al, 2012; Ameer & Othman, 2012), others show negative and or no significant impact of sustainability reporting on financial performance (see Ezejiofor et al, 2016; Nwobu, 2015; Dibia and Onwuchekwa, 2015;

Karlsson, 2015; Kusuma and Koesrindartoto, 2014; Aggarwal, 2013; Brian, 2012; Kasum et al, 2011; Lourenco et al, 2012; Surroca et al., 2010).

The evidences from these previous studies show that the relationship between corporate sustainability and firm performance have been grounded on empirical and theoretical arguments ranging from those that opined that sustainability practice reduces organizational profits, and those that suggest that it could be deployed for competitive advantage. This observed lack of convergence cumulating to the observed mixed results is an indication that this topic of study is far from been settled empirically, hence the need for more studies. Majority of the previous studies have been carried out in developed countries with far little attention been paid to such studies in developing countries like Nigeria. The few studies that focus on the oil and gas industry in Nigeria made use of only one dependent variable. This study is therefore justified by assessing the effect of two of the three major dimensions of corporate sustainability (environment and social) and firm's performance using three different performance indicators (dependent variables) in the entire listed oil and gas companies in the Nigerian Stock Exchange. It is expected that the outcome would contribute in reconciling the inconsistencies in extant studies especially in the Nigerian context.

CHAPTER THREE

METHODOLOGY

3.1 RESEARCH DESIGN

Research design is the framework conceived to answer research questions or test hypotheses of a study (Avwokeni, 2016). The research design adopted for this study is an *ex-post facto*. The choice of this design is based on the nature of the study in which the researcher examined the effects of corporate sustainability reporting on firm performance.

3.2 POPULATION OF THE STUDY

The population of this study consisted of the entire oil and gas firms listed on the Nigerian Stock Exchange (NSE) as at 31st December, 2016. As at year ended 31st December 2016, there are a total of fifteen (15) oil and gas firms listed in the Nigeria Stock Exchange (NSE) which comprises of:

Table 3.1 POPULATION OF STUDY

S/N	NAME OF COMPANY
1	ANINO INTERNATIONAL
2	BECO PETROLEUM PRODUCT
3	CAPITAL OIL
4	CAVERTON OFFSHORE SUPPORT GROUP
5	CONOIL PLC
6	ETERNA PLC
7	FORTE OIL (AP)

8	JAPAUL OIL
9	MOBIL OIL NIGERIA
10	MRS OIL (FORMERLY TEXACO, CHEVRON)
11	OANDO PLC (FORMERLY UNIPETROL)
12	RAK UNITY PETROLEUM
13	SEPLAT PETROLEUM DEVELOPMENT
14	TOTAL NIGERIA
15	NAVITUS ENERGY

Source: Library of Nigeria Stock Exchange

In terms of structure, the industry is broadly divided into upstream sector, downstream sector, and services sector. The study focuses on the downstream sector due to the public availability of their financial statements as majority are listed in the Nigerian Stock Exchange. The study period covered ten (10) financial years (2007 – 2016).

3.3 SAMPLE SIZE

According to Avwokeni (2016), a sample size is a count of individual samples or observations in any statistical setting. The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. In practice, the sample size used in a study is determined based on the expense of data collection, and the need to have sufficient statistical power. Since the population is not quite large, the entire working population was initially considered to be adopted that is, "census technique". However, considering that not all the existing oil and gas companies were listed in the NSE as at 2007, which is the start year of the study (for example, Beco

Petroleum, Caverton Offshore and Seplat Petroleum Development Company were listed in 2008, 2009 and 2014 respectively).

As a result, the "purposive sampling technique was applied (Non-random sample). In this method, the sample is chosen based on what the researcher thinks is appropriate for the study. A total of five (5) out of the fifteen (15) companies were inevitably excluded during the data collection process due to incomplete data. Consequently, what constituted the sample size of the study in a panel of one hundred (100) observations is ten (10).

One of the limitations of this sampling technique is the possibility of being prone to researcher bias. Purposive sampling is based on the researcher. That means their conscious or unconscious bias goes into the data being collected. That bias may make the data seem to be valid, but it can also influence the data and provide false results.

3.4 SOURCES OF DATA COLLECTION

To obtain reliable data that helped the researcher to ensure the effectiveness of the research work, the study employed the secondary sources of data collection. The historical data were obtained from the following sources: (1) library of Nigeria Stock Exchange, (2) annual financial reports and accounts of the individual companies downloaded from the websites of the companies, and (3) www.nse.com.ng. The qualitative data for the independent variable (corporate sustainability) were sourced via content analysis procedure using sustainable practices checklist of the GRI (Global Reporting Initiative) in line with previous studies (e.g. Nwobu, 2015; Kwaghfan, 2015).

3.5 DATA ANALYSES TECHNIQUES

For the purpose of the empirical analysis, the study adopted descriptive statistics and regression analysis technique. A descriptive analysis of the data was conducted to obtain the sample characteristics and to observe the level of sustainability disclosure among the companies. The multiple regression analysis was performed to test the effect of the independent variables (corporate sustainability components) and corporate performance indicators. Some conventional diagnostic tests such as normality, multicollinearity, heteroskedasticity and autocorrelation tests were also conducted to address some basic underlying regression analysis assumptions.

3.5.1 Normality

This test is used to ascertain the behavior of the regression variables. The Jarque-Bera statistic was used to ascertain the normality of the variables. The residuals are normally distributed if the statistical histogram assumes a bell-shape structure. Also, the variables are normally distributed if their respectively probability values assume a zero (0).

3.5.2 Multicollinearity

In a regression analysis of this nature, there is the possibility that one or more explanatory variables could correlate among themselves thus undermining the regression result. In this case, which is a test of first order level of multicollinearity problem there is need to conduct a multicollinearity test. The Variance Inflation Factor (VIF) statistic will also be used to ascertain the presence or higher level of multicollinearity problem among the independent variables. The decision rule is that if each of the explanatory variables has a VIF of less than ten (10), it will be suggestive that it does not correlate with the

other independent variables. However, if a variable exhibits VIF of more than ten (10), then it correlates with other independent variables, and as such, it should be dropped.

3.5.3 Heteroskedasticity

Heteroskedasticity means the absence of homoskedasticity, the constant variance assumption of the Ordinary Least Square estimator. It implies that the absence of non-constant variance leading to the breakdown of the BLUE properties in which the efficiency and consistency property are lost. Using the auto regressive conditional heteroskedasticity (ARCH), the decision rule is to reject the presence of heteroskedasticity (acceptance of homoskedasticity) if the ARCH statistical probability value is greater than the norm (0.05), otherwise there is the presence of heteroskedasticity.

3.5.4 Autocorrelation

This is used to ascertain the presence or absence of higher order correlation. Using Breusch-Godfrey Serial Correlation LM test, the decision rule is to reject the presence of autocorrelation if the Breusch-Godfrey Serial Correlation LM teststatistic probability value is greater than the norm (0.05), otherwise there is the presence of autocorrelation which tends to undermine the validity of the regression result.

3.5.5 Model Specification

In order to test for the relevance of the hypotheses regarding the impact of corporate sustainability on corporate firm performance of oil and gas companies listed on the Nigerian Stock Exchange, a multiple regression model was used as adopted from previous studies (Kwaghfan, 2015) which examines the relationship between dependent variables comprising of firm performance indicators and two or more regressors or

independent variables (sustainability dimensions). The original model of Kwaghfan (2015) goes thus:

$Y = b_0+b_1X1+b_2X2 +b_3X3 +e$…… Equ. (1)

Where: Y is the dependent variable describing four (4) corporate financial performance indicators namely; i) Return on asset, ii) Return on Equity, iii) Net profit margin; and iv) Earnings per Share.

While: X1, X2, and X3 are the independent variables which represent the components of Sustainability Reporting disclosure viz; X1 = Economic performance disclosure, X2 = Social performance disclosure, and X3 = Environmental performance disclosure.

e represents the error term which captures other possible explanatory variables not explicitly included in the model.

b_0 is the intercept of the regression.

b_1, b_2 and b_3 are the coefficients of the regression.

The above model was modified by the researcher to suit the specific objectives of this study. The major alteration was dropping the variable of ’Economic sustainability performance disclosure’ because some of its components are similar to the constructs of financial performance indicators already earmarked as dependent variables. Again, the financial performance measures that constitute the dependent variables were scaled down to three (3) from the original four (4) based on the specific objectives of the study.

Therefore, specified below are the adapted multiple regression econometric model used for the study which seeks to explain variations in the value of the dependent variable (firm financial performance) on the basis of changes in the independent variables

(sustainability reporting). The assumption is that, the dependent variable is a linear function of the independent variable. The model is stated thus:

$Y_1 = f$ (Corporate Sustainability)……..Equ. (1)

Where Y_1 is the Corporate Firm performance (proxied using ROA, ROE, and ROCE,); while Corporate Sustainability was classified into two of its three main components which include: Environmental and Social sustainability performance. Thus, the three (3) proxies of firm financial performance culminated to three (3) multiple regression models as shown below:

Model 1

$ROA_{it} = \beta_0 + \beta_1 ENVP_{it} + \beta_2 SOCP_{it} + e_{it}$.....Equ. (2)

Model 2

$ROE_{it} = \beta_0 + \beta_1 ENVP_{it} + \beta_2 SOCP_{it} + e_{it}$.....Equ. (3)

Model 3

$ROCE_{it} = \beta_0 + \beta_1 ENVP_{it} + \beta_2 SOCP_{it} + e_{it}$. .....Equ. (4)

Where:

β_0 = represents the constant or intercept

β_1 to… β_2= represents estimated parameters

e_{it}= represents the error term

ROA_{it} = Return on Asset of company *i* in year *t*

ROE_{it} = Return on Equity of company *i* in year *t*

$ROCE_{it}$ = Return on Capital Employed of company *i* in year *t*

$ENVP_{it}$ = Environmental Sustainability Performance disclosure of company *i* in year *t*

$SOCP_{it}$ = Social Sustainability Performance disclosure of company *i* in year *t*

Our *apriori* expectations were projected as follows: $\beta_1>0$, $\beta_2>0$ (i.e. in each of the model), which means that:

$\beta_1>0$: implies that increase in the environmental performance is expected to lead to an increase in ROA (and same with the other two financial performance proxies).

$\beta_2>0$: implies that increase in the social performance is expected to lead to an increase in ROA and indeed, ROE and ROCE.

