University of Cape Coast https://ir.ucc.edu.gh/xmlui

UNIVERSITY OF CAPE COAST

EFFECT OF CORPORATE GOVERNANCE ON ENVIRONMENTAL SUSTAINABILITY IN THE UPSTREAM OIL AND GAS SECTOR IN GHANA

BY

JOHN BOSCO BOADI-QUAYE

Dissertation submitted to the Institute of Oil and Gas Studies, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Business Administration degree in Oil and Gas Management.

MARCH 2021

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature……..... Date……

Name: John Bosco Boadi-Quaye

Supervisor's Declaration

I hereby declare that the preparation and presentation of this dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature……..... Date……

Name: Dr Kassimu Issau

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

ABSTRACT

The study was conducted to examine the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana. The target population included those in top management, senior staff and technical staff. The research utilized the explanatory research design with quantitative inquire to approach the study. The study sampled and surveyed 133 employees from five selected upstream oil and gas companies in Ghana through structured questionnaire administration. The finding of the study revealed that the state of effectiveness of the implementation of corporate governance systems as measured by corporate structure, corporate strategy and corporate social responsibility is generally very effective at the selected upstream oil and gas companies. Also, the results of the study revealed that changes in the components of corporate governance measured as corporate structure and corporate strategy collectively accounts for a statistically significant positive substantial improvement in environmental sustainability whereas corporate social responsibility accounted for a statistically significant positive moderate improvement in environmental sustainability in the upstream oil and gas sector in Ghana. It was therefore recommended that management of these selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) must continue to implement corporate governance that are modelled around the corporate governance programmes contextualized in the estimated model if they are to keep on improving the level of environmental sustainability of their companies.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

KEY WORDS

Corporate Governance

Corporate Structure

Corporate Strategy

Corporate Social Responsibility

Environmental Sustainability

Upstream Oil and Gas Sector

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

ACKNOWLEDGEMENT

I would like to express my profound gratitude to my supervisor, Dr Kassimu Issau for his professional guidance, advice, encouragement and goodwill which he guided this work. I would like to express my sincerest love to the late Dr Alex Adom who was my initial supervisor until his untimely demise. Finally, I would like to say a very big thank you to my beloved family and colleagues for their immense contribution towards the completion of this MBA programme.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

DEDICATION

To my beloved father, Mr Anthony Yaw Fosu

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

TABLE OF CONTENTS

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

LIST OF TABLES

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

LIST OF FIGURES

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

CHAPTER ONE

INTRODUCTION

As corporations' environmental impact comes under greater scrutiny by global financial, regulatory, and societal stakeholders; scholars in management studies have increasingly focused on the role of corporate governance as a tool for driving environmental initiatives. In these first two decades of the new century, a new way of approaching the strategic and management scheme of companies is being manifested. Organizations and for that matter, upstream oil and gas companies are moving towards a more sustainable environmental model with greater measures placed on accountability (Jiang & Kim, 2020). Both corporate governance and environmental sustainability have become an important variable to be considered if the performance of upstream oil and gas companies is to be achieved. Hence, the study was undertaken to examine the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana.

Background to the Study

The oil and gas industry has become the main industry and main contributor to the economies of countries in the world. However, the activities of oil and gas hold many major potential hazards to the environment and thus the environmental concerns are increasing over the recent years due to the impact of the rapid oil and gas activities around the world (Kovermann & Velte, 2019). Due to the occurrence of incidents related to the environment as a result from the impacts caused by activities done by companies especially oil and gas companies, this has contributed to the increment of awareness on

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

environmental across many countries over the world, including Ghana as the developing country (Solomon, 2020; Eljayash, James & Kong, 2012).

In turn, management scholars increasingly recognize that decisions around environmental sustainability are dictated by corporate governance arrangements, or how firms allocate decision-making to tackle this grand challenge (Walls & Berrone, 2017). In 2007, Komos Energy announced the discovery of oil in commercial quantities in Ghana's territory off the Gulf of Guinea. After several years of oil prospecting, the assessment of the offshore deposits along the coast of the Western Region meant Ghana could become an oil producing nation. In December of 2010, oil production formally started in Ghana and it was officially ushered into the league of oil-producing nations (Adusah-Karikari, 2015; Planitz & Kuzu, 2015). With an estimated yield of two billion barrels of oil and 5000 billion cubic feet of gas in the oil fields, and expected average revenue of one billion dollars annually, this industry is seen as a tremendous opportunity in the drive towards economic prosperity for Ghana (Adusah-Karikari, 2015).

According to Suleman and Zaato (2021), the upstream sector which is a part of the oil and gas industry in Ghana is responsible for exploration activities and producing the crude oil and natural gas deposits. The most dangerous and widespread impact of the activities done by these oil and gas industry within this context is pollution and it is associated with almost all activities throughout all phases of oil and gas activities from exploratory to refining, especially the upstream sector (Planitz & Kuzu, 2015). The amount of over 800 different chemicals from the wastewaters, hazardous waste and

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

gas emissions are generated during the upstream activities of drilling, production, refining and transportation (Oppong & Kwame Amoni, 2021).

Undoubtedly, business managers and corporate boards of directors are important stakeholders in the race to ensuring a sustainable environment, in a lot of sectors most importantly, the oil and gas sector. It is valuable, therefore, to assess and examine corporate governance of environmental protection behavior giving considerations to both strategic and operational decisions of oil and gas companies that are solely involved in upstream operations, especially in Ghana. In this regard, management scholars increasingly recognize that decisions around environmental sustainability are dictated by corporate governance arrangements, or how firms allocate decision-making, to tackle this grand challenge (Walls & Berrone, 2017). Such attention is warranted as environmental initiatives often require substantial investments with long term strategic implications and significant multi-level coordination among various corporate actors who are competing for firm resources.

Most of the theoretical perspective given in the area of corporate governance and environmental sustainability has considered the agency theory which explains the relationship between the shareholders (owners) and the management (agents) appointed to represent the best interest of the shareholders (Jensen & Meckling 1976; Hillman & Dalziel 2003). Again, the stewardship theory is also used in discussing the employee-employer relationship where the agents act in the interest of shareholders but rather, independently perform their functions to promote the going concern and effectiveness of the firm as if they were owners (Hillman & Dalziel 2003).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

The stewardship theory also posit that a board of directors' responsibilities includes overseeing senior management's environmental policy, strategic plans, finances, and ensuring that there are effective monitoring and reward systems (Villiers et al., 2011). This study adopted the agency and stewardship theories to explain the interrelationship that exist between corporate governance and environmental sustainability in the upstream oil and gas industry in Ghana.

Corporate governance (CG) is defined as the distribution of rights and responsibilities within the firm, which entails allocating power and resources to different corporate actors and managing the inevitable tensions among these actors (i.e., owners, management, board and employees) whereas environmental sustainability on the other hand refers to the set of corporate behaviors and strategies that "mitigate a firm's impact on the natural environment," which include "implementing products, processes, and policies that reduce energy consumption and waste, using ecologically sustainable resources, and employing environmental management systems (Zaman, Jain, Samara & Jamali, 2022; Bhagat & Bolton, 2019).

The corporate governance issues have been highlighted in recent years around the world due to its importance. Besides, due to the increasing amount of research on corporate governance over the recent years has led to a greater variation of definition of the corporate governance. Among the dimensions of the corporate governance include the corporate structure, corporate strategies and corporate social responsibility (Singh, Tabassum, Darwish & Batsakis, 2018). These variables give a broader and an in-depth meaning to corporate governance and also help to ascertain the true effect of corporate governance

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

on environmental sustainability in the upstream oil and gas sector. Hence, corporate governance of upstream oil and gas companies plays a major role in achieving environmental sustainability and comes with the added benefit of attracting capital investments and social legitimacy in the communities within which they operate (Alabdullah, Ahmed & Muneerali, 2019).

Again, members of corporate governance (i.e., institutional investors, top management team [TMT] and CEOs, and members of the board of directors) are the main decision makers within companies. Their characteristics, including behavioral and ideological aspects, as well as beliefs, behaviors, and attitudes, can work to promote or inhibit the adoption of organizational policies and strategies aimed at the development of environmental innovation projects (Zaman et al., 2022). García-Sánchez et al. (2020) show the structure and dispersion of the property are key configurations in the environmental proactivity of companies, and Hossain et al. (2022) find that the CEO makes most strategic corporate decisions related to the expectations of the stakeholders. For example, a CEO may act on issues related to carbon emission when the board of directors exerts pressure to mitigate environmental damage generated by production processes, which can impact the company's reputation.

Thus, there is the need to understand how corporate governance affects environmental sustainability in the upstream oil and gas sector which is viewed as one of the least researched areas in corporate governance studies (Masud, Kaium, Nurunnabi & Bae, 2018), which is the main motivation for this study. This study is underpinned by the argument that corporate governance especially in developing countries like Ghana should be

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

strengthened to ensure a safe and sustainable environment within the oil and gas sector. Hussain, Rigoni and Orij (2018) determined that the most important outstanding factor in corporate governance studies is the application of different governance mechanisms whiles being mindful of the structure and the environment within which such firms operate.

Once more, the debate on environmental sustainability has continued in political, activist, academic communities, and to some degree among corporate managers. There is some consensus that the current approaches to managing companies need to be mindful of their environmental impacts and responsibilities (Cancela, Neves, Rodrigues & Dias, 2020; Ong & Djajadikerta, 2018). Numerous laws have been enacted around the world to clarify the environmental responsibilities of companies. Most companies are working to be in compliance with these regulations (Shrivastava & Addas, 2014).

Corporate governance (GC) towards the ecosystem and the contribution that boards of directors of businesses make to environmental sustainability has attracted the attention of academicians, managers of other organizations, and policymakers. According to Han, Wang and Yan (2019) corporate governance contributions to sustainable development and various stakeholders (businesses, governments, civil environmental groups, and individuals) play an important role. Environmental sustainability is an important means of accelerating transparency and informing stakeholders about organizations' short- and long-term strategies and policies regarding the natural environment (Comyns, 2016; Perrault & Clark 2016; Chang et al. 2017).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

It is also evident that environmental issues have become an important parameter for upstream oil and gas firms to gain a competitive business advantage and reputation (Lu et al. 2015; Crifo, Escrig-Olmedo, & Mottis, 2019). Further, Lagasio and Cucari (2019) identified two reasons for increased environmental sustainability in the last decade. First, firms with environmental sustainability are more likely to gain better economic performance. Second, environmental sustainability enhances organizations' internal and external legitimacy by implementing recognized standards, such as Global Reporting Initiative (GRI) and the ISO 26000.

Statement of the Problem

The need to develop and boost the potentials of Ghana's upstream oil and gas activities has been advocated by policymakers, academics, and financial institutions since the discovery of oil and gas in commercial quantities (Suleman & Zaato, 2021). However, the surge in environmental degradation has been identified as a major challenge confronting the world in achieving sustainability in the oil and gas sector. Among other causes of this phenomenon, some empirical studies have emphasized poor corporate governance systems as some of the major drivers of this problem in Ghana (Ashun, 2019; Muhoro, 2019). Regardless of the importance of corporate governance in the development of the firm, and largely the economy, the oil and gas sector especially the upstream sector has been battling with major environmental issues ranging from disastrous oil spillages, destruction of ecosystems, and the negative impacts on communities within which oil and gas operations take place (Baral & Pokharel 2017; Perrault & Clark 2016; Delgado-Márquez et al. 2016; Cheng et al., 2014).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

During these widespread environmental issues, most upstream oil and gas companies in Ghana do not or have not yet developed a robust corporate governance structure and the leadership to comprehensively battle these environmental issues (Sarkodie & Strezov, 2018). In view of this, the study synthesizes and critically assesses the growing body of research at the intersection of corporate governance (CG) and environmental sustainability. Such an effort is important because we still lack a comprehensive and systematic understanding of this emergent body of inquiry and a holistic agenda for future research. Again, previous reviews have touched on related issues such as CSR (Jain & Jamali, 2016) or sustainability (Bansal & Song, 2017; Mura, Longo, Micheli & Bolzani, 2018), which encompass areas beyond the natural environment.