Table 3.2: OPERATIONALIZATION OF VARIABLES

s/n	Variables	Proxy	Type	Measurement(s)
	Firm Performance :			
1.	Return on assets	ROA	Dependent	Net income/Total assets
2.	Return on equity	ROE	Dependent	EBIT/Shareholders equity
3.	Return on capital employed	ROCE	Dependent	EBIT/Capital Employed
	Corporate Sustainability:			
5.	Environment Sustainability	ENVP	Independent	Environmental performance disclosure index
6.	Social Sustainability	SOCP	Independent	Social performance disclosure index

Source: Researcher's Compilation (2017)

The table above shows the measurement of variables that was adopted for the execution of the study in the order of the dependent variables and the independent variables. While the dependent variables was captured using the quantitative data as inherent in the financial statement of quoted companies, the independent variables was captured using a scoring index of non-financial performance indicators selected from the GPI guidelines (see Index below in Table 3.3) as also employed by previous studies such as Artiach, Lee, Nelson, & Walker (2010), Ademola, (2013) and Kwaghfan (2015). From

the index, the environmental sustainability reporting components have 34 items, while the social performance has 48 items. On each of the two sustainability reporting components adopted (environmental and social performance disclosure), a content analysis was conducted to calculate the number of indicators disclosed by a sampled company in a financial year. The proportion (based on the total requirement) is then taken as the measure of extent of disclosure.

3.5.6 Measurement of Social and Environmental Performance

For the measurement of social and environmental performance, the study made use of content analysis via unweighted dichotomous index to capture the extent of disclosures attributable to the two sustainability dimensions. This is in line with Artiach, Lee, Nelson, & Walker (2010), Ademola, (2013) and Kwaghfan (2015). A similar approach has also been used by some recent studies such as Eriabie and Odia (2016); Wachira (2018) on corporate social and environmental disclosure and risk disclosure studies respectively.

Considering the nature of the study, the financial (quantitative) component of the social dimension (i.e. CSR, which is synonymous to philanthropy) was excluded from the construct since majority of the companies do not monetize (quantify) the social dimensions (such as labour practices, employee management, human rights and product responsibility) apart from CSR. The focus was thus on the core social sustainability issues as listed above (see Complete Disclosure Index in Table 3.3). Researchers such as Williams (2001); Ahmed & Courtis (1999) posit that the use of unweighted dichotomous index pattern reduces subjectivity involved in determining the weights of each disclosed item. A disclosure item was awarded a score of one (1) if it is disclosed in the corporate

annual report of a particular company and or zero (0) if it is not disclosed. Thereafter, the total number items found to be disclosed were matched with the expected number of items the standard stipulated For example the standard has 34 items required to be disclosed in the environmental sustainability components while the social performance has 48 items. The proportion that was disclosed by each company in each of the financial year studied was thus used as the qualitative figure.

The following formula was used in the calculations:

QIDj index= $\frac{\sum rd_i^m}{n_j} \times 100$

Where;

QIDj index is the disclosure weight index for the firm j.

rd_i will be *0* if an item is not disclosed, and *1* if otherwise.

n_j represents the maximum number of items that was disclosed by firm j.

The total qualitative disclosure score (TQID) was then converted into percentage terms by applying the following formula:

$$\frac{\text{Total no. of items appearing in the annual report}}{\text{Max. no. of items which should appear in annual reports}} \times \frac{100}{1}$$

Table 3.3 Sustainability Reporting Disclosure Index

Indicator		
	Category: ECONOMIC	**Codes**
	Economic performance	
	Direct economic value generated and distributed	**G4-EC1**
	Financial implications and other risks and opportunities for the organization's activities due to climate change	**G4-EC2**
	Coverage of the organization's defined benefit plan obligations	**G4-EC3**
	Financial assistance received from government	**G4-EC4**
	Market presence	
	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	**G4-EC5**
	Proportion of senior management hired from the local community at significant locations of operation	**G4-EC6**
	Indirect economic impact	
	Development and impact of infrastructure investments and services supported	**G4-EC7**
	Significant indirect economic impacts, including the extent of impacts	**G4-EC8**
	Procurement practices	
	Proportion of spending on local suppliers at significant locations of operation	**G4-EC9**
Category: ENVIRONMENTAL		
	Materials	
	Materials used by weight or volume	**G4-EN1**
	Percentage of materials used that are recycled input materials	**G4-EN2**
	Energy	
	Energy consumption within the organization	**G4-EN3**
	Energy consumption outside of the organization	**G4-EN4**
	Energy intensity	**G4-EN5**
	Reduction of energy consumption	**G4-EN6**
	Reductions in energy requirements of products and services	**G4-EN7**
	Water	
	Total water withdrawal by source	**G4-EN8**
	Water sources significantly affected by withdrawal of water	**G4-EN9**
	Percentage and total volume of water recycled and reused	**G4-EN10**
	Biodiversity	
	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	**G4-EN11**
	Description of significant impacts of activities, products, and services on	**G4-EN12**

	biodiversity in protected areas and areas of high biodiversity value outside protected areas	
	Habitats protected or restored	**G4-EN13**
	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	**G4-EN14**
	Emissions	
	Direct greenhouse gas (GHG) emissions (Scope 1)	**G4-EN15**
	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	**G4-EN16**
	Other indirect greenhouse gas (GHG) emissions (Scope 3)	**G4-EN17**
	Greenhouse gas (GHG) emissions intensity	**G4-EN18**
	Reduction of greenhouse gas (GHG) emissions	**G4-EN19**
	Emissions of ozone-depleting substances (ODS)	**G4-EN20**
	NO**X**, SO**X**, and other significant air emissions	**G4-EN21**
	Effluents and waste	
	Total water discharge by quality and destination	**G4-EN22**
	Total weight of waste by type and disposal method	**G4-EN23**
	Total number and volume of significant spills	**G4-EN24**
	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	**G4-EN25**
	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	**G4-EN26**
	Products and services	
	Extent of impact mitigation of environmental impacts of products and services	**G4-EN27**
	Percentage of products sold and their packaging materials that are reclaimed by category	**G4-EN28**
	Compliance	
	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	**G4-EN29**
	Transport	
	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	**G4-EN30**
	Overall	
	Total environmental protection expenditures and investments by type	**G4-EN31**
	Supplier environmental assessment,	

	Percentage of new suppliers that were screened using environmental criteria	**G4-EN32**
	Significant actual and potential negative environmental impacts in the supply chain and actions taken	**G4-EN33**
	Environmental grievance mechanisms	
	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	**G4-EN34**
	Category: SOCIAL	
	– Sub-Category: Labor Practices and Decent Work	
	Employment	
	Total number and rates of new employee hires and employee turnover by age group, gender, and region	**G4-LA1**
	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	**G4-LA2**
	Return to work and retention rates after parental leave, by gender	**G4-LA3**
	Labor/management relations	
	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	**G4-LA4**
	Occupational health and safety	
	Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs	**G4-LA5**
	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	**G4-LA6**
	Workers with high incidence or high risk of diseases related to their occupation	**G4-LA7**
	Health and safety topics covered in formal agreements with trade unions	**G4-LA8**
	Training and education	
	Average hours of training per year per employee by gender, and by employee category	**G4-LA9**
	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	**G4-LA10**
	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	**G4-LA11**
	Diversity and equal opportunity	
	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	**G4-LA12**
	Equal remuneration for women and men	
	Ratio of basic salary and remuneration of women to men by employee category,	**G4-LA13**

	by significant locations of operation	
	Supplier assessment for labor practices	
	Percentage of new suppliers that were screened using labor practices criteria	**G4-LA14**
	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	**G4-LA15**
	Labor practices grievance mechanisms	
	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	**G4-LA16**
	– Sub-Category: Human Rights	
	Investment	
	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	**G4-HR1**
	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	**G4-HR2**
	Non-discrimination	
	Total number of incidents of discrimination and corrective actions taken	**G4-HR3**
	Freedom of Association and Collective Bargaining	
	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	**G4-HR4**
	Child Labor	
	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	**G4-HR5**
	Forced or Compulsory Labor	
	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	**G4-HR6**
	Security Practices	
	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	**G4-HR7**
	Indigenous Rights	
	Total number of incidents of violations involving rights of indigenous peoples and actions taken	**G4-HR8**
	Assessment	
	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	**G4-HR9**

	Supplier Human Rights Assessment	
	Percentage of new suppliers that were screened using human rights criteria	**G4-HR10**
	Significant actual and potential negative human rights impacts in the supply chain and actions taken	**G4-HR11**
	Human Rights Grievance Mechanisms	
	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	**G4-HR12**
	– Sub-Category: Society	
	Local communities	
	Percentage of operations with implemented local community engagement, impact assessments, and development programs	**G4-SO1**
	Operations with significant actual or potential negative impacts on local communities	**G4-SO2**
	Anti-corruption	
	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	**G4-SO3**
	Communication and training on anti-corruption policies and procedures	**G4-SO4**
	Confirmed incidents of corruption and actions taken	**G4-SO5**
	Public policy	
	Total value of political contributions by country and recipient/beneficiary	**G4-SO6**
	Anti-competitive Behavior	
	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	**G4-SO7**
	Compliance	
	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	**G4-SO8**
	Supplier Assessment for Impacts on Society	
	Percentage of new suppliers that were screened using criteria for impacts on society	**G4-SO9**
	Significant actual and potential negative impacts on society in the supply chain and actions taken	**G4-SO10**
	Grievance Mechanisms for impacts on Society	
	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	**G4-SO11**
	– Sub-Category: Product Responsibility	
	Customer Health and Safety	
	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	**G4-PR1**

	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	**G4-PR2**
	Product and Service Labeling	
	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	**G4-PR3**
	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	**G4-PR4**
	Results of surveys measuring customer satisfaction	**G4-PR5**
	Marketing Communications	
	Sale of banned or disputed products	**G4-PR6**
	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	**G4-PR7**
	Customer Privacy	
	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	**G4-PR8**
	Compliance	
	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	**G4-PR9**

Source: Researcher's Compilations from GRI-G4 Implementation Manual (2015d, p.66-221)

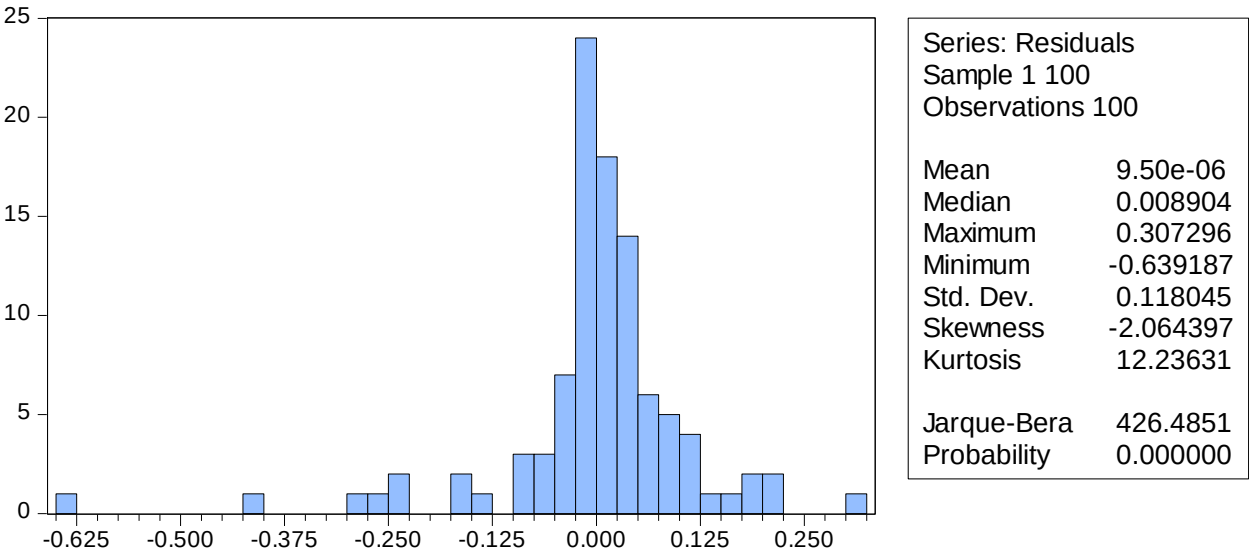
CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Regression Diagnostic Tests

Several underlying diagnostic tests were conducted prior to the estimation to ensure that the basic regression analysis assumptions are not violated. The tests include: Normality test using the JargueBera, Variance Inflation Factor (VIF) for Multicollinearity, White Heteroskedasticity test and the LM test for autocorrelation.

Figure 4.1 Normality Test for Model One



Source: Eviews 9 output (2018)

Figures 4.1, 4.2 and 4.3 present the normality results tested with a histogram. The assumption is that the histogram should reflect a bell-shaped curve, which would mean that the data is normally distributed. The following hypotheses are applicable to this test:

Null Hypothesis (Ho): Residuals (u) are normally distributed

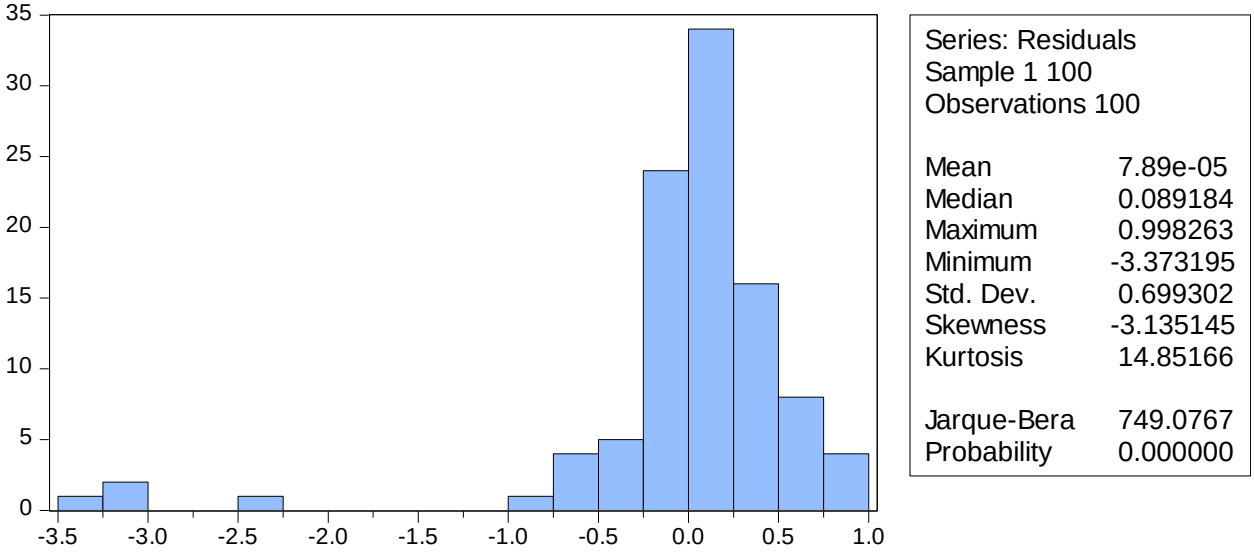
Alternative Hypothesis (H_1): Residuals are not normally distributed

Decision Rule: accept the null hypothesis when p-value is greater than 0.05 (5%).

As shown in the result of *Figure* 4.1, which a combination of the entire variables in the 100 observations for the model one of study, the histogram showed that it was not symmetrically bell-shaped. This indicates that the data did not fit into a normal bell-curve. The skewness coefficient of -2.06 indicated that the distribution was negatively skewed. The kurtosis coefficient which measures the thickness of the tails of the distribution stood high at 12.23 implying strong deviation from normality. Also, the Jargue-Bera statistic stood high at 426.5 with a corresponding probability value of 0.000 ($p<0.05$).

Based on the decision rule, the null hypothesis that the population residual (u) is normally distributed is rejected. Overall, the largely departure from normality can be attributed to small nature of the sample observation (i.e. 100). However, according to the Central Limit Theorem as cited in Ghasem and Zahediasl (2012), with large enough sample sizes (> 30 or 40), the violation of the normality assumption poses no major problem in panel data analysis.

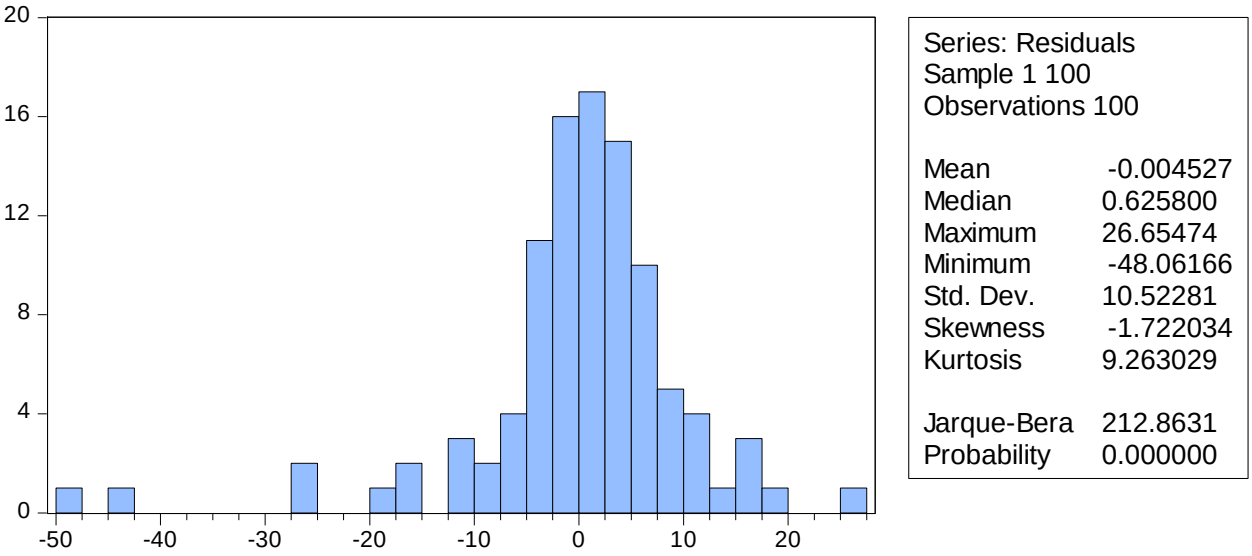
Figure 4.2 Normality Test for Model Two



Source: Eviews 9 output (2018)

In *Figure* 4.2, the normality test result of model two appeared similar with the previous – showing high Jarque-Bera values of 749.0767 signifying that the errors are not normally distributed. The p-value = 0 indicates that the null hypothesis "the distribution is normal" is rejected. However, this does not pose a problem to the pattern of analyses adopted since the assumption of homoskedastic is not violated (See table 4.3).

Figure 4.3 Normality Test for Model Three



Source: Eviews 9 output (2018)

The observation of the histogram in figure 4.3 showed that it was not symmetrically bell-shaped, an indication that the data did not fit into a normal bell-curve. The Jargue Bera statistic remained high at 212.86 with a low corresponding probability value which is less than 0.05. Based on the decision rule, we can reject the null hypothesis. This implies that the residuals (u) are not normally distributed and this can be attributed to some of the variables in the regression line (such as the sustainability variables) which the variances cannot be controlled.

Table 4.1 Variance Inflation Factors (VIF) tests

Model 1 Variable	Coefficient Variance	Centered VIF	**Model 2** Variable	Coefficient Variance	Centered VIF	**Model 3** Variable	Coefficient Variance	Centered VIF
C	0.001634	NA	C	0.054188	NA	C	13.11908	NA
SOCP	0.029358	1.000063	SCOP	0.973733	1.000063	SCOP	235.7432	1.000063
ENVP	0.079726	1.000063	ENVP	2.644292	1.000063	ENVP	640.1901	1.000063

Source: Researchers compilation from Eviews 9 output (2018)

The data for this study was tested for multicollinearity as reported in Table 4.2. As observed, all the VIF values are very close to the value of '1' and far below the benchmark of 10. This is an indication of an absence of multicollinearity among the variables, thus there would be likely no issue of unstable parameter estimates in the regression line.

Table 4.2 Other Regression Diagnostics Tests

	Model 1	**Model 2**	**Model 3**
Breusch-Godfrey Serial Correlation LM Test:			
F-statistics	2.247	2.753	1.881
Prob.	0.0537	0.0688	0.0818
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistics	0.765	0.0994	0.0976
Prob.	0.468	0.7502	0.907

Source: Researcher's Computation via E-views. 9 (2018)

The Breusch-Godfrey Lagrange Multiplier (LM) test for higher order Serial correlation test is conducted to test for serial correlation. In the presence of serial correlation, ordinary least squares estimators are no longer Best Linear Unbiased

Estimators (BLUE). Moreover, the coefficient may be overestimated, standard errors underestimated and t-statistics overestimated. The Breusch-Godfrey Lagrange Multiplier (LM) test for higher order autocorrelation reveals that the hypotheses of zero autocorrelation in the residuals were not rejected. This was because the probabilities (Prob. F, Prob. Chi-Square) were greater than 0.05 and hence the LM test did not therefore reveal serial correlation problems for the model.

The test for Heteroscedasticity which is the absence of homoscedasticity or the constant variance assumption of the Ordinary Least Square estimator is also conducted. It implies the absence of non-constant variance leading to the breakdown of the BLUE properties in which the efficiency and consistency property are lost. Using the Autoregressive conditional Heteroskedasticity (Breusch-Pagan-Godfrey) test, decision rule is to conclude that there is no heteroscedasticity if the F-statistic values are respectively greater than the critical values at 5% level. In the absence of this (i.e if the critical values at 5% is greater than the F-statistic and observed R-square value), we conclude that there is homoscedasticity. From the second part of table 4.3, the results show the absence of heteroscedasticity, meaning that the residuals of the three models are homoskedastic (which is desirable) because the entire p-values are more than 5%.

4.2 TEST OF HYPOTHESES

The six null hypotheses earlier formulated in the first chapter of this study were tested in this sub-section. The probability (sig.) values obtained from the regression result were used for the tests. The decision rule goes thus: the null hypothesis will be accepted if the probability value (p-value) is greater than 0.05 or when the calculated t-statistics is

less than 2.0, or reversely we accept the alternative (i.e. if the probability (p-value) value becomes less than 0.05 and or the t-statistics is ≥ 2.

4.2.1 Test of hypothesis one

Ho: Corporate social sustainability reporting does not significantly affect Return on Assets (ROA) of Oil and Gas Companies listed on the Nigerian Stock Exchange.