Other reviews have also focused on environmental sustainability but was limited to specific disciplines, such as human resource management (Renwick, Redman, & Maguire, 2013), innovation (Adams, Jeanrenaud, Bessant, Denyer & Overy, 2016), and entrepreneurship (Leonidou, Christofi, Vrontis & Thrassou, 2020) but not in the upstream oil and gas sector. This study fills these gaps by focusing on CG and its influence on environmental sustainability by considering the different structures (like corporate structure, corporate strategies and corporate social responsibility) which accurately measures the effectiveness of corporate governance.

To date, the associations between environmental sustainability and corporate governance have been empirically analyzed more in developed countries such as Australia, the United Kingdom, Russia, the United States, and other European countries (Ortiz-de-Mandojana et al. 2016; Perrault &

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Clark 2016) but not in the context of a developing country like Ghana. This is due to the importance these developed nations have placed on environmental issues. Also, such a study in a developing country like Ghana is of necessity since the different social and environmental context will provide these developing nations the right framework that is fit for accurately assessing and implementing the findings that will be revealed.

This study was also conducted to fill this gap by concentrating on a developing upstream oil and gas producing country like Ghana. This gap is important to fill because the context of analysis in developed countries can't be the same as that of developing countries because of the differences in socio-economic and environmental factors. Furthermore, there is a huge research gap and paucity of literature on the role that the different components of corporate governance (corporate structure, corporate strategies and corporate social responsibility) play in achieving environmental sustainability particularly, in the upstream oil and gas sector in Ghana (Yu & Ramanathan, 2015). This study conceptualized corporate governance as corporate structure, corporate strategies and corporate social responsibility to assess the effect on environmental sustainability. It is against this background that this study was conducted to examine the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana.

Purpose of the Study

The study was conducted to investigate the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Research Objectives

In the bid to achieve the overall purpose of the study, the following specific research objectives were pursued:

1. To determine the effectiveness of corporate governance in the upstream oil and gas sector in Ghana.
2. To evaluate the effect of corporate structure on environmental sustainability in the upstream oil and gas sector in Ghana.
3. To examine the effect of corporate strategies on environmental sustainability in the upstream oil and gas sector in Ghana.
4. To assess the effect of corporate social responsibility on environmental sustainability in the upstream oil and gas sector in Ghana.

Research Questions

In the bid to achieve the total purpose of the study and the specific objectives underpinning the study, the following research questions were as posed;

1. What is the effectiveness of corporate governance in the upstream oil and gas sector of Ghana?
2. What is the effect of corporate structure on environmental sustainability in the upstream oil and gas sector in Ghana?
3. What is the effect of corporate strategies on environmental sustainability in the upstream oil and gas sector in Ghana?
4. What is the effect of corporate social responsibility on environmental sustainability in the upstream oil and gas sector in Ghana?

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Significance of the Study

The study will be of immense benefit to government, policy makers, and management practitioners and to literature. The outcomes of this study would contribute immensely to augmenting policy formulation on the relevant measures of corporate governance towards ensuring a sustainable environment within the upstream oil and gas sector. This would enhance the relevance of such policies in improving the business growth and long-term sustainability of firms within the upstream oil and gas sector. It will also give the government the knowledge of providing the necessary logistics, infrastructure and funding to enhance and help in achieving a sustainable environment in the upstream oil and gas sector of the country.

Again, students and researchers may equally find this study very useful as it will provide information that can serve as a source of literature. Suggestions for further studies as well as research gaps may be offered for researchers to act upon to fully uncover the nature of interrelationships among the constructs, especially in the context of developing countries' upstream oil and gas context. The findings of the study may also contribute immensely to the creation and building of knowledge in Ghana's oil and gas framework. This may provide enough evidence to validate claims from other empirical studies conducted outside Africa and in developed countries.

Delimitations

The study sought to examine the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana. Geographically, this study covered and was limited to only upstream oil and gas companies in Ghana excluding all downstream companies. In terms of the

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

scope of the topic, the study corporate governance was conceptualized as corporate structure, corporate strategies, and corporate social responsibility. All top management including the unit heads were only selected as part of the sample size. An estimated 133 top management, senior and technical staff were only selected to participate in the study. The simple random sampling procedure was employed in this study to select the respective participants for the study (Malhotra & Birks, 2007).

Limitations

The major limitations that the researcher envisages include respondents' unwillingness to reveal the information. Some respondents may also feel reluctant to respond to the questionnaires and that can cause a delay for the researcher to finish on time. However, sound steps were taken to explain to respondents where there was confusion for clarity and understanding. In an ideal situation, a nationwide study is required. This would have given much assurance to any generalisations made. The time for the study and the resources available, however, made this unfeasible.

Definitions of Terms

Corporate Governance: Corporate governance is a system of rules, policies, and practices that dictate how a company's board of directors manages and oversees the affairs of the company.

Corporate Structure: Corporate structure refers to the organization of different departments or business units within a company.

Corporate Strategies: Corporate strategy is a unique plan or framework that is long-term in nature, designed with an objective to gain a competitive

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

advantage over other market participants while delivering both on customer/client and stakeholder promises (i.e. shareholder value).

Corporate Social Responsibility: It refers to how companies integrate social and environmental concerns in their business operations and interactions with their stakeholders.

Environmental Sustainability: It is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future.

Organisation of the Study

The study was organized mainly into five chapters. Chapter One is made up of an introduction which includes the background, problem statement, objectives, research questions, significance, delimitations of the study, limitations of the study and organization of the study. Chapter Two provides a review of related literature of the study with emphases on a theoretical framework as well as an empirical analysis of the study while the third chapter outlines the methodology of the study which includes major themes such as research design, research approach, study area, population, sampling and sampling procedures, data collection procedure, data instrument, data processing and analysis. Chapter Four analyses as well as discusses the results of data while the final chapter, Chapter Five presents information regarding the summary of the study, conclusions drawn in respect of the specific research objectives recommendations and suggestions for further studies.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviewed literature that was relevant in this research. The study was conducted to assess the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana. This chapter provided relevant materials relating to the key concepts under consideration in the framework of the study, theoretical review, empirical review and conceptual framework. The chapter is organized systematically to reflect the central theme of the study, review key concepts supporting this study and also identify dispositions in literature, as well as provide conceptual framework that highlights the interrelationships among the key constructs of the study.

Upstream Oil and Gas Industry in Ghana

According to the Ghana National Petroleum Corporation (GNPC), there are four oil and gas sedimentary basins in Ghana. These basins are the Saltpond Basin, the inland Voltaian Basin, the Accra-Keta Basin, and the Tano Basin, which includes the Cape Three Points Sub-basin (GNPC, 2014). The offshore basins cover approximately 60,000 square kilometers, while the Voltaian Basin, which is the only inland basin, occupies 103,600 square kilometers, constituting the biggest oil and gas sedimentary basin in Ghana (GNPC, 2014).

Foreign petroleum companies operating within these offshore and onshore sedimentary basins have been allocated quotas to explore, develop, and produce oil and gas. These sedimentary basins have been subdivided into

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

blocks that have been allocated to multinational petroleum companies for producing oil and gas (GNPC, 2014). While offshore sedimentary basins have been assigned to operators, the onshore Voltaian Basin is yet to be assigned to operators. The emergence of Ghana's upstream petroleum sector dates back to 1896 when hydrocarbon exploration began in the western region of Ghana following the discovery by explorers of inland petroleum seepages.

Between 1896 and 1957, shallow exploration wildcat drilling was conducted in 21 unproven areas. Of these areas, most of the shallow wells contained hydrocarbons (GNPC, 2014). Within the offshore environment, Ghana's first commercial well was drilled at Saltpond Basin in 1970. This well subsequently yielded commercial quantities of oil and gas, peaking at 4,800 barrels of oil per day (bopd) in 1978 (GNPC, 2014). From 1978 up to 2007, when significant quantities of oil and gas were discovered, Ghana's upstream petroleum sector was quiescent.

In 2007, the discovery of substantial deposits of oil and gas at the Jubilee field led to oil production that reached a significant scale in November 2010 (GNPC, 2014). The successful launching of oil extraction in the Jubilee field, which produces an average of 110,000 bopd, attracted other multinational petroleum companies to Ghana, resulting in a vibrant upstream oil and gas industry. To increase local participation in the upstream petroleum industry, L.I. 2204 was ratified in 2013. Commission of Ghana is mandated to regulate petroleum activities in the country's upstream oil and gas sector (Petroleum Commission, 2015).

Tullow Oil Ghana Limited and ENI Ghana Exploration and Production Limited are currently the leading multinational petroleum companies in

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

operation whose oil and gas development and production plans have been approved by the GoG. In compliance with L.I. 2204, both Tullow and ENI employ locals. In turn, the operators have employed foreign petroleum companies that are oil and gas product service line providers such as Halliburton, Baker Hughes, MODEC, and Schlumberger. According to the Independent Oil and Gas Information Resource Center (IOGIRC) Ghana, multinational petroleum companies operating in the country's oil and gas fields have been asked by the Petroleum Commission of Ghana to comply with the requirements of L.I. 2204 or else face sanctions (IOGIRC, 2015).

Theoretical Review

On the grounds of the theoretical underpinning concerning the study, a careful examination for suitable theories that accurately reveal the possible behaviour among the variables of interest in the study was perfectly carried out. The study adopted the Agency theory and the Stewardship Theory which proposes that exist a relationship between owners and management who are selected to serve the best interest of shareholders (Jensen & Meckling 1976) and the Resource Dependency Theory (RDT) which posits that organization depends on resources that originate from its environment and that organizations' behaviour is shaped by external resources required such as raw material. These theories are deeply explained in the following paragraphs.

Agency Theory

Agency theory was developed by Jensen and Meckling (1976). They suggested a theory of how the governance of a company is based on the conflicts of interest between the company's owners (shareholders) and its

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

managers. Each of these groups has different interests and objectives. The shareholders want to increase their income and wealth. Their interest is with the returns that the company will provide in the form of dividends, and also in the value of their shares. The value of their shares depends on the long-term financial prospects for the company. Shareholders are therefore concerned about dividends, but they are even more concerned about long-term profitability and financial prospects, because these affect the value of their shares (Dong, Karhade, Rai, & Xu, 2021).

The managers are employed to run the company on behalf of the shareholders. However, if the managers do not own shares in the company, they have no direct interest in future returns for shareholders, or in the value of the shares (Esmaili Kia, Najafnia & Oshani, 2019). Managers have an employment contract and earn a salary. Unless they own shares, or unless their remuneration is linked to profits or share values, their main interests are likely to be the size of their remuneration package and their status as company managers. Jensen and Meckling (1976) defined the agency relationship as a form of contract between a company's owners and its managers, where the owners (as principal) appoint an agent (the managers) to manage the company on their behalf (Elsayed & Elbardan, 2018).

As a part of this arrangement, the owners must delegate decision-making authority to the management. The owners expect the agents to act in the best interests of the owners. Ideally, the 'contract' between the owners and the managers should ensure that the managers always act in the best interests of the owners. However, it is impossible to arrange the 'perfect contract', because decisions by the managers (agents) affect their own personal welfare

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

as well as the interests of the owners (Vitolla, Raimo & Rubino, 2020; Jensen & Meckling 1976).

However, a conflict exists regarding the goals of the owner and agent due to managers' inclination toward controlling business policy and strategy to enhance their short-term interests, rather than to make long-term decisions. Further, Subramanian (2018) defines agency theory in terms of monitoring and incentives where a board is responsible for monitoring the top management's environmental policy, strategy, investments, and reporting. Thus, environmental sustainability significantly relates to the firm's long-term decisions and investments in environmental initiatives as enacted by top management.

Again, this management may be reluctant to incur expenses, such as R&D expenditures, unless these ensure an immediate financial benefit; management more commonly focuses on short-term investments that will enhance both financial and non-financial opportunities (Chan et al. 2014). Prior literature also indicates that owners with significant shares of a firm are more likely to spend their time on managerial performance evaluations (Desender & Epure 2015). Alternatively, a board's outside directors represent shareholders as well as varied stakeholders by closely monitoring the firm's environmental policy, regulations, and performance (Kyere, & Ausloos, 2021).

The relevance and importance of the agency theory to this study is that, the strong presence of a board of directors can reduce the agency problem by the monitoring, supervising, and controlling of management's short- and long-term interests and goals regarding ESRP (Ntim et al. 2013; Chang et al. 2017).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Therefore, environmental sustainability is the process of social and organizational engagement that differ across the country which organizational management uses in communicating with any circumstances mitigating agency conflicts as well as cost.

Again, it is by encompassing all stakeholders, instead of only taking into account the interests of shareholders as suggested in the agency theory of Jensen and Meckling (1976), that many corporate governance researchers have shifted their attentions to CSR, corporate strategies and corporate structure issues. Corporate governance is thereafter studied in light of different ownership structures and governance practices, mainly related to the board of directors.

Resource Dependency Theory (RDT)

Resource dependence theory was pioneered by Pfeffer and Salancik's (1978). The central thesis of this theory is that organisations attempt to exert control over their environment by co-opting the resources needed to survive (Pfeffer & Salancik, 1978). Resource dependency theory focuses on the role of board of directors in providing access to resources needed by the organisation and reduces uncertainty (Pfeffer & Salancik, 1978; Anderson, Dickhaus & Brown, 2021). A board must consider many policies and regulations to make decisions regarding a firm's short- and long-term environmental strategies and its daily operations.

As a result, the board should have more experienced directors to provide advice and suggestions, exchange information with outsiders, counsel insiders, and access to outside resources for organizational success (Jones, 2022; Jungin & Jae, 2021; Rossiter, 2021; Chamchong, 2019). Experienced

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

directors in a board are likely to act as business and technical experts and specialists (Lisimba & Lisimba, 2020). Pfeffer and Salancik (1978) in the resource dependence theory explain the influence of outside resources of the firm's decisions making.

Early studies using RDT to examine boards focus on board size and composition as indicators of the board's ability to provide critical resources to the firm. For example, Pfeffer (1972b) finds that board size relates to the firm's environmental needs and those with greater interdependence require a higher ratio of outsider directors. He concludes "that board size and composition are not random or independent factors, but are, rather, rational organizational responses to the conditions of the external environment" (Pfeffer, 1972b: 226) and confirms this assertion in a replication study (Pfeffer, 1973).

Moreover, Frooman (1999) and Hillman et al. (2009) indicates influential stakeholders have control over outside resources and could exercise their influence over management decisions. Further, Ntim et al. (2013) suggests that a company with risk-related disclosures can gain different competitive advantages because of their potential resources, and prior literature proves that resource-based directors possess this quality (Hillman et al. 2009). A resourceful board with expert directors creates strong relationships with various stakeholders, and understands their demands, interests, and concerns.

Therefore, engaging, monitoring, controlling and, accordingly, the success of environmental sustainability of firms depends on the directors' experience and diverse qualities and backgrounds (Hillman et al. 2009). The

Digitized by Sam Jonah Library

relevance of this theory to the study is that, supporting and managing environmental sustainability is costly relative to its many implicit and explicit factors, such as political, legal, financial, tax, and regulatory factors, but this may ensure many benefits that enhance management's expertise and the quality of their decisions and decrease capital costs (Cheng et al. 2014; Dhaliwal et al. 2014).

Again, Resource dependence theory may also be relevant to explain the governance effects of owner/managers in entrepreneurial firms (Alhassan, Zyambo & Boakye, 2021), as well as to explain potential benefits arising from different types of ownership; particularly, ownership by government authorities and large institutions. In general, therefore, the resource-dependence theory supports the view that corporate governance can be a means to acquire, generate, or maintain resources which result in competitive advantage for the firm. Again, different stakeholders pressure firms for better environmental sustainability, investment, policies, and strategies, where the sustainability can bridge the gap between stakeholders and management (Masud et al. 2017). This theory was used in this study because in presenting the resource dependency theory, Pfeffer and Salancik (1978) have analyzed the link between the attributes of boards of directors and their companies' CSR performance (Harjoto & Rossi, 2019).

The Concept of Corporate Governance

Corporate governance is defined as the code of practices by which a firm's management is held accountable to capital providers for the efficient use of assets (Kovermann & Velte, 2019). The corporate governance system aligns the organisation's mission, values and philosophy. Corporate

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

governance is an internal system encompassing policies, processes and people; serves the needs of shareholders and other stakeholders; and directs and controls management activities with objectivity, accountability and integrity. Corporate governance is the set of processes, customs, policies, laws, and institutions affecting the way a corporation (or company) is directed, administered or controlled (Jiang & Kim, 2020).

Corporate governance also includes the relationships among the many stakeholders involved and the goals for which the corporation is governed (Solomon, 2020). In contemporary business corporations, the main external stakeholder groups are shareholders, debt holders, trade creditors, suppliers, customers and communities affected by the corporation's activities (Koutoupis, Kyriakogkonas, Pazarskis, & Davidopoulos, 2021). Internal stakeholders are the board of directors, executives, and other employees. There are many different models of corporate governance around the world. These differ according to the variety of capitalism in which they are embedded.

The Anglo-American "model" tends to emphasize the interests of shareholders. The coordinated or multi-stakeholder model associated with Continental Europe and Japan also recognizes the interests of workers, managers, suppliers, customers, and the community. Corporate governance principles and codes have been developed in different countries and issued from stock exchanges, corporations, institutional investors, or associations (institutes) of directors and managers with the support of governments and international organizations (Bhagat & Bolton, 2019). As a rule, compliance with these governance recommendations is not mandated by law, although the

Digitized by Sam Jonah Library

codes linked to stock exchange listing requirements may have a coercive effect (Lund & Pollman, 2021).

For example, companies quoted on the London, Toronto and Australian Stock Exchanges formally need not follow the recommendations of their respective codes. However, they must disclose whether they follow the recommendations in those documents and, where not, they should provide explanations concerning divergent practices (Alabdullah, Ahmed & Muneerali, 2019; Aguilera, Marano & Haxhi, 2019). Such disclosure requirements exert a significant pressure on listed companies for compliance. One of the most influential guidelines has been the 1999 OECD Principles of Corporate Governance. This was revised in 2004. The OECD guidelines are often referenced by countries developing local codes or guidelines (Lund, 2019).

Building on the work of the OECD, other international organizations, private sector associations and more than national corporate governance codes, the United Nations Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR) has produced their Guidance on Good Practices in Corporate Governance Disclosure (Kyere & Ausloos, 2021). This internationally agreed benchmark consists of more than fifty distinct disclosure items across five broad categories; auditing, board and management structure and process, corporate responsibility and compliance, financial transparency and information disclosure, ownership structure and exercise of control rights (Shu & Chiang, 2020).

According to Robinett, Anantevrasilpa and Hickey (2013), corporate governance is a process by which business corporations are managed,

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

organized and directed to achieve desired organizational goals. It brings to focus a real sense of engagement and operation of the business organization (Ruwanti, Chandrarin & Assih, 2019). Fauzi and Locke (2012); Chancharat and Chancharat (2019), were of the view that the functionality of the corporate governance is apt to navigate and institute a sense of ownership and coordinated governance, which is geared towards enabling managers conduct themselves in an ethical manner and also, make excellent decisions that will increase the developmental agenda of the business corporation and benefit to stakeholders.

In the same vein, Irine and Indah (2017); Babatunji, Tze, Md and Abu (2020) recognized the fundamentality of corporate governance. Based on their study, they observed that corporate governance is the connection that holds together policy making, formulation and implementation of the business policy which gives direction and purpose to the organization and optimization for stakeholders' benefit. It represents a fundamental apparatus that correlates the various dealings and operations of the business with the concern of stakeholders in an organization (Ajala, Amuda & Arulogun, 2012; Akinleye, Olarewayu & Fajuyagbe, 2019).

In the views of Udeh, Abiahu and Tambou (2017), corporate governance in companies is operationalised as the equilibrium between social, economic objectives, as well as between communal and individual aims. In achieving the aforementioned variable balance, Odunayo (2019), explained that in the deployment of resources, transparency and accountability of executive and managerial power and an inclusive arrangement of stakeholders' interest is key to achieving this. Holistically, Akingunola,

Digitized by Sam Jonah Library

Adekunle and Adedipe, (2013), conceptualized corporate governance as a structural framework of an organization involving its operations, processes and codes of conducts including ethics that give the organization a clear direction towards optimizing its resources and achieving organizational goals for the greater good and benefit of its stakeholders.

Positive performance, progress, effective and efficient goal achievement can be obtained when business corporations place corporate governance as top priority which involves adherence to formulated rules, regulations and policy standards (Olayiwola, 2018). Arinze (2013) also concurs when he argued that corporate accountability, transparency, effective and efficient utilization of resources are enhanced by good corporate governance which ultimately leads to better competitive advantage of the firm and improvement in both financial and non-financial performance which increases stakeholders' confidence (Khurshed & Shahid, 2016; Osundina, Olayinka, & Chukwuma, 2016; Odunayo, 2019).

Corporate Structure

Zaripov, Murakaev, Novikov and Ryapukhin (2020) described corporate structure as a group of people occupying a formal structure of position to achieve a particular purpose. They are institutions that enable society to pursue goals that could not be achieved by individuals' action alone. A corporation is generally defined as a structure of relationships to get work done. Corporate structure is a social system involving interpersonal relationships. According to Danso, Fosu, Owusu- Agyei, Ntim and Adegbite (2021), the establishment of a corporate structure presupposes the absence of a

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

sole-proprietorship. It also assumes a level of operation that requires the joint effort of many persons to successfully execute a task or an assignment.

This underscores the need to specify the different tasks that should be carried out by different individual job (job descriptions), how it should be carried out (operating procedures), expected standards of performance, line of authority, etc., in order to avoid confusion and conflict. Corporate structure also requires the relationships and interactions between jobs; system of integration and coordination that would ensure corporate cohesion and, effective and efficient operations. Simply put, corporate structure defines the formal division, grouping, and coordination of job tasks (Makhmudov, 2020).

As far as a corporation is concerned, structures of different forms exist, and it is the consciousness of creating and applying structure chosen that brings in changes in a corporate's output (Dimitriou, 2021). Every management has to establish its own corporate structure for efficient handling of business activities. The term corporate structure has become very important in the business world today, which in other words has also distinguished different corporation in the world. Corporate structure can be seen as the rules that oversee the relationship between individuals or teams who try to achieve the corporate goals (Kruk, 2021). In corporations like the upstream oil and gas, employees' responsibilities most often are defined by what they do, who they report to, and for managers, who reports to them.

Also, put differently by another scholar, kuye (2004) referred jones (1995), in his book, that corporate structure is the formal system of task and reporting relationships that determines how employees use resources to achieve corporation goals. With the above definition, it shows that corporate

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

structure is essential for the conduct of business activities or relationships that exist in the corporation like task and reporting activities or relationships which dedicates how employee use available resource effectively to bring about efficient result (Sandu, Butorin & Kirova, 2021). The corporate structure can also be determined by internal factors and external factors of a company; in this case, these factors consist of formality, centralization, complexity of internal and external boundaries and technology (Kalowski, 2015) and changes in corporate structure which affects global markets (Ajagbe et al., 2015).

Corporate Strategies

A good strategy is put in place after a proper consideration of the strengths and weaknesses of the organisation in comparison to those of its rivals (Feldman, 2020). Menz, Kunisch, Birkinshaw, Collis, Foss, Hoskisson and Prescott (2021) defines a strategy as a long-term plan which seeks to ensure that the organisations' goals are attained. According to Hernandez and Menon (2021), three strategy levels exist: business, corporate or operational and functional level. In the corporate strategy level, the vision, firm's culture and corporate philosophy and goals are defined. There is a bridge between functional and corporate strategy is made possible by the business strategy level which involves decisions such as market segmentation, plant location and distribution channels while the functional level is concerned with the implementation.

It is therefore important to note that in formulating a strategy, upstream oil and gas firms must choose unique ways of doing things different from its competitors which enables them to offer more value to its customers and make

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

it different from the competitors thus giving it a competitive edge over its rivals (Hutsaliuk, Koval, Tsimoshynska, Koval, & Skyba, 2020). A competitive advantage thus makes it possible for firms to create more value for its customers and attain more profits (Hutsaliuk, Koval, Tsimoshynska, Koval, & Skyba, 2020). Again, Hutsaliuk, Koval, Tsimoshynska, Koval and Skyba (2020) postulates two ways through which a firm can attain a competitive edge over its competitors.

Through supplying a similar product as that of the competitor at a lower price or sell a commodity that is highly differentiated such that the buyer is motivated to purchase the product at a price that is higher than the additional production cost (Feldman, 2020). Like all other companies, listed companies' oil and gas sector operate in a very competitive environment. To survive the competition and thrive to achieve their set targets, listed companies require formulating strategies that differentiate them and create competitive advantage over their rivals (Hutsaliuk, Koval, Tsimoshynska, Koval, & Skyba, 2020).. This study therefore examined whether corporate governance is an effective tool that listed upstream oil and gas firms could use to different themselves, create a competitive advantage and therefore improve their performance.