Table 4.3 Test summary for hypothesis one

	Dependent Variable(s)	Independent Variable	t-statistics	p-value (Sig.)	Significant or not	Decision
Ho	Return on Assets (ROA)	Social sustainability reporting	-0.952838	0.3431	NSig	Accept null

Source: Researchers Compilation (2018) **NSig = Not significant**
*****.Significant at 5% (95%) level of confidence

Interpretation: The above test result shows that the effect of social sustainability reporting on return on assets (ROA) is not significant and the p-value of 0.3431 is greater than 0.05. This led to the acceptance of the null hypotheses (Ho). Thus, we conclude that "corporate social sustainability reporting does not significantly affect Return on Assets (ROA) of Oil and Gas Companies listed on the Nigerian Stock Exchange".

4.2.2 Test of hypothesis two

Ho: Corporate social sustainability reporting does not have a significant effect on Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

Table 4.4 Test summary for hypothesis two

	Dependent Variable(s)	Independent Variable	t-statistics	p-value (Sig.)	Significant or not	Decision
Ho	Return on Equity (ROE)	Social sustainability reporting	-2.552775	0.0123*****	**Sig**	**Reject null**

Source: Researchers Compilation (2018) **NSig = Not significant**
*****.Significant at 5% (95%) level of confidence

Interpretation: The above test result shows that the effect of social sustainability reporting on return on equity (ROE) is significant and the p-value of 0.0123 is less than

0.05. This led to the rejection of the null hypotheses (Ho) and acceptance of the alternative hypothesis (H_I). Thus, we conclude that "Corporate social sustainability reporting has a significant effect on the Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange".

4.2.3 Test of hypothesis three

Ho: Corporate social sustainability reporting does not have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

Table 4.5 Test summary for hypothesis three

	Dependent Variable(s)	Independent Variable	t-statistics	p-value (Sig.)	Significant or not	Decision
Ho	Return on Capital Employed (ROCE)	Social sustainability reporting	-0.502204	0.6167	NSig	Accept null

Source: Researchers Compilation (2018) **NSig = Not significant**

*****.Significant at 5% (95%) level of confidence

Interpretation: The above test result shows that the effect of social sustainability reporting on return of capital employed (ROCE) is not significant and the p-value of 0.6167 is greater than 0.05. This led to the acceptance of the null hypotheses (Ho). Thus, we conclude that

"Corporate social sustainability reporting does not have a significant effect on Return of Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange"

4.2.4 Test of hypothesis four

Ho: Corporate environmental sustainability reporting does not significantly affect Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange.

Table 4.6 Test summary for hypothesis four

	Dependent Variable(s)	Independent Variable	t-statistics	p-value (Sig.)	Significant or not	Decision
Ho	Return on Assets (ROA)	Environmental sustainability reporting	0.151454	0.8799	NSig	Accept null

Source: Researchers Compilation (2018) **NSig = Not significant**
*****.Significant at 5% (95%) level of confidence

Interpretation: The above test result shows that the effect of environment sustainability reporting on return on asset (ROA) is not significant and the p-value of 0.8799 is greater than 0.05. This led to the acceptance of the null hypotheses (Ho). Thus, we conclude that "Corporate environmental sustainability reporting does not significantly affect Return on Assets (ROA) of Oil and Gas companies listed on the Nigerian Stock Exchange".

4.2.5 Test of hypothesis five

Ho: Corporate environmental sustainability reporting does not have a significant effect on Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

Table 4.7 Test summary for hypothesis five

	Dependent Variable(s)	Independent Variable	t-statistics	p-value (Sig.)	Significant or not	Decision
Ho	Return on Equity (ROE)	Environmental sustainability reporting	0.116562	0.9075	NSig	Accept null

Source: Researchers Compilation (2018) **NSig = Not significant**
*****.Significant at 5% (95%) level of confidence

Interpretation: The above test result shows that the effect of environment sustainability reporting on return on equity (ROE) is not significant and the p-value of 0.9075 is greater than 0.05. This led to the acceptance of the null hypotheses (Ho). Thus, we conclude that "Corporate environmental sustainability reporting does not have a significant effect on Return on Equity (ROE) of Oil and Gas companies listed on the Nigerian Stock Exchange".

4.2.6 Test of hypothesis six

Ho: Corporate environmental sustainability reporting does not have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange.

Table 4.8 Test summary for hypothesis six

	Dependent Variable(s)	Independent Variable	t-statistics	p-value (Sig.)	Significant or not	Decision
Ho	Return on Equity (ROE)	Environmental sustainability reporting	1.219258	0.2258	NSig	Accept null

Source: Researchers Compilation (2018) **NSig = Not significant**
*****.Significant at 5% (95%) level of confidence

Interpretation: The above test result shows that the effect of environment sustainability reporting on return on capital employed (ROCE) is not significant and the p-value of 0.2258 is greater than 0.05. This led to the acceptance of the null hypotheses (Ho). Thus, we conclude that "Corporate environmental sustainability reporting does not have a significant effect on Return on Capital Employed (ROCE) of Oil and Gas companies listed on the Nigerian Stock Exchange"

4.3 PRESENTATION OF RESULTS

Table 4.9 Descriptive Statistics of Dependent and Independent variables

	ROA	ROE	ROCE	SOCP	ENVP
Mean	0.020184	0.015537	5.420841	0.180564	0.079669
Median	0.035141	0.132420	6.362373	0.166667	0.094118
Maximum	0.303097	0.907611	28.56445	0.461806	0.140441
Minimum	-0.71357	-3.93969	-52.184	0.041667	0.000000
Std. Dev.	0.125952	0.729498	11.24324	0.074079	0.044953
Skewness	-2.59336	-3.55869	-2.21056	0.837219	-0.60066
Kurtosis	14.97243	17.30371	11.45862	4.320600	2.077208
Jarque-Bera	709.3379	1063.555	379.5608	18.94887	9.561398
Probability	0.000000	0.000000	0.000000	0.000077	0.008390
Sum	2.018369	1.553710	542.0841	18.05642	7.966912
Sum Sq. Dev.	1.570516	52.68451	12514.64	0.543287	0.200060
Observations	100	100	100	100	100

Source: Eviews 9 output (2018)

Table 4.1 shows the descriptive statistics of the sustainability and performance measures that formed the independent and dependent variables used in the study. As observed, an overall average of 2.01% of ROA (return on assets) with a maximum average of about 30.31% is an indication of an increasing profit earnings margin in relation to the overall resources of the sampled firms.

Similarly, the mean value of ROE was slightly lower at 0.015537 which also indicates an overall positive trend on the sampled firm's ability managing the shareholders funds towards profit generation. The return on capital employed (ROCE) showed a high mean value of 5.420841 which indicates that the sampled companies

optimally manages its equity and debt towards profit generation. This is a sign of a progressively growing sector.

It was also noted that the three performance ratios all have negative minimal values; this suggests that not all the sampled companies generated enough income compared to the capital they invested during the period under review.

Also, the standard deviations of all the performance measures are observed to be largely small and not too far from the mean, this indicates that the performance indices among the sampled companies did not disperse (±) much across the distribution. Further, the variable of SOCP (social sustainability performance) and ENVP (environmental sustainability performance) showed mean values of 0.180564and 0.079669 respectively. This shows that, on average, the overall sampled companies disclosed only about 18.06% of the entire required social sustainability disclosure requirements, while only about 7.97% was disclosed on the required environment sustainability disclosure index. What his implies is that, generally, the entire sample can be classified as low sustainability companies. However, as the result indicates, the sampled companies performed better in the social index category compared to the environmental category. This appears to support the findings of Owolabi et al (2016) which found the overall sustainability reporting of a Nigerian manufacturing industry to be 15% and attributed the poor disclosure to the non-mandatory nature of the practice. Also, the ENVP variable has a minimum value of 0 meaning that most of the sampled companies did not report (at all) on environmental sustainability requirements in some of the financial years examined. It was also observed that there is wide dispersion in the variable of SOCP (with a standard

deviation value of 0.07) which further highlights an uneven spread of adherence to social sustainability reporting among the sampled companies.

On the normality status of the individual variables, the result showed that the variables of SOCP and ENVP fairly symmetrical and moderately skewed as their skewness and kurtosis values stood between -0.5 and 1. The remaining variables (ROA, ROE and ROCE) showed high Jarque-Bera values (709.34, 1063.56 and 379.56 respectively) indicating significantly departure from normality. These can be attributed to the small nature of the sample observation considering the limited number of listed oil and gas firms.

4.4 ESTIMATION RESULTS

The three regression equation comprising a total of 100 observations (for each model) in the ten-year period, 2007 to 2016, suggested possible presence of autocorrelation in the temporal dimension which could have rendered the accuracy of the estimation compromised and unreliable. The Cochrane-Orcutt autoregressive was then employed; convergence was achieved on the three models after 9, 10 and 58 iterations (respectively) with same 100 observations included on same ten-year period after adjustments based on autoregressive one, AR(1), procedure (see results in appendix). Following this procedure, the result produced an output devoid of autocorrelation issues as detailed in the results of the models.

Table 4.10 Regression Results of Model One, Two and Three

Dependent Variable: ROA (Model 1), ROE (Model 2), ROCE (Model 3)

Method: Least Squares

Periods included: 10 (2007–2016)

Included observations: 100

	Model One			Model Two			Model Three	
Variable	**Coefficient**	**t-Statistic (Prob.)**	**Variable**	**Coefficient**	**t-Statistic (Prob.)**	**Variable**	**Coefficient**	**t-Statistic (Prob.)**
C	0.059735	1.03(0.31)	C	0.440862	1.73(0.09)	C	4.541394	0.91(0.36)
SOCP	-0.235093	-0.95(0.34)	SOCP	-2.225505	-2.55(0.01)*	SOCP	-9.565158	-0.50(0.62)
ENVP	0.044936	0.15(0.88)	ENVP	0.25653	0.12(0.91)	ENVP	33.6454	1.22(0.23)
R^2	0.122		**R^2**	0.081		**R^2**	0.124	
Adjusted R^2	0.085		**Adjusted R^2**	0.042		**Adjusted R^2**	0.087	
F-stat (p-value)	3.3(0.014)		**F-stat (p-value)**	3.1(0.044)		**F-stat (p-value)**	3.36(0.013)	
Durbin Watson	2.04		**Durbin Watson**	2.01		**Durbin Watson**	2.03	

Source: Researcher's Computation using Eviews 9 (2018) *Significant at the 0.05 level.

The outcome of the model estimations are presented in Table 4.4 above. As shown, the overall statistical significance of the models are assured at the 5% level owing to the f-statistics values of 3.3, 3.1and 3.36 for model one, two and three respectively. This shows that, taken together, there is a linear relationship among the variables. On the percentage of the variations in ROA, ROE and ROCE that was accounted for by the two sustainability proxies (independent variables) taken together, the result showed a total of 12.2%, 8.1% and 12.4% respectively for each of the three models. The individual values of the adjusted R-squared which controls for the effect of the inclusion of successive explanatory variables on the degrees of freedom stood at about 8.5% (for model one), 4.2% (model two) and 8.7% for model three. This implies that a significant proportion of variances in the performance proxies (dependent variables) were not captured by the

model meaning that other factors not captured by the model explain a larger proportion of those variations. Implicationally, the models can be said to have low explanatory powers.