The key strategic areas that the study examined was to determine the degree to which listed upstream oil and gas firms influence environmental sustainability in the upstream oil and gas sector by the practice of corporate governance which includes their production and operations, marketing strategies, financial planning and budgeting, product development, human resource strategies, expansion strategies and procurement strategies (Menz, Kunisch, Birkinshaw, Collis, Foss, Hoskisson & Prescott, 2021).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Corporate Social Responsibility

A Green Paper released by the European Commission defines Corporate Social Responsibility (CSR) as actions which allow companies to not only meet their legal obligations but also to go beyond and invest in human capital, in the environment, and in strengthening relations with stakeholders (Turnbull, 2015). Due to the environment shifting to a more digitized, transparent and connected form, many societies demand companies to utilize corporate social responsibility (CSR) (Iglesias et al, 2020). CSR is a broad business model that allows companies to monitor their impact on environmental responsibility, ethical responsibility, philanthropic responsibility, and economic responsibility (Kolyperas, Anagnostopoulos, Chadwick, & Sparks, 2016).

CSR allows companies to pursue charitable objectives in addition to maximizing profits. This way of operating enhances the aforementioned responsibilities instead of contributing negatively to the world (Fernando & Sutha, 2022). Moreover, the environmental responsibility within CSR focuses on companies operating as environmentally friendly as possible. This is done by either increasing the company's dependence on sustainable resources and renewable energy, reducing the pollution that the company emits during production and logistics, and offsetting negative environmental impact by funding research or planting trees (Stobierski, 2021).

Further, the ethical and philanthropic responsibilities cover the company's aim to vigorously improve both the world and society (Stobierski, 2021). According to Stobierski (2021), Corporate Social Responsibility is a concept often divided up into four types of responsibility such as the

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Environmental, Ethical, Philanthropic, and the Economical responsibility. These types of responsibility were created during the shift of businesses around the world moving from having a sole focus of maximizing profit, to today realizing that they need to focus on not just the financial parts but on the people and the planet as well as society (Stobierski, 2021). A business that focuses on incorporating Social Corporate Responsibility tends to also be able to use it as an influential marketing tool, since it can position the business positively with the consumer.

Also, Chaung and Huang (2016) continue explaining that a higher effort in environmental CSR directly leads to an increase in resources of green management actions internally within a business. Fukuda and Ouchida (2020) add to the discussion by presenting findings on how promoting CSR undoubtedly increases social welfare, which creates an engagement with the government to promote this type of engagement. This opens up an opportunity for emissions causing companies to, when their emissions reduction cost is minor, increase reputation as well as profit through engaging in social welfare at the same time as they are releasing emission.

Effectiveness of Corporate Governance

The need for good and effective corporate governance stems from the obligation of the corporation to fulfill the expectations of its stakeholders. For a corporation to fulfill its objectives, meet the expectations of different stakeholders it needs to perform (Flammer, Hong & Minor, 2019). Performance of a corporation is dependent on the effectiveness of the governance process, which is in turn dependent on the individuals involved in the process of governance. For effective governance of a corporation the

Digitized by Sam Jonah Library

Board of Directors need to perform (Vadasi, Bekiaris, & Andrikopoulos, 2019). In simple terms board performance means the effectiveness of the board in overseeing management and the affairs of the financial institution, and ensuring that risks accepted by the financial institution can be safely managed.

Any corporation, for instance the upstream oil and gas is governed by the Board of Directors and the Management. They are responsible for good/bad/effective/ineffective governance. Good corporate governance must therefore ensure

- Healthy relation between corporation and stake holders
- Should ensure compliance with set standards/code of governance
- Should ensure fairness and transparency in the corporation's dealings with its entities.

Good and effective corporate governance is very important for sustainable development and higher valuations of a corporation. Therefore, the quality of governance needs to be improving continuously (Jain & Bagga, 2021). Normally most of the Boards end up providing good but not effective governance. Effectiveness of Corporate Governance is normally mistaken to compliance of the Board, Management to the standards and guidelines defined for governing the corporation (Jain & Bagga, 2021).

Compliance with the standards and guidelines defined for governing the corporation only ensures good governance. Good governance is assumed by many to be effective governance. However, effective governance goes beyond mere compliance with codes/standards and is also linked to the performance of the corporation. Effectiveness needs to be measured for taking

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

meaningful steps to improve the performance of the corporation. The measurement of effectiveness is a challenging task as quite a few of the concerned factors are subjective in nature (Scherer & Voegtlin, 2020).

Corporate Structure and Environmental Sustainability

Structure refers to the relations between the components of a corporate whole (hatch, 2014). Corporate structure is the framework of the relations on jobs, systems, operating process, people and groups making efforts to achieve the goals. Corporate structure is a set of methods dividing the task to determined duties and coordinates those (Widani & Bernawati, 2020). Corporate structure is a method by which corporation activities are divided, organized and coordinated. The corporations create the structures to coordinate the activities of work factors and control the members' actions (Awadallah, 2020).

Corporate structure refers to the models of internal relations of organization, power and relations and reporting, formal communication channels, responsibility and decision-making delegation is clarified. Amold and Feldman (1986): Helping the information flow is one of the facilities provided by structure for the corporation (Fernando, Li & Hou, 2020). Corporate structure should facilitate decision making, proper reaction to environment and conflict resolution between the units. The relationship between main principles of organization and coordination between its activities and internal organizational relations in terms of reporting and getting report are duties of corporate structure (Oncioiu, Petrescu, Bilcan, Petrescu, Fülöp & Topor, 2020). Okpeku (2020) highlighted on the following corporate structures;

Digitized by Sam Jonah Library

- **The Board of Directors:** The board of directors oversees the operations of companies, whose fundamental purpose is to steer the organization to greater heights and performance based on strategic policy guidelines (Mohammad, Ibrahim, & Jamaliah, 2017). The role of the board of directors is derived from the lack of congruence between the interest of shareholders and managers evidenced by agency problem. The agency theory is founded on the idea that a business owner(s) employs a manager(s), with the aim of the agent acting for the benefit of the principal with delegated authority in decision making with a view to achieving the goals and objectives of the business. Egbunike and Abiahu, (2017), argue that, the agency theory tends to give some insights about the monopoly of power by the agents in decision making. They contend that, as organizations expand in size and finances, principals gradually lose control of the business empire to the agents, due to information asymmetric between the agents and the principal leading to a dysfunctional by the former. From the forging, the board of directors was instituted in businesses. From the concept of the agency theory, the board of directors plays a leading role in coordinating, controlling and monitoring of the business operations in order to align the interest of the managers and shareholders for the development and growth of the entity, leading to reduction in agency cost (Warrad & Khaddam, 2020). Thus, the link between the shareholders and the agents is the board of directors. The board in its capacity evaluates and examines management policy implementation, planning schemes for business growth, development,

Digitized by Sam Jonah Library

expansion, social interaction and the overall sustainability of the firm (Balachandran & Faff, 2015; OECD, 2015). The board of directors wields a moderating influence on irrational decision of managers (Chen & Huang, 2014) and they are considered a valuable mechanism that solves the agency problems which may arise due to control and ownership separation of the business (Fauzi & Locke, 2012). Julio and Babu (2020) argued that as a highest administrative body in an organization, their mandate is both external and internal involves regular supervision of top managers responsible for the implementation of policies made by the board. Similarly, Banzato and Volpp (2016) acknowledged the board superiority in the organization but also distinguished them as a small group of individuals whose decision making has both direct and indirect effects on the organization. According to Balc, Ilies, Cioban and Cuza (2013), the board members have an important mandate in ensuring good governance in the business, which relies heavily on different important board variables such as, the board diversity, the board size, the board independence, effectiveness, duality of CEO amongst others.

- **Board Size:** The size of the board of directors is an important factor in corporate governance, and it is not the same in all business organizations whether private or public, and this is dependent on the business size, its cultural set-up, and business type (Chancharat, Detthamrong, & Chancharat, 2019). In trying to find out the appropriate number that constitutes a board size, Fauzi and Locke (2012); Chancharat et al., (2019), argued that there is no single

Digitized by Sam Jonah Library

standard format for board composition, they further stated that based on the significance of the board size on organization's performance, a widely constituted size is necessary. Jantadej and Wattanatorn, (2020) opined in favour of large board size. He stated that a largely - constituted board will to great extents ensure efficiency and effectiveness of organizational functions, leading to an increase in information disclosure, accountability, and transparency of high level managers. On agency dilemma, Chancharat et al., (2019) argued from an agency perspective that a large board would help eliminate the conflict. The implication is that, with vast experience, skilled and informed individuals in the helm of affairs over policy decisions in the organization, all levels of management will be adequately supervised and controlled mechanism. Similarly, Vitolla, Raimo, and Rubino (2019), highlights the level of impact large board size has on the resources in the organization. These resources usually knowledge, skills, experiences and technical know-how which illustrate the composition of large board size are of great importance in ensuring greater performance and effective monitoring of operations and greater disclosure of information from top management (Vitolla et al., 2019).

- **Board Diversity:** Various explanations have been adduced to account for diversity in board composition. In the opinion of Rao and Tilt (2016); Naciti (2019), the diversity variable in the board of directors in an organization is characterized by a different set of attributes like the board composition, experiences of the members, their expertise in policy formulating for the organizations' progress. Naciti (2019)

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

argued that gender and national diversity form a basic feature of board diversity. This study will use gender diversity as a proxy for board diversity. Evidence from listed firms in the New York Stock Exchange according, to Wolfers (2015), reveals that amongst executive members, men outnumber women. This global trend is buttressed by the assertion of Joanna, Siri, and Jakub (2020). But in recent times, there has been a growing advocacy for more females' representation in a board (Chen et al., 2016; Cumming et al., 2015; Almor, Bazel-Shoham & Lee, 2019). Studies conducted by (Huang & Kisgen, 2013) concluded that women executives more circumspect than men in decision bnaking in an organization. The significance of gender diversity could be seen with regard to the variance between men and women in both cultural and social matters (Liao et al., 2015). Here, some studies (Cumming et al., 2015; Vitolla et al., 2019) highlighted the diverse alteration as regards their mode of interaction, skill set, cognitive ability, experience and even educational attainments. Furthermore, other studies (Fernández-Temprano & Tejerina-Gaite, 2020), have examined the value differences between both genders in the organization. More importantly, Baker, Pandey, Kumar, and Haldar (2020) illustrated the significance of women in an organization. This importance according to them, range from full commitment to the vision of the business, diligence in work ethics, good sense of coordination, and an establishment of an amiable environment within the board, which tends to improve the process of the decision making.

Digitized by Sam Jonah Library

- **Board Independence:** Independence of the board is a very crucial and important element in corporate governance. According to Ali (2016), the independence of an organizational board will enhance the formulation of unprejudiced decisions, which will relieve the organization from financial troubles. The independence of the board is manifest in the composition of its non-executive. As stated by Liao, Luo, and Tang (2015), the composition of a board with a large number of non-executives is able to supervise and monitor organization with utmost effectiveness and efficiency. This is because non-executive board members are not in direct contact with daily activities of the organization since they do not hold any official positions (Karim, Manab & Ismail, 2020). In terms of information flow between management and performance, Liao et al., (2015) opined that non-executive on the board proposed more options for improved organizational management. The independence of the board is primarily hinged on the inclusion of non-executive members. This is due to the notion that non-executives do not have a direct link with the CEOs and the executives whose operations do not depend on the activities of the later (Vitolla et al., 2019), hence, allowing them to be more independent in reviewing companies' financial and non-financial activities (Liao et al, 2015; Vitolla et al., 2019). On information disclosure and response, Al-Gamrh, Al-Dhamari, Jalan and Jahanshahi (2020) noted that nonexecutive members are more open and pronto indiscreet leakage of information, compared to their executive counterparts. Substantiating the usefulness of the nonexecutives, the

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

stakeholder theory reveals a crucial relationship that prohibits non-executives from espousing contrary views from his executive colleagues having related party affiliation to the firm (Al Amosh & Khatib, 2021).

Corporate Strategies and Environmental Sustainability

Strategy is often divided into corporate, business and operational strategy (Bansal, 2021). Corporate strategy is the highest-level strategy of the organization. Recent understanding is that corporate strategy really matters based on Bowman and Helfat (2001) variance decomposition study. Corporate strategy is defined, similarly to Duque- Grisales, Aguilera- Caracuel, Guerrero- Villegas and García- Sánchez (2020) and Sull et al. (2018) viewpoint, as a set of unique activities that guides critical choices and adds value to achieve the corporation's mission. In addition, corporate strategy creates the foundation on how the different parts of businesses are tied together, and it defines the common direction and scope of the organization.

Corporate strategy gives direction on the utilization of the common resources and developing them to right direction. Corporate strategy should also formulate and implement major goals and strategic projects taken by the corporation's top executives on behalf of owners (Cheng, Xie, Fang, & Mei, 2022). Corporate strategy is necessary because it affects the profitability of the whole corporation (Cardoni, Kiseleva & Lombardi, (2020). Often the top leaders struggle with corporate strategy because they lack clarity on how different parts of corporation fit together and create economic value (Sull et al. 2018).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

There is a common understanding that corporate strategy needs to be clear to execute it efficiently (Sull et al 2018; Adamides 2015). However, the roles of top executives and organizational project management however play a big part in effective corporate strategy implementation (Hyväri 2016). According to Parnell (2003), people should be engaged in strategy-formulation as early as possible. When formulating strategy involve everyone that is affected by asking them their input to strategic decisions (Peters & Simaens, 2020). If middle managers are part of the strategic discussion, they can then easily convert the strategy into actions (Jílková, 2021).

Likewise, top and senior management needs to identify patterns of changes and come up with the best solutions for them in the strategy implementation. Function managers need to have access to the key metrics that measure the key drivers of their business (Valeri, Matondang & Siahaan, 2020). In addition, middle managers need to have clear agendas and reporting process in strategy implementation. Managers need to have time to implement the strategy in their organization; due to strategy implementation is not happening in their free time or without constant working towards the goals (Nderitu, Waiganjo & Orwa, 2021).

Strategy needs to be executed in a disciplined way through every leadership team and connect to every employee's work-plans. All employees need to understand the strategy and they need to have individual contribution plans build around the company strategy (Smith, 2009). All the employees in different levels need to understand how their decisions and ways of working affect corporation´s bottom line (Harjito, Santoso & McGowan Jr, 2021).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Communication and target setting help to connect the strategic targets to individual level.

Corporate Social Responsibility (CSR) and Environmental Sustainability

Corporate Social Responsibility (CSR) is no longer a vague ideology; instead, it has become a reality and a vital part of business strategy for the leaders of many organizations all over the world (Engelbrecht, Heine, & Mahembe, 2017; MacLean & Webber, 2015). Mughal (2014) defines CSR is the persistent commitment by the businesses, regardless of their nature, to behave in a way that is in line with the ethics and contribute to the economic development, and declare it an integral part of the governance of every organization or business entity.

Perhaps the most widely used definition of corporate social responsibility is Carroll's pyramid of corporate social responsibility developed by Carroll (2015) and his framework has been utilised by several writers and researchers (Zaman, Jain, Samara & Jamali, 2022; Lyon & Maxwell, 2020). According to Carroll (2015), a firm is regarded as socially responsible if it is profitable, obeys the law, engages in ethical behaviour and gives back to society through philanthropy (Portney, 2020). Advantage (2020) summarises these four components of CSR as striving to make a profit (economic), obey the law (legal), be ethical (ethics) and be a good corporate citizen in its relationship with stakeholders (philanthropic).

Again, to Maroun (2020), economic and legal responsibilities are socially required, ethical responsibilities are socially expected and philanthropy is socially desired. Company owners are increasingly facing pressure from shareholders, employees, vendors, suppliers, civic community

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

representatives, and competitors to become socially and environmentally responsible (Dufays & Huybrechts, 2015). Shields and Shelleman (2015) disclosed the fundamental premise that people and communities expect companies to be socially responsible. Yuan, Lu, Tian & Yu, (2020) indirectly defended the concept of profit maximization, stating that profit maximization should serve as a motivating factor for owners to use their capital to contribute to society. Smith (2002) advanced the market system as an ethical one that may serve the common good.

Christopher (2018) argued that CSR focuses more on profit increase and creating shareholder wealth. Scholars and researchers have looked at the definitions of CSR from different angles, and, CSR guides decisions to improve the social and economic activities of companies (Dhaliwal et al., 2014; Sobhani, Amran & Zainudden, 2012). CSR is a commitment by the organization to act ethically and improve the quality of life of the workers and their families (Pasricha, Singh & Verma, 2018). The goal of CSR is to promote economic development in the local communities in which the company operates (Rolston, 2015; Yakovleva & Vázquez-Brust, 2012).

While CSR is a strategic tool for promoting profitability, it extends beyond the firms to impact all society members (Reed, Vidaver-Cohen, & Colwell, 2011). Global corporations like oil and gas companies use CSR as a tool to connect to the environment, socially and economically, as part of their value and culture, as it provides the basis of effective decision-making strategies and operations to create wealth and serve larger social needs. According to Costa and Menichini (2013), CSR is the universal remedy for solving global environmental degradation, poverty gaps, and social exclusion

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

in today's dynamic environment. Carroll (2015) asserted that CSR is a corporate act, by which the impacts of organizational activities on society are considered.

When upstream oil and gas companies engage in socially responsible activities (Balabanov, Balabanova, & Dudin, 2015; Humberd & Rouse, 2016), there is significant potential for extending the scope of CSR (Mencl, Wefaild, & Ittersum, 2016). According to Filatotchev and Nakajima, (2014), CSR often includes activities or programs that give back to the community as well as promote environmental sustainability. Babalola et al., (2016) viewed CSR as when companies comply with ethical obligations to consider employees, customers, communities, shareholder interests, and all aspects of the ecological influence of their organization. The perceptions of stakeholders on CSR tend to influence the extent of organizational engagement in socially responsible activities (Stouten, Rousseau, & De Cremer, 2018).

Although the definition of CSR is not always clear, the literature suggests that it is a general measure of how a firm serves other stakeholders, communities and the environment. Recent studies show that, through CSR activities, firms can not only generate favorable stakeholder attitude and better improve support behaviors but also earn reputation, strengthen stakeholder–company relationships, enhance stakeholders' advocacy behaviors (Lenz, Wetzel, Hammerschmidt & Can, 2017), gain traction in the evolving investor and consumer market, as well as, eventually, enhance firm value (Marti, Drescher, Martí-Ballester & Rovira-Val, 2013).

These facts align well with the notion that CSR enhances firm value. Skroupa (2020) reports that approximately 70% of high-net-worth millennials

Digitized by Sam Jonah Library

invest more money in companies with a higher level of CSR. Meier and Cassar (2020) demonstrate that the CSR activities of the world's 250 largest companies, according to the companies themselves, increased from 64% in 2005 to 92% in 2015. Brière, Peillex and Ureche-Rangau (2017) mention that the market scale of CSR mutual funds constituted more than US$8 trillion in assets under management in the United States in 2016.

Corporate responsibility has however produced mixed results according to some empirical research (Humberd & Rouse, 2016). Some results from the studies have put forward a positive outcome to a sustainable environment, while others concluded that the effects of CSR are adverse or insignificant (Mencl, Wefaild, & Ittersum, 2016). One setback relative to the abovementioned empirical studies was that their studies failed to make a distinction between past, concurrent, and after implementation regarding the economic performance of CSR, creating difficulty in making reliable inferences about the causatives of direction.

Environmental Sustainability

Environment in totality can be referred to as the surroundings where a business operates. Environment consists of various factors and conditions that affect the development of a business (Oláh, Aburumman, Popp, Khan, Haddad & Kitukutha, 2020). It determines what an individual or an organisation can achieve. An organisation exists in the environment. No firm is an island or operates in vacuum and therefore needs environment to survive its existence. Organizations are to consider the environment while setting their goals and carrying out their operations (Eruemegbe, 2015). It provides inputs to the firms and receives their outputs. In a nutshell, environment provides all the

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

elements a firm needs to support its existence including the market for its products and services (Sun, Mohsin, Alharthi, & Abbas, 2020).

Sustainability on the other hands can be referred to as the ability to maintain something for future use. There are several definitions of sustainability (Ehrenfeld, 2008). It also means not making the future generation suffers the adverse effect of the actions of previous generations. The concept of sustainability development, corporate social responsibility, sustainability and triple bottom line are often used synonymously though they have different historical backgrounds (Ucheagwu, 2019). However, they all aim at being ethically, socially, environmentally and economically responsible. At firms` level, sustainability encompasses economic, social and environmental sustainability which can be translated into the '3Ps' namely profit, people and planet respectively (Adedoyin, Alola & Bekun, 2020).

Environmental sustainability is a component of sustainability practices. From the explanations of environment and sustainability above, environmental sustainability is the ability to meet the needs of individuals and firms in the environment without adversely affecting the capacity to meet future needs. It is crucial to social, economic and governance sustainability. Specifically, environmental sustainability means meeting the needs of current and future generations without jeopardizing the health of the ecosystem (Smith, 2020). Organizations operate in ecological environment and their operations do have destructive impact on the ecosystem (Okafor, 2018). Some firms engage in proactive measures to ensure environmental management of pollutions and wastes while others don't.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

In this study, the concept of environmental sustainability is used when we want to talk about the ability of the environment to remain productive and resilient in supporting the livelihood of humans: that is to say its relation to the ecosystem integrity and the capacity of the natural environment (De Giacomo & Bleischwitz, 2020). This implies that the resources should be studied to analyse when they would rejuvenate to ensure that the harvesting periods are times to avoid its depletion while ensuring that the waste in the environment is not more than the ecosystem can contain (Evers, 2018). Du and Kang (2016) identify some of the changes in climate as the variations in ice and sea levels, global warming, ocean acidification, and increasing greenhouse effects.

However, very little literature exists on the extensive effect of poor environmental management on our societies today. The proactive measures include emission reduction, waste treatment, reduction of pollution, production of quality products, conservation of energy, and reuse of materials and treatment of water. According to Agan, Han (2021), disposal of waste without treatment can cause air pollution and contamination of ground water. In the long-run, engaging in environmental sustainability will save companies some expenses.

For instance, a firm that is energy efficient will be able to save substantial amount from its energy expenses. In the modern business world, investors and customers are aware of environmental and social issues. They will prefer to be associated with and invest in environmentally sustainable businesses (Pettinger, 2018). Environmental sustainability will rather increase the profitability of companies than having a negative impact on them. This is

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

because there will be reduction in expenses (such as cost of compensating for destruction and cost of litigation) and increase in competitive advantage.

Empirical Review

Effectiveness of Corporate Governance

In the study conducted by Suleman and Zaato (2021), the study sought to examine local content implementation and development in Ghana's upstream oil and gas sector for sustainable development: contemporary issues on policy management. The main purpose of the study was concentrated on how Ghana can use local content policy in upstream oil and gas operations to maximum economic and social benefits for the good of the Ghana government, citizens, and the Multinational Oil Companies. To address that question, comprehensive analysis of local content laws and policies and stakeholder consultations were conducted.

The study further argued that an effective local content policy towards achieving sustainability in the upstream oil and gas industry demands balancing the needs of policymakers, local communities, multinational oil companies, and regulators to succeed. The study recommended that a local content implementation master plan; active participation of key stakeholders (government, citizens and multinational oil companies); and integration of forward and backward linkages in the implementation of Ghana's upstream local content laws and policies.

Effect of Corporate Governance on Environmental Sustainability

Further, Olayinka and Owolabi (2021) examined corporate governance and environmental sustainability reporting from the Nigerian perspective. The study explored the effect of corporate governance dimensions of board size,

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

board independence, chief executive officer (CEO) duality, female directorship and board ownership on environmental sustainability reporting. The study adopted ex-post facto research design. The population of the study comprised 169 quoted companies on the Nigerian Stock Exchange (NSE) as at December 31, 2018. Samples of 42 quoted companies were selected through stratified and purposive sampling techniques for the period of 10years (2010-2019).

Data were sourced from published audited annual report and accounts of the sample companies. Data were analyzed using descriptive and inferential statistics. The findings revealed that corporate governance (CG) had positive and significant effect on environmental sustainability reporting (ENSR) of selected quoted companies in Nigeria (Adj R2 = 0.178, Wald-Stat = 80.23, $p < 0.05$). Board size, board independence and female director have positive and significant effect on ENSR (BS = 0.141, t-test = 6.176, $p < 0.05$, BI = 0.120, t-test = 2.955, $p < 0.05$, FD = 0.133, t-test = 4.965, $p < 0.05$).