Further, a look at the slope coefficients of the independent variables of the three models shows that SOCP will most likely exert a negative impact on the three performance proxies (ROA, ROE and ROCE) used as dependent variables. However, while SOCP effect on ROA and ROCE are statistically insignificant, its effect on ROE passed the significant test at 5% levels due to its (SOCP) probability value of 0.01 in model two. Thus, a unit increase in social sustainability (SOCP) will lead to about 2.55 units significant decreases in return on equity (ROE). On the other hand, the variable of ENVP (environmental sustainability reporting) has a positive coefficient sign across the three models. This suggests that its effect on the three profit performance measures would most likely be positive. However, none among the three models are significant as their reported probability values of 0.88, 0.91 and 0.23 (for the three models respectively) are all greater than 0.05. On the Durbin-Watson statistics, the three models showed values that can be approximated to 2.0 which is an indication of zero evidence of autocorrelation among the residuals.

4.5 DISCUSION OF FINDINGS

4.5.1 The effect of Corporate Social and Environmental Sustainability on ROA

In line with the outcome of model one, the result showed that the effect of social and environmental sustainability on return on assets is not significant. This led to the acceptance of the first and fourth null hypotheses (Ho) which are both applicable to

model one. The coefficients and p-values of the two independent variables of model one (SOCP and ENVP) are -0.235093(0.34) and 0.044936(0.88) respectively as shown in table 4.4 (Regression Results). This goes to show that while SOCP has the tendency of causing a negative effect, the latter ENVP can assert a positive; howbeit, not significantly as the result shows.

The result of the SOCP (that is) the first hypothesis, tends to support most existing school of thoughts (such as Ezejiofor et al, 2016) who argue that engaging in sustainability practices goes with a high negative fiscal effect on the organization's resources, while that of ENVP (environmental sustainability) supports some existing group of studies (such as Kasum et al, 2011; and Ogundare, 2013) that projected a positive effect but could not establish its statistical significance at any level. Also, our result on both variables (SOCP and ENVP) in respect to return on assets (ROA) contradicts the findings of most foreign authors such as Amacha & Dastane (2017) and Maletic et al (2015) which found that both social and environmental sustainability have strong positive effect on firm financial performance. The reason for the non-significant nature of our result can be attributed to the overall poor sustainability disclosures of the sampled companies (at 13% on average), compared to most advance countries (such as US) that reports in the excess of 25% (Ameer & Othman, 2012).

4.5.2 The effect of Corporate Social and Environmental Sustainability on ROE

In model two; using same independent variables (SOCP and ENVP) against another performance measure (ROE) as dependent, our result maintained the same coefficient signs as in model one that is, negative for SOCP and positive for ENVP (see table 4.4: Regression results). However, while the former (SOCP) became statistically

significant at the five percent level, the latter did not pass the significant test at 5% owing to its large probability value of 0.91. This led to the rejection of the second hypothesis (Ho) as well as the acceptance of the fifth hypothesis (Ho). What this implies is that the effect of social sustainability performance on return on assets (ROE) is negative and statistically significant, while the effect of environmental sustainability on ROE is statistically insignificant.

The result of hypothesis two (SOCP and ROE) corroborates that of Aggarwal (2013) which found that components of social sustainability have significant but varying effect on firm financial performance. Studies by Surroca et al (2010); Yahya and Ghodratollah (2014) also found indirect significant relationships. What this portends is that highly socially sustainable firms will most likely experience a drop in some performance indices due to the cost implications at the early stages.

However, since engagement in sustainability practices enhances/boosts firm value as found by (Loh, Thomas and Wang, 2017), it will most likely mitigate the negative effect when sustained for a long period. Thus, there is likelihood that the impending benefits, when used as a competitive advantage, may outweigh the supposed negative effect on a long run. Further, considering the low sustainability compliance level among the sampled companies, the insignificant effect of environmental sustainability performance on ROE cannot be considered out of place. It also supports the findings of most recent studies such as Nobanee and Ellili (2017) which found that environmental sustainability disclosures have no significant effects on the performance of the company.

4.5.3 The effect of Corporate Social and Environmental Sustainability on ROCE

The outcome of the third model is similar to that of the first model. Here, the two sustainability proxies (social and environmental sustainability) exert non-significant effects on firm performance (proxied using ROCE). However, while SOCP showed inverse coefficient sign, ENVP showed a positive sign. This resulted in the acceptance of hypotheses three (Ho) and six (Ho) because both have probability values of 0.62 and 0.23 respectively (see table 4.4: Regression Results) which are greater than 0.05. It can be observed that while SOCP significantly affects ROE as showed in model two, its effects on ROCE is insignificant in model three. This can be attributed to the differing components of both performance measures, while the former captures only equity capital returns, the latter measures the returns on total capital while also considering the entire firm liabilities. The differing dimensions may have affected the outcome.

Thus, the implication of the outcome of model three is that the oil and gas firms that invest massively on social and environmental initiatives may likely not experience prompt significant change in financial performance in terms of return on capital employed (ROCE). The inverse insignificant effect of SOCP on ROCE supports the findings of Bansal (2005); Lourenco et al (2012), while the insignificant effect of environmental sustainability on ROCE can be related to the findings of Ezejiofor et al (2016); Nwobu (2015) which found a weak positive relationship between sustainability and firm profit performance. It, however, negates the findings of most recent studies by Nigerian authors such as Nnamani et al (2017), and Okafor (2018), which showed evidence that engagement in environmental activities and reporting improve the overall performance of the firm.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

Based on the outcome of the empirical analyses in the previous chapter in relation to the specific research objectives, the major findings from the study are:

i. That social sustainability reporting has negative effect on return on assets (ROA) but the effect is not significant.

ii. That the effect of social sustainability reporting of return on equity (ROE) is negative but its effect is statistically significant.

iii. That social sustainability reporting has negative effect of return on capital employed (ROCE) but the effect is insignificant.

iv. That environmental sustainability reporting has positive effect on return on asset (ROA) but its effect is not significant.

v. That the effect of environmental sustainability reporting on return on equity (ROE) is positive but the effect is not significant.

vi. That the effect of environmental sustainability reporting on return on equity (ROCE) is weakly positive for the reason that the effect is insignificant.

5.2 Conclusion

The study empirically examined the extent of sustainability reporting among the oil and gas companies listed in the Nigerian Stock Exchange (NSE). The major focus was to find out how social and environmental sustainability affects the performance of the sampled firms. The items of the social and environmental sustainability disclosure

assessment are based on a content analysis using the GRI-G4 implementation manual (2015d), while performance measures adopted included are return on assets (ROA), return on equity (ROE) and return on capital employed (ROCE). Findings from the descriptive analysis showed that the sampled companies scored 18% on the extent of social sustainability disclosure and about 8% on the environmental components of the sustainability index. Thus, it can be deduced that oil and gas sustainable companies place more emphasis on the social sustainability issues compared to environmental issues.

On the whole, considering the poor level of sustainability disclosures observed, it can be concluded that the oil and gas companies in Nigeria are low sustainability companies. On the result of the regression analysis, the study found that while the social aspect of sustainability have overall negative effect on all the three profit performance proxies, that of the environmental sustainability showed positive effects on the profitability measures across board. Howbeit, on the effect of social sustainability on return on equity (ROE) passed the significant test at 5% level of confidence. In general, out of the six research hypotheses tested, only hypothesis two (Ho2) was statistically significant. This goes to show that; overall, sustainability reporting practices of the Nigerian oil and gas companies does not strongly affect their performance, all things being equal. It can be concluded, therefore, that in terms of the effects of corporate social and environmental sustainability on the financial performance-indicators of the oil and gas companies in Nigeria, the only variable of interest is return on equity which was significantly affected by social sustainability performance. The other two financial performance proxies (ROA and ROCE) were not significantly affected by ether social or environmental sustainability.

5.3 Implication of the Findings

Flowing from the outcome of our statistical analysis, it appears evident that the effect of corporate sustainability reporting (in terms of its social and environmental components) on the financial performance of implementing firms is bi-directional and largely inconclusive. This position is being taken against the backdrop of the poor level of sustainability reporting compliance by the sampled firms, which may not have been enough to trigger a significant effect on the profit-performance proxies adopted. The implication of this is that studying the behaviours of same variables using highly sustainable companies may likely twist the outcome to an opposite direction. Also, the negative effect of the social aspect of sustainability reporting on all the performance proxies is an indication that socially sustainable firms may likely experience an initial marginal drop in financial performance, while the overall positive effect of environmental sustainability suggest an impending trigger of all performance indices, going forward. Thus, if these results continue to hold the near future, the implication is that majority of the oil and gas firms in Nigeria might become more conservative towards social and environmental sustainability reporting and may focus more on maximizing the economic aspect of the organizational goals. More so, since sustainability reporting is still largely voluntary than mandatory, the implication is that most management will likely choose to pursue and implement policies that enhance the shareholders wealth.

5.4 Recommendations

Based on the findings of this study, the following policy recommendations are put forward:

i. The relevant regulatory authorities should encourage sustainability reporting practices among Nigerian companies by aligning the existing global sustainability standards to reflect the social and environmental challenges peculiar in the Nigeria context.

ii. Despite the fact that sustainability reporting is still an evolving concept in Nigeria, its compliance level among companies can be rapidly enhanced if it is made mandatory to a specified magnitude rather than its current voluntary-nature.

iii. The external users of sustainability reports such as the shareholders, local communities, employees and other stakeholders should device appropriate channels by which their demands for sustainability reporting can be adequately pressed upon. By this, companies would feel the heat on the need to prioritize accountable and stewardship both economic-wise and sustainably-wise.

iv. There are indications from our study that engaging in social sustainability practices may result in financial disadvantages on the part of the firm ab initio, while there were also no clear evidence that engaging in environmental sustainability enhances performance significantly. Hence, it is recommended that organizations should imbibe appropriate strategic fiscal policies while investing on sustainability practices as the expected positive repercussionary effects on the firm financial performance may not be immediate.

5.5 Contributions to Knowledge

i. Considering that stakeholders are greatly concerned about issues relating to sustainability practices and reporting, while shareholders, creditors and researchers are increasingly inquisitive about its effect on firm performance; this study has contributed in closing the gap in knowledge of sustainability reporting in Nigeria and adding to the conclave of literature on how sustainability reporting affects performance. This is expected to be of great benefit to concerned stakeholders.

ii. To the best of the researcher's knowledge, this study is among the few that studied corporate sustainability reporting in Nigeria on a longer time-frame basis (ten-year-period), incorporating three different performance measures. It will no doubt act as a good reference point for further studies.

iii. In a bid to reconciling the conflicting evidences in previous studies, the study has provided empirical validation to some school of thought that argue that sustainability reporting may not yield immediate profitability gains to the company. This would be beneficial to management in streamlining their policies towards striking a balance between prioritizing both economic and sustainability stewardships.

5.6 Suggestions for Further Studies

i. The study focused only on the oil and gas companies listed on the Nigerian Stock Exchange (NSE). Considering the fact that there are some other companies in the oil sector that are not listed on the NSE, future researchers can incorporate both listed and non-listed companies as the activities of the both are capable of affecting the environment.

ii. One of the limitations of this study is that some oil and gas companies were inevitably excluded from the sample due to incomplete data for the period covered by the study (some were even not listed as at the study start year). This may affect the generalization of the outcome. Future studies can encompass the entire population using an unbalanced panel data approach as the estimation technique. This may contribute in enhancing the results and be more useful for generalization purposes.

iii. The explanatory powers of our models were relatively low as observed by the low adjusted r-squared values. This can be attributed to the use of only two independent variables in all the models. There is possibility that our results may have twisted by some unconsidered company-specific characteristics. Future studies can consider the inclusion of some firm specifics (such as size, ownership structure, age, etc) as either controlling variables or even as moderators in longitudinal data analysis as those can equally influence how the firm considers and values sustainability reporting issues.

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APPENDIX I: RESULTS OF DATA ANALYSIS

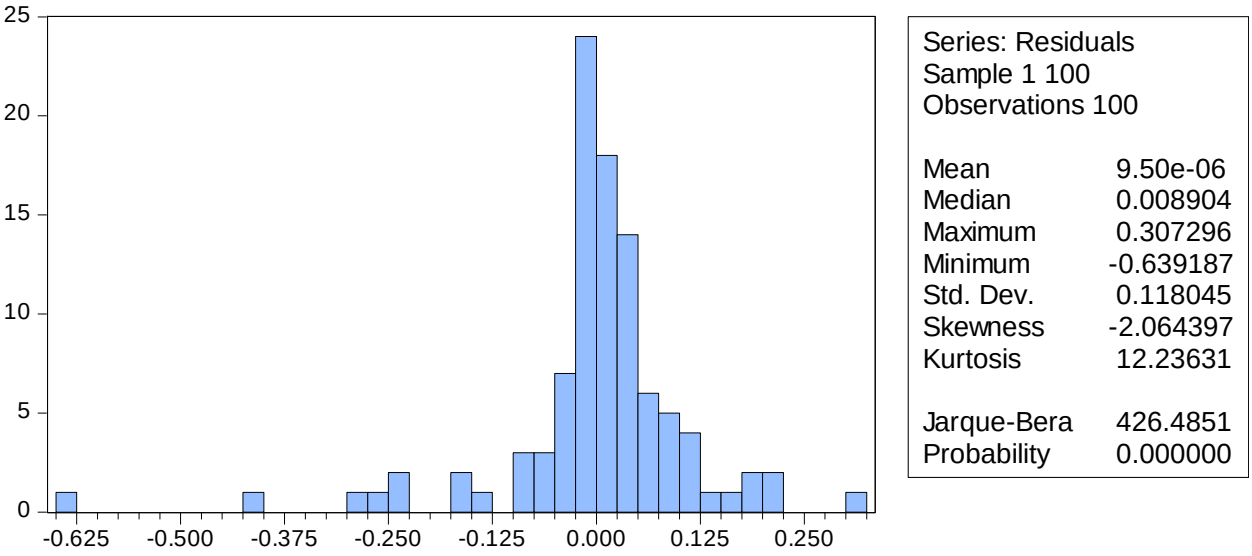
MODEL ONE

Dependent Variable: ROA
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 03/06/18 Time: 20:18
Sample: 1 100
Included observations: 100
Convergence achieved after 9 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.059735	0.057998	1.029945	0.3057
SCOP	-0.235093	0.246729	-0.952838	0.3431
ENVP	0.044936	0.296700	0.151454	0.8799
AR(1)	0.360502	0.057290	6.292623	0.0000

R-squared	0.121609	Mean dependent var	0.020184
Adjusted R-squared	0.084625	S.D. dependent var	0.125952
S.E. of regression	0.120504	Akaike info criterion	-1.344161
Sum squared resid	1.379527	Schwarz criterion	-1.213902
Log likelihood	72.20803	Hannan-Quinn criter.	-1.291443
F-statistic	3.288085	Durbin-Watson stat	2.042636
Prob(F-statistic)	0.014327		

Inverted AR Roots	.36



Source: Eviews 9 output (2018)

Variance Inflation Factors
Date: 03/06/18 Time: 23:28
Sample: 1 100
Included observations: 100

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.001634	10.24382	NA
SCOP	0.029358	7.001584	1.000063
ENVP	0.079726	4.172899	1.000063

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.247314	Prob. F(5,92)	0.0561
Obs*R-squared	10.88429	Prob. Chi-Square(5)	0.0537

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 03/06/18 Time: 23:36
Sample: 1 100
Included observations: 100
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001939	0.039261	0.049382	0.9607
SCOP	-0.032713	0.168078	-0.194632	0.8461
ENVP	0.051797	0.283670	0.182597	0.8555
RESID(-1)	0.293553	0.104156	2.818399	0.0059
RESID(-2)	0.040673	0.109137	0.372680	0.7102

R-squared	0.108843	Mean dependent var	1.29E-17
Adjusted R-squared	0.041037	S.D. dependent var	0.125007
S.E. of regression	0.122415	Akaike info criterion	-1.286182
Sum squared resid	1.378659	Schwarz criterion	-1.077768
Log likelihood	72.30909	Hannan-Quinn criter.	-1.201833
F-statistic	1.605224	Durbin-Watson stat	1.986593
Prob(F-statistic)	0.143732		

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.765228	Prob. F(2,97)	0.4680
Obs*R-squared	1.553282	Prob. Chi-Square(2)	0.4599
Scaled explained SS	11.60353	Prob. Chi-Square(2)	0.0030

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares

Date: 03/06/18 Time: 23:29
Sample: 1 100
Included observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.027548	0.019877	1.385898	0.1690
SCOP	0.008595	0.084262	0.101999	0.9190
ENVP	-0.171078	0.138856	-1.232053	0.2209

R-squared	0.015533	Mean dependent var	0.015470
Adjusted R-squared	-0.004765	S.D. dependent var	0.061958
S.E. of regression	0.062106	Akaike info criterion	-2.690421
Sum squared resid	0.374139	Schwarz criterion	-2.612266
Log likelihood	137.5211	Hannan-Quinn criter.	-2.658790
F-statistic	0.765228	Durbin-Watson stat	1.849371
Prob(F-statistic)	0.468016		

Source: Researcher's Computation using Eviews 9

MODEL TWO

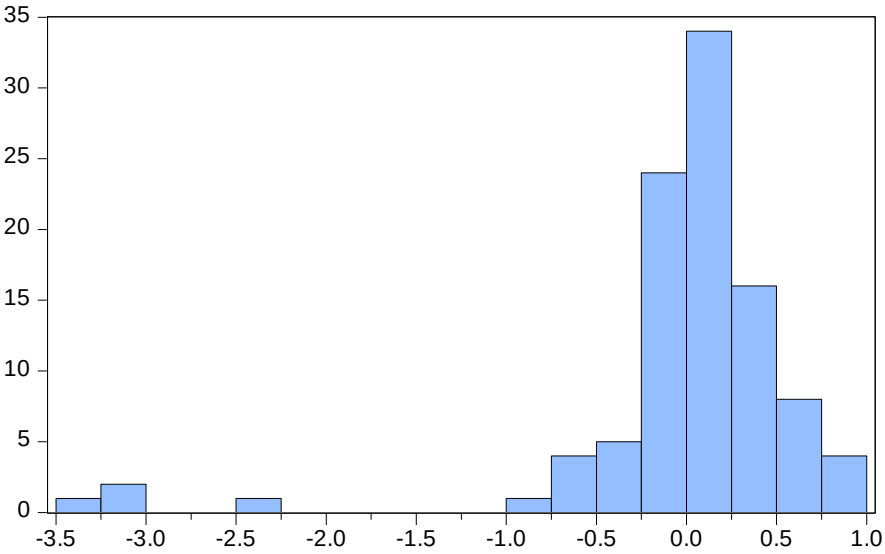
Dependent Variable: ROE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 03/06/18 Time: 20:18
Sample: 1 100
Included observations: 100
Convergence achieved after 10 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.440862	0.254814	1.730132	0.0869
SCOP	-2.225505	0.871798	-2.552775	0.0123
ENVP	0.256530	2.200812	0.116562	0.9075
AR(1)	0.248372	0.109697	2.264160	0.0258

R-squared	0.081070	Mean dependent var	0.015537
Adjusted R-squared	0.042379	S.D. dependent var	0.729498
S.E. of regression	0.713873	Akaike info criterion	2.213119
Sum squared resid	48.41336	Schwarz criterion	2.343378
Log likelihood	-105.6560	Hannan-Quinn criter.	2.265837
F-statistic	3.095290	Durbin-Watson stat	2.007813
Prob(F-statistic)	0.044443		

Inverted AR Roots	.25

Source: Researcher's Computation using Eviews 9



Series: Residuals	
Sample 1 100	
Observations 100	
Mean	7.89e-05
Median	0.089184
Maximum	0.998263
Minimum	-3.373195
Std. Dev.	0.699302
Skewness	-3.135145
Kurtosis	14.85166
Jarque-Bera	749.0767
Probability	0.000000

Source: Eviews 9 output (2018)

Variance Inflation Factors
Date: 03/06/18 Time: 23:30
Sample: 1 100
Included observations: 100

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.054188	10.24382	NA
SCOP	0.973733	7.001584	1.000063
ENVP	2.644292	4.172899	1.000063

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.753048	Prob. F(2,95)	0.0688
Obs*R-squared	5.478370	Prob. Chi-Square(2)	0.0646

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 03/06/18 Time: 23:31
Sample: 1 100
Included observations: 100
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.034616	0.229309	0.150959	0.8803
SCOP	-0.221828	0.976689	-0.227122	0.8208
ENVP	0.098420	1.599724	0.061523	0.9511
RESID(-1)	0.224459	0.103302	2.172849	0.0323
RESID(-2)	0.040678	0.103813	0.391840	0.6961

R-squared	0.054784	Mean dependent var	8.33E-17
Adjusted R-squared	0.014985	S.D. dependent var	0.719928

S.E. of regression	0.714514	Akaike info criterion	2.214278
Sum squared resid	48.50034	Schwarz criterion	2.344536
Log likelihood	-105.7139	Hannan-Quinn criter.	2.266996
F-statistic	1.376524	Durbin-Watson stat	1.978695
Prob(F-statistic)	0.247915		

Heteroskedasticity Test: ARCH

F-statistic	0.099376	Prob. F(1,97)	0.7533
Obs*R-squared	0.101321	Prob. Chi-Square(1)	0.7502

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 03/06/18 Time: 23:32
Sample (adjusted): 2 100
Included observations: 99 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.534617	0.199718	2.676859	0.0087
RESID^2(-1)	-0.031981	0.101451	-0.315240	0.7533