However, CEO duality has positive and insignificant effect on ENSR while board ownership has negative and insignificant effect on ENSR (CD = 0.046, t-test= 1.800, $p > 0.05$ and BO = -0.001, t-test= -0.453, $p > 0.05$). The study concluded that corporate governance has a significant effect on environmental sustainability reporting in quoted companies in Nigeria. The shareholders should include more female and independent directors on board, as a greater proportion of female directors will boost environmental sustainability reporting. Also, consideration for board membership should not be based on share ownership and the role of chairman and CEO should be separated.

Digitized by Sam Jonah Library

Okpeku (2020) conducted a study on the effect of corporate governance on company's financial Performance in the Nigeria Banking sector. The study was motivated to examine the effect of corporate governance on corporate financial performance using the stakeholder's theory in the context of selected commercial banks in Nigeria. The study's objectives were to examine the influence of board size, board gender diversity, board independence, and board effectiveness on financial performance measures, like Return on Assets (ROA) and Return on Equity (ROE). The study utilized the quantitative research approach. Data were also collected from annual reports of the selected banks from 2015 to 2019. Multiple regression model was employed to analyze data obtained from the field.

The findings of the study reveal that corporate governance measures, like board size, board independence, board gender diversity, have an insignificant relationship with corporate financial performance (ROA and ROE), while board effectiveness has a significant relationship with corporate financial performance (ROA and ROE). Based on the study findings, the study recommends, that corporate governance should be examined from a broader perspective, in all facets, in other to realize the main essence of corporate governance vis-à-vis day-to-day performance, in order to lend credence to matters that boost maximum corporate performance, without necessarily focusing on how the board is composed - its size, its independence, and its gender diversity.

Oluseyi-sowunmi, Owolabi, Iyoha, & Uwuigbe (2019) in her study examined environmental sustainability and corporate performance from the shareholders` perception in Nigeria. The study examined the effect of

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

environmental sustainability on corporate performance from shareholders perception. The study adopted ex-post facto and content analysis research design. The population of this study is made up of 35 quoted manufacturing companies listed on Nigerian Stock Exchange (NSE) as at the end of June, 2018. Purposive sampling technique was adopted in selecting the sample size of 12 companies that were able to meet up with the criteria. Secondary source of data was used. Corporate performance was measure by proxy of financial performance (EPS).

Environmental sustainability was measured by considering guidelines as stated in GRI and NSE sustainability framework in relation with the environmental practices disclosed in the annual reports. Control variable was company size. The study adopted descriptive statistics and pooled Ordinary Least Square (OLS) to analyse the data. The result of the study indicated that there is a positive relationship between environmental sustainability and corporate performance. The study recommends that in making decisions on which organisation to invest in, investors should not consider individually environmental sustainability practices or the size of quoted manufacturing firms in Nigeria, rather, consider them alongside social sustainability practices, governance sustainability practices and other financial sustainability practices.

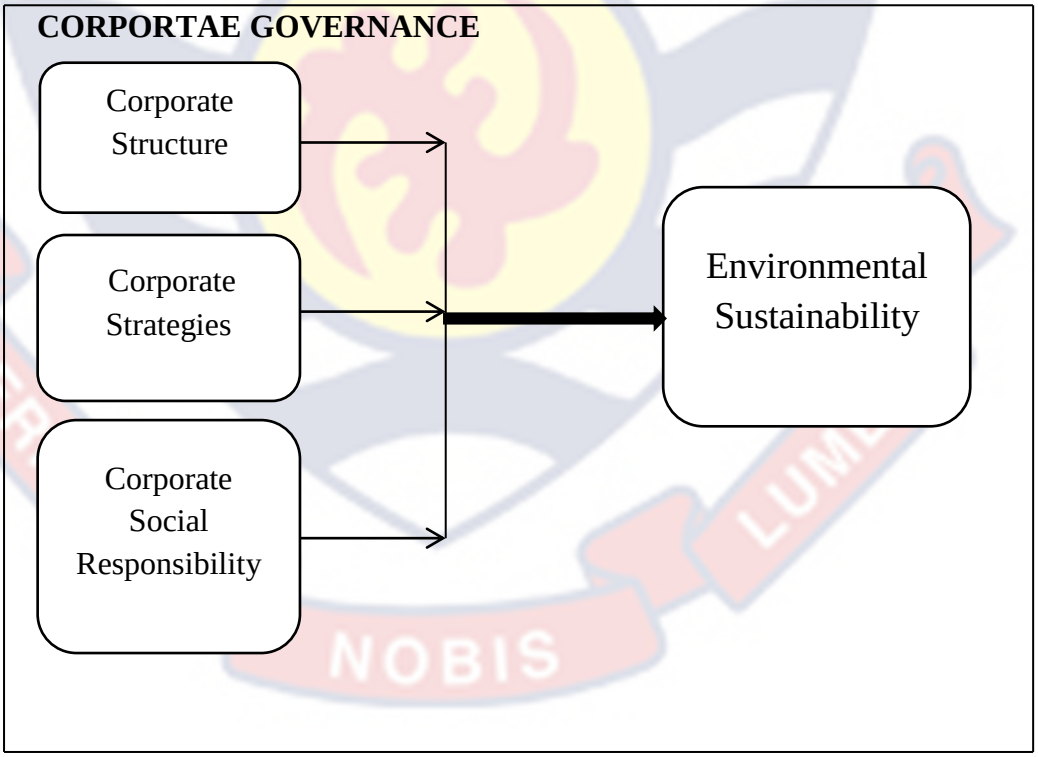
Conceptual Framework

Founded on the overall purpose of the study, the theoretical perspective clarifying the basic underlying principle behind the interrelationships among the constructs, the propositions of the specific research objectives and trends acknowledged through the empirical review,

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

this conceptual framework was proposed to regulate and coordinate the conduct of this empirical study. The study proposes that corporate governance is scientifically operationalized in the contest of this study in terms of corporate structure, corporate strategies and corporate social responsibility. It is further proposed that environmental sustainability is scientifically operationalized in the contest of this study. It must however be recognized that these predictive variances are based on the degree of corporate governance variables considered in this study. The arrows in the figure show the relationship and how a change in any of the independent variable (corporate structure, corporate strategies and corporate social responsibility) will affect the dependent variable (environmental sustainability) in the study.



Source: Author's own construct (2021)

Figure 1: Conceptual Framework

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Chapter Summary

This chapter has provided information relating to literature review in the light of the central theme of the study. Special attention was given to theoretical perspective, conceptual issues, empirical review and conceptual framework. The essence of this chapter is to provide literature support that can provide grounds for testing empirically, the specific objectives of the study, comparing the findings to previous empirical claims and providing enough information for understanding the key concepts in the study.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter dealt with the methodological approach to the primary data collection, analysis and presentation. Research methodology is the general approach the researcher takes in carrying out the research project (Komba & Lwoga, 2020). It describes and analysis methods, throws more light on their limitations and resources, clarify their pre-suppositions and consequences, relating their potentialities to the twilight zone at the frontiers of knowledge (Igwenagu, 2016). The Chapter also dealt with key issues such as the research design, research approach, population, sample and sampling techniques, Data collection instrument and procedure, data processing and analysis and ethical considerations.

Research Design

The study employed the explanatory research design owing to the nature of the scientific enquiry underpinning this study. Thus, being driven by the logic of cause-effect relationship among the variables of interest – corporate governance (Independent variable) environmental sustainability (Dependent Variable). According to Zikmund Carr, Babin, and Griffin (2013) explanatory design research is conducted in order to identify the extent and nature of cause-and-effect relationships. This study by nature is a causal study. Explanatory studies focus on an analysis of a situation or a specific problem to explain the patterns of relationships between variables (Creswell, 2014). The primary purpose of explanatory research is to explain why phenomena occur and to predict future occurrences (Maxwell, 2012).

Digitized by Sam Jonah Library

Also informing the decision to approach the study quantitatively is the assertion that the data are quantitative and almost always require the use of a statistical test to establish the validity of the relationships. This research design is about finding the cause of a problem or the "why" aspect of a problem or a phenomenon or a correlation-ship (Abutabenjeh & Jaradat, 2018). Thus, through this design, the study assessed how changes in corporate governance (Independent variable) induce changes in environmental sustainability (Dependent variable) in the upstream oil and gas sector in Ghana.

It therefore conclusively displays that the use of explanatory research design positions the investigation to clarify cause and effect of relationships (Greener & Martelli, 2018) without the direct involvement of the research in the phenomenon under investigation (Potwarka, Snelgrove, Drewery, Bakhsh & Wood, 2019). Again, the study used the explanatory research design because this design helps the study understand a particular problem (issues bordering on environmental sustainability) in depth by providing more information about that problem. By employing explanatory research, study can predict the cause, or make an inference behind a phenomenon and predict future occurrences.

Research Approach

The study employed the quantitative research approach based on the nature of the study purpose under consideration, specific objectives and the nature of the primary data to be collected and analyzed. The constructs were by nature measurable and subject to statistical manipulation. According to Creswell (2014) quantitative approach deals with explaining phenomena by collecting numerical data that are analysed using mathematically based

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

methods, in particular, statistics. The quantitative methods were employed because its normally use deductive logic and seeks regularities in human lives by separating the social world into empirical components called variables which can be represented numerically as frequencies or rate, whose associations with each other can be explored by statistical techniques, and accessed through researcher-introduced stimuli and systematic measurement (Rahman, 2017).

This approach typically begins with data collection based on a hypothesis or theory and it is followed with application of descriptive or inferential statistics (Tashakkori & Teddlie, 2003). Quantitative methods are frequently described as deductive in nature, in the sense that inferences from tests of statistical hypotheses lead to general inferences about characteristics of a population. Quantitative methods are also frequently characterized as assuming that there is a single "truth" that exists, independent of human perception (Guba & Lincoln, 1994).

In addition, the presentation of the conclusions was quantitative in nature, by using figures and numbers as principles of the method. Also, quantitative research employed in this study because it produces objective data that can be clearly communicated through statistics and number which becomes good for interpreting cause-and-effect analysis (Sürücü & Maslakçi, 2020). Some limitations relating to quantitative research approach are that quantitative research approaches take snapshots of a phenomenon: not in-depth, and overlook test-takers' and testers' experiences as well as what they mean by something (Rahman, 2017).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Population

According to Strouse, Donovan & Fatima (2019), population can be seen as the target group about which the researcher is interested in gaining information and drawing conclusion. Out of the key upstream operators with an established presence in Ghana, five (5) companies namely, Aker Energy, Tullow Oil, Kosmos Energy, ENI, and Springfield were selected, and in total, a target population of Two hundred (200) individuals (employees) were obtained. The study targeted top management, senior and technical staff who work in the various offices of these upstream oil and gas companies across the nation.

Table 1: Target Population Distribution

Upstream Operators	Target Number
Aker Energy	35
Tullow Oil	58
Kosmos Energy	37
ENI	46
Springfield	24
Total	200

Source: (GNPC, 2021)

Sampling Procedure

Sampling has also been referred to the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population (Berndt, 2020). Before sampling, it is important for the sample size to be determined first. A sample size of 133 was considered and respondents were

Digitized by Sam Jonah Library

subsequently made to participate in the study. Buntin (2020) argue that to arrive at the optimum sample size for a study, one would need to ensure that the sample used is representative enough of the population in question and reliable to give reasonable responses. This is because large sample size is debatable, generate responses that could be duplicated, is costly and time-consuming. Therefore, in fulfilling the above requirements, the Yamane (1967) sample size determination formula was employed;

$$n = \frac{N}{[1+N(e)^2]} = \frac{200}{[1+200(0.05)^2]} = \frac{200}{1.5} = 133.333 = 133$$

Where n = sample size; N = sample frame; and e = margin of error. A margin of error of 5% as suggested by Yamane (1967) was applied.

The choice of this sampling formula was necessitated by the fact that it provides the chance for the researcher to meet the sampling requirement [(n> 50 + 8 (Number of independent variables)] proposed for regression analysis in social science research (Pallat, 2005). The study employed a simple random sampling technique for the selection of the respondents that were surveyed. This probability sampling method was used because it allows every member of the study population an equal chance to be selected and represented in the population of the study (Mishra & Alok, 2022).