R-squared	0.001023	Mean dependent var	0.518272
Adjusted R-squared	-0.009275	S.D. dependent var	1.910198
S.E. of regression	1.919036	Akaike info criterion	4.161518
Sum squared resid	357.2218	Schwarz criterion	4.213945
Log likelihood	-203.9951	Hannan-Quinn criter.	4.182730
F-statistic	0.099376	Durbin-Watson stat	1.763787
Prob(F-statistic)	0.753257		

Source: Researcher's Computation using Eviews 9

MODEL THREE

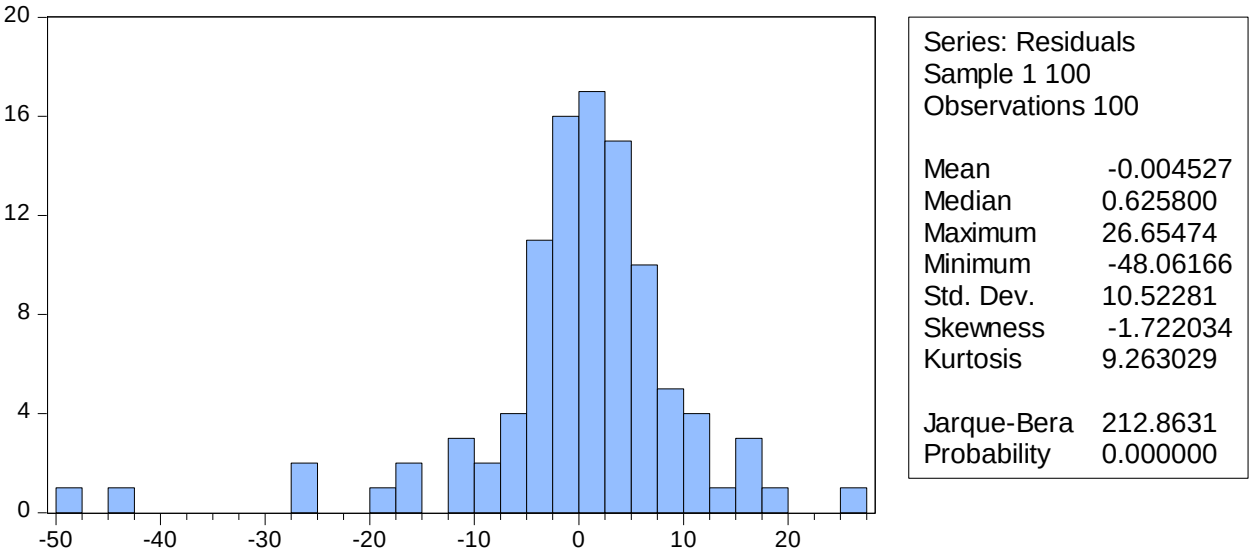
Dependent Variable: ROCE
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 03/06/18 Time: 20:19
Sample: 1 100
Included observations: 1T00
Convergence achieved after 58 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.541394	4.988130	0.910440	0.3649
SCOP	-9.565158	19.04634	-0.502204	0.6167
ENVP	33.64540	27.59497	1.219258	0.2258
AR(1)	0.370013	0.066716	5.546116	0.0000

R-squared	0.124049	Mean dependent var	5.420841
Adjusted R-squared	0.087167	S.D. dependent var	11.24324
S.E. of regression	10.74206	Akaike info criterion	7.636389
Sum squared resid	10962.22	Schwarz criterion	7.766647

Log likelihood	-376.8194	Hannan-Quinn criter.	7.689107
F-statistic	3.363380	Durbin-Watson stat	2.032573
Prob(F-statistic)	0.012769		

Inverted AR Roots	.37



Source: Eviews 9 output (2018)

Variance Inflation Factors
Date: 03/06/18 Time: 23:27
Sample: 1 100
Included observations: 100

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	13.11908	10.24382	NA
SCOP	235.7432	7.001584	1.000063
ENVP	640.1901	4.172899	1.000063

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.097611	Prob. F(2,97)	0.9071
Obs*R-squared	0.200855	Prob. Chi-Square(2)	0.9045
Scaled explained SS	0.749198	Prob. Chi-Square(2)	0.6876

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 03/06/18 Time: 23:26
Sample: 1 100
Included observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	91.81252	102.3186	0.897320	0.3718
SCOP	166.5703	433.7332	0.384039	0.7018
ENVP	-153.9744	714.7555	-0.215422	0.8299

R-squared	0.002009	Mean dependent var	109.6222
Adjusted R-squared	-0.018569	S.D. dependent var	316.7587
S.E. of regression	319.6861	Akaike info criterion	14.40210
Sum squared resid	9913322.	Schwarz criterion	14.48025
Log likelihood	-717.1048	Hannan-Quinn criter.	14.43373
F-statistic	0.097611	Durbin-Watson stat	1.524200
Prob(F-statistic)	0.907091		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.881418	Prob. F(7,90)	0.0818
Obs*R-squared	12.76528	Prob. Chi-Square(7)	0.0780

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 03/06/18 Time: 23:34
Sample: 1 100
Included observations: 100
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.135767	3.535984	-0.038396	0.9695
SCOP	-0.790426	15.39125	-0.051356	0.9592
ENVP	3.392958	25.27216	0.134257	0.8935
RESID(-1)	0.308929	0.105818	2.919445	0.0044
RESID(-2)	0.055249	0.111437	0.495790	0.6213

R-squared	0.127653	Mean dependent var	1.14E-15
Adjusted R-squared	0.040418	S.D. dependent var	11.20183
S.E. of regression	10.97312	Akaike info criterion	7.723413
Sum squared resid	10836.84	Schwarz criterion	7.983930
Log likelihood	-376.1707	Hannan-Quinn criter.	7.828849
F-statistic	1.463325	Durbin-Watson stat	2.006186
Prob(F-statistic)	0.173820		

Source: Researcher's Computation using Eviews 9

DESCRIPTIVE STATISTICS

	ROA	ROE	ROCE	SCOP	ENVP
Mean	0.020184	0.015537	5.420841	0.180564	0.079669
Median	0.035141	0.132420	6.362373	0.166667	0.094118
Maximum	0.303097	0.907611	28.56445	0.461806	0.140441
Minimum	-0.713574	-3.939688	-52.18395	0.041667	0.000000
Std. Dev.	0.125952	0.729498	11.24324	0.074079	0.044953
Skewness	-2.593361	-3.558686	-2.210560	0.837219	-0.600664
Kurtosis	14.97243	17.30371	11.45862	4.320600	2.077208
Jarque-Bera	709.3379	1063.555	379.5608	18.94887	9.561398
Probability	0.000000	0.000000	0.000000	0.000077	0.008390
Sum	2.018369	1.553710	542.0841	18.05642	7.966912
Sum Sq. Dev.	1.570516	52.68451	12514.64	0.543287	0.200060
Observations	100	100	100	100	100

Source: Eviews 9 output (2018)

APPENDIX II: DATA USED FOR ANALYSIS

Company	Year	Total Asset	Total Equity	Profit After Tax	SCOP	ENVP	ROCE	ROA	ROE
Capital Oil	2007	120,115	52,754	2,202	0.167	0.000	3.97	0.0183	0.041741
Capital Oil	2008	1,224,432	13,341	-39,413	0.167	0.000	-2.22	-0.0322	-2.95428
Capital Oil	2009	1,433,290	1,007,482	-43,546	0.167	0.121	0.87	-0.0304	-0.04322
Capital Oil	2010	1,839,023	1,143,582	-49,221	0.167	0.082	0.55	-0.0268	-0.04304
Capital Oil	2011	2,250,194	1,849,652	-53,532	0.167	0.106	0.45	-0.0238	-0.02894
Capital Oil	2012	2,726,696	2,025,829	-23,040	0.167	0.099	2.92	-0.0084	-0.01137
Capital Oil	2013	1,860,098	950,299	-475,530	0.146	0.140	-20.17	-0.2556	-0.5004
Capital Oil	2014	1,699,707	822,211	-131,161	0.125	0.138	-1.93	-0.0772	-0.15952
Capital Oil	2015	1,645,944	760,359	-61,851	0.125	0.122	-2.40	-0.0376	-0.08134
Capital Oil	2016	1,306,856	420,107	-340,252	0.188	0.104	-24.24	-0.2604	-0.80992
Conoil	2007	39,455,445	11,294,897	2,593,476	0.083	0.138	13.61	0.0657	0.229615
Conoil	2008	56,795,534	11,829,688	1,821,051	0.083	0.124	10.46	0.0321	0.153939
Conoil	2009	39,773,617	13,511,103	2,312,367	0.104	0.121	15.87	0.0581	0.171146
Conoil	2010	41,489,945	15,260,152	2,789,977	0.083	0.095	13.94	0.0672	0.182828
Conoil	2011	61,855,315	16,820,772	2,984,524	0.083	0.000	9.66	0.0483	0.177431
Conoil	2012	83,095,975	15,661,295	714,981	0.167	0.084	6.40	0.0086	0.045653
Conoil	2013	82,372,026	18,037,434	3,070,091	0.208	0.059	8.29	0.0373	0.170207
Conoil	2014	86,593,457	16,096,047	834,421	0.250	0.088	4.43	0.0096	0.05184
Conoil	2015	69,387,365	17,709,653	2,307,558	0.250	0.088	10.39	0.0333	0.130299
Conoil	2016	69,833,463	18,465,680	2,837,884	0.229	0.109	8.66	0.0406	0.153684
Eternaoil	2007	3,277,560	1,184,916	-135,480	0.146	0.107	-2.31	-0.0413	-0.11434
Eternaoil	2008	9,586,570	778,281	-406,646	0.146	0.138	0.11	-0.0424	-0.52249
Eternaoil	2009	10,273,602	3,902,315	-1,495,203	0.146	0.131	-7.07	-0.1455	-0.38316
Eternaoil	2010	9,278,500	4,623,820	722,737	0.146	0.132	18.98	0.0779	0.156307
Eternaoil	2011	14,711,813	5,834,979	1,211,156	0.146	0.101	14.62	0.0823	0.207568
Eternaoil	2012	33,212,850	6,397,105	946,356	0.146	0.095	5.80	0.0285	0.147935
Eternaoil	2013	18,253,144	7,110,709	703,196	0.188	0.101	9.94	0.0385	0.098893
Eternaoil	2014	13,029,370	8,420,172	974,366	0.188	0.113	6.30	0.0748	0.115718
Eternaoil	2015	28,565,409	9,684,305	1,278,073	0.208	0.124	6.44	0.0447	0.131974
Eternaoil	2016	31,690,081	10,828,227	1,477,559	0.208	0.115	18.72	0.0466	0.136454
Forte Oil (Ap)	2007	33,245,400	7,367,949	5,727,560	0.146	0.115	28.56	0.1723	0.777362
Forte Oil (Ap)	2008	71,659,655	6,962,802	5,103,116	0.146	0.107	10.60	0.0712	0.732911
Forte Oil (Ap)	2009	87,852,100	33,082,789	-9,158,927	0.167	0.096	-2.71	-0.1043	-0.27685
Forte Oil (Ap)	2010	69,029,503	25,378,780	-2,747,405	0.167	0.121	-1.74	-0.0398	-0.10826
Forte Oil (Ap)	2011	45,225,375	5,889,294	##########	0.229	0.090	-40.82	-0.4320	-3.31724
Forte Oil (Ap)	2012	42,512,938	7,582,842	1,007,507	0.188	0.099	7.05	0.0237	0.132867
Forte Oil (Ap)	2013	104,678,000	42,349,307	5,004,397	0.146	0.124	8.03	0.0478	0.11817
Forte Oil (Ap)	2014	139,238,298	44,334,669	4,456,617	0.167	0.121	7.34	0.0320	0.100522
Forte Oil (Ap)	2015	121,757,960	13,082,550	5,794,060	0.188	0.117	9.99	0.0476	0.442885
Forte Oil (Ap)	2016	140,756,492	43,333,577	2,890,430	0.042	0.138	8.18	0.0205	0.066702