Aside from being economical and easy to use, it is also regarded as a fair approach to selecting members, ease of use, and the most straightforward probability sampling procedure suitable for quantitative study (Creswell & Clark, 2017). These random numbers were generated through a computer aided program called the Research Randomizer. The corresponding name of

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

firms that were associated with the random numbers generated were selected and contacted for the collection of the primary data (Munis, 2020).

Data Collection Instrument

Structured questionnaire was used as the main primary data collection instrument in this study. The questionnaire contains close-ended questions. Causal studies are very structured by nature (Maxwell, 2012) thereby demanding structured means of primary data collection. Questionnaire is a formalized set of questions for obtaining information from respondents (Singer & Couper, 2017). Young and Javalgi, (2007) provided that surveys using questionnaires are perhaps the most widely-used data-gathering technique in research and can be used to measure issues that are crucial to the management and development of businesses (Malhotra & Birks, 2007).

A 5-point Likert scale questionnaire was used to assess the respondents' opinion on the objects that characterize the variable or constructs included in this study. The closed ended questions require respondents to choose from among a given set of responses and require the respondents to examine each possible response independent of the other choice. The close-ended items employed checklist (a list of behavior, characteristics or other entities that the researcher is investigating), Likert scale (which is more useful when behaviour, attitude or other phenomenon of interest needs to be evaluated in a continuum) dichotomous questions and multiple-choice questions (Trigueros, 2017).

Generally, McColl (2005) posits that there are distinct advantages in using questionnaires rather than interview. Data analysis is made easier and straight forward when structured questions are used for primary data

Digitized by Sam Jonah Library

gathering. Besides, an easy-to-use questionnaire reduces measurement error and the potential for nonresponse error of the research participant (Singer & Couper, 2017; Boateng & Sekyere, 2018). It also supported the quantitative approach orientation of the research (Guetterman, 2017; Malhotra, 2015). The questionnaire was made up of three subdivisions.

These subdivisions were in line with the specific objectives of this study. Section "A" covered the demographic data of the respondents which was made up of six questions. Section "B" measured corporate governance (corporate structure = 10 items; corporate strategies = 11 items; corporate social responsibility = 10 items) whilst section "C" also measured environmental sustainability which was made up of ten questions. However, the questionnaires that was used for the various constructs of corporate governance was adapted from CSR Europe (2018) whiles questionnaires for environmental sustainability was adapted from Lalangui, Álvarez-García and Río-Rama (2018).

Reliability and validity are two key components to be considered when evaluating a particular instrument. Reliability, according to Bless and Higson-Olatubosun and Smidts (2022), is concerned with consistency of the instrument, and an instrument is said to have high reliability if it can be trusted to give an accurate and consistent measurement of an unchanging value. When Cronbach's Alpha values are beyond 0.7, the scale can be considered as being reliable given the selected sample size (Palomo-López, et al., 2020). The results from the internal consistency shows that all variables are below the minimum 0.7 but above 0.6 but the total reliability of all the constructs were above 0.7 minimum cut off point of Cronbach Alpha as required. These

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

figures were reached when some odds were removed (items less than 0.30) in the internal consistency and the overall coefficient of the various constructs shot up. Table 1 summarizes the reliability score for the individual constructs of the study.

Table 2: Reliability Results

Construct	Cronbach's Alpha
Corporate Structure	.621
Corporate Strategies	.652
Corporate Social Responsibility	.642
Environmental Sustainability	.618
Total	.952

Source: Field survey, (2021)

The validity of an instrument refers to how well and instrument measures the particular concept it supposed to measure (Saunders, Lewis & Thornhill, 2007). It indicates that how well the data collection and data analysis of the research captures the reality being studied (Mohajan 2017). Saunders et al., (2007) further asserted that an instrument must be reliable before it can be valid, implying that an instrument must be consistently reproducible; and that once this has been achieved, the instrument can then be scrutinized to assess whether it is what it purports to be. To ensure validity of questionnaires, the researcher reviewed other relevant literature and those literatures supported the construct of the instrument. Some of the items in the scales were scientifically validated items. Further, the designed questionnaire was submitted to the project supervisor for vetting, correction and approval before distributing it to the respondents.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Data Collection Procedure

Permission for the data collection exercise at the various offices at various selected upstream oil and gas companies was sought from the authority of the institution when a letter was issued by the Graduate School of Department of Oil and Gas Studies in University of Cape Coast was sent to their outfit. Permission for the primary data collection was then granted. The sampling frame was then made available to the researcher. This sampling frame was rich in content. The purpose of the study was explained to all participants. Consent of the respondents was sought.

Date for questionnaire distribution to the participants was set on some agreed terms. The drop-and-pick survey approach was adopted. The questionnaire was self-administered to the respondents. In all 133 questionnaires were issued to the respondents. All the respondents fully provided the information needed accurately, returned the questionnaires, which thereby led to a 100% response rate. Data gathering exercise was rather time consuming (Ben-Shlomo, Brookes & Hickman, 2013; Boateng & Sekyere, 2018). Where there was misunderstanding with regards to the questionnaire, ample time was taken to explain into details to the respondents for easy understanding.

Data Processing and Analysis

Analysis of data is a process of editing, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggestion, conclusions, and supporting decision making (Adèr, 2008). The use of analytics requires reducing complex data into meaningful and actionable information (Johnson, Levine, Smith & Stone, 2010). The responses from the

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

questionnaires were edited, coded and entered into Statistical Package for Social Science (SPSS version 25.0) for the analysis. This statistical software is recommended for us in studies in social sciences (Zickmund, 2000).

Inferential statistical technique such as standard multiple regression was conducted on research objective 2, 3 and 4 to find out how much variance in the dependent variable (corporate governance) is explained by the independent variables (environmental sustainability). Descriptive statistics (the use of mean and standard deviation) was also done on the research objective 1 to determine degree of effectiveness of corporate governance at the selected upstream oil and gas companies.

On the other hand, the regression analysis was guided by this regression model;

$Q = E_0 + CE + e$

Where Q= Dependent variable (Environmental Sustainability); E_0*= model constant; C= Independent variable (Corporate Governance); e= Error term (margin of error)*

The findings were chronologically presented on Tables and Figures, which made the interpretation and discussion of the findings easier and straight forward.

Ethical Considerations

Researchers conducting studies using human information should imbibe principles of ethical conduct, which must be meticulously followed before starting the research. According to Helena (2013), researchers need to predict potential situations that could arise during the study. The questions or statements in the scale were simple, straightforward and unambiguous which

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

eventually facilitated the completion rate. Also, all cited sources were dully referenced. There were no data manipulation carried out in the processing and analysis of the study. The benefits as well as the purpose of the study were fully explained to all stakeholders particularly the respondents. Confidentiality of the respondents was assured and was confusion arose with regards to the statements in the questionnaire; quality time was taken to explain to the respondents. Again, no respondent was forced to answer the questionnaire.

Chapter Summary

This chapter has provided information as to how the primary data for the study was collected, organized, analyzed and presented for further analysis and discussion. This chapter also presented information on the design of the study and scientific approach it took in terms of approach to data needs, statistical techniques and systematic enquiry into the investigation under consideration.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The study examined the effects of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana. The previous chapter provided information in respect of the research methods employed to gathering, processing and analysing the data in respect of the specific research objectives formulated in this study. This current chapter provides information in respect of the results and discussions given cognizance of the findings as stipulated by the nature of the specific research objectives. The findings are first summarized in tables, are then presented and interpreted given cognizance of their practical, theoretical and managerial implications and are finally compared with some empirical postulations in literature.

Demographic Information

The demographic information of the respondents was measured with descriptive statistics of frequency and percentage. These descriptive tools are appropriate for nominal scale items such as the variables that were included in the demographics of the respondents. The findings are presented in Table 3.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Table 3: Demographic Information

Variable	Variable Categories	Frequency	Percentage (%)
Gender	Male	73	64.6%
	Female	40	35.4%
Age	18-28 years	22	19.5%
	29-39 years	45	40.7%
	40-49 years	28	24.8%
	Above 50 years	17	15.0%
Level of Education	HND/Diploma	27	23.9%
	Bachelor	38	33.6%
	Masters	34	30.1%
	Ph.D.	14	12.4%
Working Experience	Less than 2 years	9	8.0%
	3-5 years	23	20.4%
	6-8 years	48	42.5%
	9-11 years	16	14.2%
	Above 12 years	17	15.0%
Position Held	Top management	33	29.2%
	Senior staff	45	39.8%
	Technical Staff	35	31.0%

Source: Field survey, (2022)

The demographic information revealed most the respondents in the selected upstream oil and gas sector are male (64.6%) whilst the remaining 35.4% are female. This shows that the workforce structure of the selected upstream oil and gas companies is male-dominated as is the usual case of many institutions in Ghana (Nordensvard, 2014). The age ranges of the staff show majority of the respondents who have 40.7% are between 29-39 years.

Digitized by Sam Jonah Library

24.8% of the respondents are within the 40-49 years whilst 19.5% are in the 18-28 years category. The remaining 15.0% of the respondents were above 50 years. The educational background of the respondents revealed that they are all formally educated with most of them having first degree certificate (33.6%), followed by those with master's certificate (30.1%) and then those with Diploma/HND certificate representing 19.2%. The remaining 12.4% represented those of the respondents who possessed Ph.D. certificates.

So, it makes managerial sense to have found that all the respondents are formally educated because of the very nature of job they are engaged in which is a prerequisite for this research study. Again, most of the respondents have worked in these selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) for 6-8 years (42.5%), followed by those who have worked between 3-5 years (20.4%) and then those with above 12 years working experience represented 15.0% whiles 14.2% represented those who have worked between 9-11 years with the remaining 8.0% representing those who have worked in these upstream oil and gas companies for less than 2 years.

In reality, these workers have enough experience to provide accurate information regarding the interplay of the concepts considered in the context of this study. Reflection on the job position revealed that majority of the respondents is senior staff (39.8%) whilst the 31.0% represented technical staff. The remaining 29.2% represented those in top management in these selected upstream oil and gas companies in Ghana. This finding depicts the typical structure of a working organizational hierarchy.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

The Level of Effectiveness of Corporate Governance

The study further examined the observation of the respondents about the level of effectiveness of corporate governance at these selected upstream oil and gas companies (measured in this study as corporate structure, corporate strategies and corporate social responsibility) at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) in Ghana. The explanation of the mean scores was based on the artificial criteria created by the researcher for such purpose. The categorization of the mean scores for the respective items measuring the constructs under investigation are as follows; *0.0 - 1.4 =* ***Highly ineffective****, 1.5 - 2.4 =* ***Very ineffective,*** *2.5 – 3.4* ***= Moderately effective, 3.5 – 4.4 = Effective, 4.5 -5.4 = Very effective, 5.5 – 6.4 = Highly effective***

Table 4: Corporate Structure

Corporate Structure Variables	Mean	Std. Deviation
The firm's board size ensures increased monitoring and control in my company.	4.0973	2.09576
There is easy coordination among members of the board in the company due to its size.	4.4159	1.98533
The size of the board at my company gives room for effective communication.	4.5044	1.93706
The board structure strengthens the commitment levels of the owner(s) or manager(s).	4.5575	1.97275
There is easy management of the firm's activities within the company.	4.5929	1.77602
The structure ensures effective environmental management whenever environmental crises arise.	4.7522	2.08108
The firm's board is more effective in decision-making due to its size.	4.8142	2.08545

Digitized by Sam Jonah Library

The board structure ensures active monitoring and control of firm activities.	4.8850	2.02992
The structure in my company provides efficient checks and balances over behavior of the owner(s)/manager(s)/employees.	4.9558	1.78480
The structures in my company define the boundaries between management's monitoring function and decision control function.	5.5752	1.66800

Source: Field survey, (2021)

The level of effectiveness of corporate structure from the perception of the respondents is given in Table 3. The results prove the claims that the firm's board size ensures increased monitoring and control in my company (M=4.0973; SD=2.09576) and there is easy coordination among members of the board in the company due to its size (M=4.4159; SD=1.98533) were all rated as effective given their respective mean scores. Also, The size of the board at my company gives room for effective communication, The board structure strengthens the commitment levels of the owner(s) or manager(s), There is easy management of the firm's activities within the company, The structure ensures effective environmental management whenever environmental crises arise, The firm's board is more effective in decision-making due to its size, The board structure ensures active monitoring and control of firm activities, The structure in my company provides efficient checks and balances over behavior of the owner(s)/manager(s)/employees were all rated as very effective given their respective mean scores.