Japaul Oil & Maritime Serv	**2007**	**4,879,694**	**1,531,255**	**378,116**	**0.104**	**0.101**	**10.26**	**0.0775**	**0.246932**
Japaul Oil & Maritime Serv	**2008**	**20,995,094**	**3,816,195**	**681,424**	**0.083**	**0.093**	**4.94**	**0.0325**	**0.178561**
Japaul Oil & Maritime Serv	**2009**	**21,287,608**	**5,188,560**	**730,903**	**0.104**	**0.123**	**5.01**	**0.0343**	**0.140868**
Japaul Oil & Maritime Serv	**2010**	**25,018,768**	**3,439,423**	**792,753**	**0.104**	**0.138**	**4.52**	**0.0317**	**0.23049**
Japaul Oil & Maritime Serv	**2011**	**27,274,499**	**4,714,716**	**980,438**	**0.104**	**0.118**	**0.53**	**0.0359**	**0.207953**
Japaul Oil & Maritime Serv	**2012**	**32,485,625**	**15,048,421**	**-6,775,365**	**0.104**	**0.138**	**-11.16**	**-0.2086**	**-0.45024**
Japaul Oil & Maritime Serv	**2013**	**38,776,602**	**15,237,484**	**239,746**	**0.167**	**0.107**	**5.34**	**0.0062**	**0.015734**
Japaul Oil & Maritime Serv	**2014**	**38,686,422**	**12,465,211**	**-2,638,494**	**0.167**	**0.115**	**2.32**	**-0.0682**	**-0.21167**
Japaul Oil & Maritime Serv	**2015**	**33,889,616**	**3,488,501**	**-8,036,923**	**0.167**	**0.126**	**-11.93**	**-0.2372**	**-2.30383**
Japaul Oil & Maritime Serv	**2016**	**30,048,162**	**18,552,960**	**##########**	**0.167**	**0.000**	**-52.18**	**-0.7136**	**-1.1557**
Mobil Nig	**2007**	**18,560,849**	**2,248,348**	**1,131,103**	**0.188**	**0.059**	**10.98**	**0.0609**	**0.503082**
Mobil Nig	**2008**	**19,914,911**	**2,837,062**	**1,718,579**	**0.188**	**0.110**	**14.80**	**0.0863**	**0.60576**
Mobil Nig	**2009**	**22,069,761**	**4,176,545**	**2,841,963**	**0.146**	**0.088**	**20.81**	**0.1288**	**0.680458**
Mobil Nig	**2010**	**14,829,710**	**5,958,683**	**3,885,610**	**0.167**	**0.059**	**23.57**	**0.2620**	**0.652092**
Mobil Nig	**2011**	**26,973,754**	**4,497,588**	**4,082,059**	**0.292**	**0.120**	**22.24**	**0.1513**	**0.907611**
Mobil Nig	**2012**	**33,563,722**	**6,589,968**	**2,878,299**	**0.188**	**0.128**	**13.04**	**0.0858**	**0.43677**
Mobil Nig	**2013**	**40,728,522**	**9,537,631**	**3,480,785**	**0.188**	**0.131**	**12.95**	**0.0855**	**0.364953**
Mobil Nig	**2014**	**49,226,575**	**13,549,450**	**6,392,790**	**0.208**	**0.096**	**17.53**	**0.1299**	**0.471812**
Mobil Nig	**2015**	**54,072,089**	**15,363,401**	**4,872,929**	**0.229**	**0.125**	**13.00**	**0.0901**	**0.317178**
Mobil Nig	**2016**	**61,701,329**	**21,457,495**	**8,154,293**	**0.229**	**0.109**	**19.48**	**0.1322**	**0.380021**
Mrs(Texaco Chevron)	**2007**	**20,936,575**	**4,045,355**	**1,959,314**	**0.146**	**0.000**	**14.30**	**0.0936**	**0.484337**
Mrs(Texaco Chevron)	**2008**	**11,330,442**	**1,915,015**	**-305,726**	**0.146**	**0.000**	**-1.99**	**-0.0270**	**-0.15965**
Mrs(Texaco Chevron)	**2009**	**13,743,319**	**2,965,925**	**1,721,283**	**0.146**	**0.000**	**6.33**	**0.1252**	**0.580353**
Mrs(Texaco Chevron)	**2010**	**41,080,104**	**18,528,746**	**2,887,683**	**0.146**	**0.000**	**4.72**	**0.0703**	**0.155849**
Mrs(Texaco Chevron)	**2011**	**72,700,238**	**18,988,685**	**1,413,242**	**0.146**	**0.000**	**1.56**	**0.0194**	**0.074425**
Mrs(Texaco Chevron)	**2012**	**55,595,688**	**19,054,010**	**378,755**	**0.167**	**0.059**	**2.81**	**0.0068**	**0.019878**
Mrs(Texaco Chevron)	**2013**	**65,694,626**	**19,629,147**	**634,418**	**0.104**	**0.059**	**5.95**	**0.0097**	**0.03232**
Mrs(Texaco Chevron)	**2014**	**57,846,626**	**20,218,121**	**746,404**	**0.188**	**0.059**	**4.20**	**0.0129**	**0.036918**
Mrs(Texaco Chevron)	**2015**	**66,893,741**	**20,977,324**	**935,625**	**0.188**	**0.029**	**4.99**	**0.0140**	**0.044602**
Mrs(Texaco Chevron)	**2016**	**81,364,815**	**22,163,841**	**1,465,905**	**0.188**	**0.088**	**4.82**	**0.0180**	**0.066139**
Anino International	**2007**	**97,849**	**84,625**	**4,002**	**0.063**	**0.088**	**3.02**	**0.0409**	**0.047291**
Anino International	**2008**	**89,720**	**63,859**	**8,846**	**0.063**	**0.000**	**2.51**	**0.0986**	**0.138524**
Anino International	**2009**	**110,453**	**78,212**	**9,302**	**0.042**	**0.000**	**0.90**	**0.0842**	**0.118933**
Anino International	**2010**	**121,034**	**86,749**	**8,080**	**0.083**	**0.000**	**3.20**	**0.0668**	**0.093142**

Anino International	**2011**	**140,819**	**93,334**	**12,284**	**0.083**	**0.059**	**-4.39**	**0.0872**	**0.131613**
Anino International	**2012**	**174,285**	**100,435**	**42,099**	**0.083**	**0.029**	**5.66**	**0.2416**	**0.419167**
Anino International	**2013**	**188,692**	**161,075**	**4,825**	**0.192**	**0.059**	**4.16**	**0.0256**	**0.029955**
Anino International	**2014**	**198,223**	**166,593**	**5,518**	**0.148**	**0.029**	**4.61**	**0.0278**	**0.033123**
Anino International	**2015**	**285,833**	**118,218**	**53,873**	**0.208**	**0.029**	**6.43**	**0.1885**	**0.455709**
Anino International	**2016**	**296,140**	**196,140**	**89,759**	**0.174**	**0.029**	**14.34**	**0.3031**	**0.457627**
Oando	**2007**	**162,684,055**	**47,416,277**	**5,480,415**	**0.250**	**0.000**	**4.99**	**0.0337**	**0.115581**
Oando	**2008**	**287,777,699**	**44,878,733**	**8,343,325**	**0.250**	**0.000**	**7.43**	**0.0290**	**0.185908**
Oando	**2009**	**315,748,049**	**53,319,124**	**10,096,979**	**0.188**	**0.000**	**8.01**	**0.0320**	**0.189369**
Oando	**2010**	**325,986,108**	**95,192,266**	**14,374,966**	**0.208**	**0.059**	**9.22**	**0.0441**	**0.15101**
Oando	**2011**	**405,644,465**	**92,764,986**	**346,643**	**0.219**	**0.029**	**6.57**	**0.0009**	**0.003737**
Oando	**2012**	**515,063,788**	**##########**	**10,786,317**	**0.250**	**0.088**	**7.31**	**0.0209**	**0.102381**
Oando	**2013**	**591,896,939**	**##########**	**-4,676,265**	**0.292**	**0.071**	**3.78**	**-0.0079**	**-0.0288**
Oando	**2014**	**889,372,557**	**45,506,703**	**##########**	**0.462**	**0.112**	**-14.90**	**-0.2016**	**-3.93969**
Oando	**2015**	**946,321,309**	**50,893,926**	**##########**	**0.313**	**0.077**	**2.25**	**-0.0330**	**-0.61299**
Oando	**2016**	**991,544,975**	**##########**	**##########**	**0.310**	**0.077**	**3.28**	**-0.0260**	**-0.13417**
Total Nigeria	**2007**	**35,496,956**	**6,338,944**	**3,255,410**	**0.231**	**0.029**	**13.82**	**0.0917**	**0.513557**
Total Nigeria	**2008**	**41,770,668**	**7,268,984**	**4,393,162**	**0.310**	**0.059**	**16.22**	**0.1052**	**0.604371**
Total Nigeria	**2009**	**49,700,803**	**6,982,835**	**3,968,059**	**0.365**	**0.059**	**13.44**	**0.0798**	**0.568259**
Total Nigeria	**2010**	**54,601,360**	**8,929,188**	**3,971,917**	**0.295**	**0.109**	**11.44**	**0.0727**	**0.444824**
Total Nigeria	**2011**	**58,719,810**	**10,026,215**	**3,813,202**	**0.295**	**0.101**	**11.47**	**0.0649**	**0.380323**
Total Nigeria	**2012**	**76,067,065**	**11,301,914**	**4,670,917**	**0.267**	**0.029**	**11.40**	**0.0614**	**0.413285**
Total Nigeria	**2013**	**79,403,587**	**13,240,785**	**5,334,091**	**0.208**	**0.029**	**12.72**	**0.0672**	**0.402853**
Total Nigeria	**2014**	**95,512,428**	**13,929,778**	**4,423,733**	**0.347**	**0.102**	**8.56**	**0.0463**	**0.317574**
Total Nigeria	**2015**	**83,653,555**	**16,242,481**	**4,047,051**	**0.297**	**0.059**	**9.91**	**0.0484**	**0.249165**
Total Nigeria	**2016**	**136,928,160**	**23,570,097**	**14,797,095**	**0.333**	**0.076**	**15.49**	**0.1081**	**0.627791**

Source: Annual Report of the sampled companies in the relevant years