Again, the structures in my company define the boundaries between management's monitoring function and decision control function (M=5.5752; SD=1.66800) was rated highly effective given it mean score. The

Digitized by Sam Jonah Library

effectiveness of corporate structure variables in general was very effective as guided by the mean of means (4.7151). The insights from these findings are that the management of these selected upstream oil and gas companies must put in place policies, resources and strategies that can be implemented to make of corporate structure initiatives to be highly effective, provide enough information for all employees that can help them prepare corporate structure programmes that are implemented in the organization as well as design corporate structure programmes based on identified corporate governance needs gaps among the employee. The essence of promoting these practices is to equip employees with all the needed information so that they could equally participate in such corporate structure programmes in an efficient manner.

Table 5: Corporate Strategies

Corporate Strategy Variables	Mean	Std. Deviation
The firm evaluates business plans thoroughly.	4.0973	2.09576
There is a financial budget for implementing a strategy.	4.4159	1.98533
The firm makes strategic changes responsively and flexibly.	4.5044	1.93706
The firm evaluates results against strategic goals.	4.5575	1.97275
The firm determines strategic actions by weighing costs and benefits.	4.5929	1.77602
My firm prioritizes their work in alignment with business goals.	4.7522	2.08108
The firm applies tactical strategies when necessary.	4.8142	2.08545
The firm has developed contingency and flexible plans according to different situations.	4.8850	2.02992
The firm has developed and established longer-term environmental goals.	5.2566	1.81156

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

There are achievable and realistic goals for the firm.	5.6106	1.82949

Source: Field survey, (2021)

The level of effectiveness of corporate strategy from the perception of the respondents is given in Table 4. The results prove the claims that there are achievable and realistic goals for the firm (M=5.6106; SD=1.82949) was rated as highly effective given it mean score. Likewise, There is a financial budget for implementing a strategy, The firm makes strategic changes responsively and flexibly, The firm evaluates results against strategic goals, The firm determines strategic actions by weighing costs and benefits, My firm prioritizes their work in alignment with business goals, The firm applies tactical strategies when necessary, The firm has developed contingency and flexible plans according to different situations and The firm has developed and established longer-term environmental goals were all rated as very effective given their respective mean scores. Also, the firm evaluates business plans thoroughly (M=4.0973; SD=2.09576) was rated effective given it mean score.

The level of effectiveness of corporate strategy variables in general was very effective as guided by the mean of means (4.7487). The insights from these findings are that the human resource unit of these selected upstream oil and gas companies must put in place policies, resources and strategies that can be implemented to make of corporate strategy initiatives to be highly effective, provide enough information for all employees that can help them prepare corporate strategy programmes that are implemented in the organization as well as design corporate strategy programmes based on identified corporate governance needs gaps among the employee. The essence

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

of promoting these practices is to equip employees with all the needed information so that they could equally participate in such corporate strategy programmes in an efficient and vibrant manner.

Table 6: Corporate Social Responsibility

Corporate Social Responsibility Variables	Mean	Std. Deviation
My company has a Code of Conduct in place.	4.4159	1.98533
My company publishes a CSR/Sustainability report.	4.5575	1.97275
My company organise training sessions to enhance the understanding of CSR/ Sustainability.	4.5929	1.77602
A quality assurance criterion in my company is adhered to in production.	4.7522	2.08108
My company ensures adequate steps are taken against all forms of environmental pollution.	4.8850	2.02992
My company participates in any voluntary CSR/sustainability initiatives.	4.9558	1.78480
My company is committed to the health and safety of employees and catchment communities within which operations take place.	5.1062	1.79465
My company has a written health & safety policy in place, which complies with local law, industry requirements and international standards.	5.3186	1.61060
Purchasing policies in my company favour the local communities in which it operates.	5.5752	1.66800
My company has a formal environmental policy, which includes a commitment to legal compliance, continuous measurement and continuous improvements in environmental performance.	5.6460	1.54064

Source: Field survey, (2021)

The level of effectiveness of corporate strategy from the perception of the respondents is given in Table 5. The results authenticate the claims that Purchasing policies in my company favour the local communities in which it

Digitized by Sam Jonah Library

operates (M=5.5752; SD=1.66800) and my company has a formal environmental policy, which includes a commitment to legal compliance, continuous measurement and continuous improvements in environmental performance (M=5.6460; SD=1.54064) were all rated as highly effective given it mean score. Similarly, My company has a Code of Conduct in place, my company publishes a CSR/Sustainability report, my company organise training sessions to enhance the understanding of CSR/ Sustainability, A quality assurance criterion in my company is adhered to in production, My company ensures adequate steps are taken against all forms of environmental pollution, My company participates in any voluntary CSR/sustainability initiatives, My company is committed to the health and safety of employees and catchment communities within which operations take place and My company has a written health & safety policy in place, which complies with local law, industry requirements and international standards were all rated as very effective given their respective mean scores.

Besides, a quality assurance criterion in my company is adhered to in production (M=4.4159; SD=1.98533) was rated effective given it mean score. The effectiveness of corporate social responsibility variables in general was very effective as guided by the mean of means (4.9805). The understandings from these results are that the management unit of these selected upstream oil and gas companies must put in place strategies, resources and schemes that can be executed to make corporate social responsibility initiatives to be highly effective and provide enough information for all employees that can assist them prepare corporate social responsibility programmes that are implemented in the organization. Management should also design robust

Digitized by Sam Jonah Library

corporate social responsibility programmes founded on identified corporate governance needs gaps among the employee. The relevance of encouraging these practices is to prepare employees with all the required data so that they could in the same way take part in such corporate social responsibility programmes in an efficient manner.

Calculating for Relevance Important Index (RII)

The relative importance index was calculated to determine the relative importance of quality factors involved. The points of likert scale used is equal to the value of W, weighting given to each factor by the respondent.

$$\textbf{Relative Important Index} = \frac{7n_7 + 6n_6 + 5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{A * N}$$

Where;

n_7 = number of respondents for strongly agree

n_6 = number of respondents for strongly agree

n_5 = number of respondents for slightly agree

n_4 = number of respondents for neutral

n_3 = number of respondents for slightly disagree

n_2 = number of respondents for disagree

n_1 = number of respondents for strongly disagree

A (Highest Weight) = 7

N (Total number of respondents) = 133

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Table 7: Relative Importance Index

Questions	Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree
Corporate Structure	52	32	14	20	5	6	4
Corporate Strategies	48	22	15	22	7	10	9
Corporate Social Responsibility	60	24	12	8	18	14	3

Questions	Strongly Agree	Agree	Slightly Agree	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Total
Corporate Structure	364	192	70	80	15	12	4	737
Corporate Strategies	336	132	75	88	21	20	9	681
Corporate Social Responsibility	420	144	60	32	54	28	3	741

Table 8: Relative Importance Index

Total number (N)	A*N	Relative Importance Index Values	Importance
133	931	0.7916219	2
133	931	0.7314715	3
133	931	0.7959183	1

Based on the ranking in Table 8, the mean RIIs and the ranking of all constructs are shown in Table 7 and 8 respectively. According to the ranking of the constructs in effectiveness, the four variables of the most importance are discussed in what follows. Based on the ranking in Table 8, the result of

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

the RII on the four variables revealed that corporate social responsibility was of more importance (it was ranked first among the variables) with regards to its effectiveness in corporate governance. This was followed by corporate structure and corporate strategies.

Test of Normality

Proceeding to key analyses, data were examined using SPSS 25.0 for data entry accuracy, missing values and violation of regression assumptions of normality; linearity, multicollinearity and outliers. Residuals were marked off for normality through expected normal probability plots and Kolmogorov-Smirnov. The Kolmogorov-Smirnov statistic is normally used to test for normality when we have a large sample size. However, Pallant (2020) postulates that when remaining plots appear normal in regression, it is not essentially to screen individual variables for normality. An examination of normal probability plots recommended no noteworthy abnormality from normality for the present data. The Kolmogorov-Smirnov statistic assessed the normality of the distribution of scores. A non-significant result (Sig. value of more than .05) indicates normality. In this case, the Sig. value is .027, suggesting no violation of the assumption of normality.

Table 9: Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Environmental Sustainability	.089	113	.027	.978	113	.059

a. Lilliefors Significance Correction

Source: Field survey, (2021)

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Objective 2: Effect of Corporate Structure on Environmental Sustainability

Objective two sought to examine the effect of corporate structure on environmental sustainability in the upstream oil and gas companies. Multiple regression analysis was carried out to assess this specific research objective. After authenticating the validity and reliability of the constructs and primary data respectively, data transformation exercise was carried to facilitate holistic analysis of the second-order formative constructs under consideration. Again, assumption of multicollinearity was tested the using correlation matrix and collinearity diagnostics. Hair et al (2006) advice that inter-correlation of more than 0.9 is considered to be a demonstration of high multicollinearity. For this observe, correlation values for all independent predictor were under 0.9 indicating that the policies underlying multicollinearity was not debased.

Further, linearity assumption was studied by means of scatter plots of the variable to discover any non-linear patterns in the data. In step with Hair et al., (2006) linearity of relationship among dependent and independent variable represents the degree to which the change in the dependent variable is related to the independent variable. In multiple regression with multiple independent variables, partial regression plots are used to expose the relationship of single independent variable to dependent variable. An examination of the residual probability plots showed that there was no non-linearity in any of the connection (see appendix B).

Also, cases with ratings which can be very special from the rest are taken into consideration as outliers (Kline, 2005). Outliers can be detected via inspecting the scatter plots of standardised residuals. The residuals must be

Digitized by Sam Jonah Library

rectangularly dispensed with most score concentrated within the centre (alongside the zero point) (Tabachnick & Fidell, 2007). Tabachnick Deviation from the centralised rectangle violates this assumption (Tabachnick et al., 2007). This was absent within the present thesis from the examination of the residual plot (see appendix D).

The Mahalanobis distance was additionally examined to check for viable outliers. The result confirmed a maximum value of 12.441 which is BELOW the critical value of 13. This however shows no presence of some outliers, an investigation of the prepare Cook's distance with a maximum value of .086 that is below 1 (Tabachnick et al., 2007) also suggests no essential problem (see appendix C). The results are presented in tables 10, 11 and 12 respectively for easy comprehension and understanding.

Table 10: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.864[a]	.747	.744	.36019

a. Predictors: (Constant), Corporate Structure

b. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The study reveals that there is a positive relationship between corporate structure and environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) after controlling for the effect of other factors in the configured model (r=0.864). Co-efficient of determination is the assessing of how change in the independent variable (corporate structure) cause changes in the dependent variable (environmental sustainability) (Kassem, Khoiry & Hamzah, 2020). It is measured by the r-square score in the regression models.

Digitized by Sam Jonah Library

R-square above 0.67 is classified as substantive, 0.33 are labelled moderate and those less than 0.19 are termed weak.

The results from the study revealed that changes in corporate structure accounts for substantial (74.4%) positive change in environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) (r^2=0.747). Other factoring affecting changes in environmental sustainability aside corporate structure could account for 25.3% positive change in environmental sustainability at the selected upstream oil and gas companies in Ghana. This result does not however show the degree of significance of the impact hence the need to examine the p-value in the ANOVA in Table 11.

Table 11: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.442	1	42.442	327.137	.000[b]
	Residual	14.401	111	.130		
	Total	56.843	112			

a. Dependent Variable: Environmental Sustainability

b. Predictors: (Constant), Corporate Structure

Source: Field survey, (2021)

The ANOVA results indicate that corporate structure significantly accounts for a substantial positive change in environmental sustainability after controlling for the effect of other factors having influence on environmental sustainability at the work context but were excluded has been statistically controlled for (p=0.000: p<0.05). Thus, the change in environmental sustainability as occasioned by changes in corporate structure is not by mere chance but by the scientific interaction among the factors in the configured model in this study. This result therefore shows corporate structure exhibited

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

by these selected upstream oil and gas companies causes a statistically significant positive and substantial change in environmental sustainability.

Table 12: Coefficeints[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.730	.228		3.206	.002		
	Corporate Structure	.863	.048	.864	18.087	.000	1.000	1.000

a. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The findings in table 12 revealed that Collinearrity diagnostics were determined by way of noting tolerance values and variance inflation factor (VIF). Low tolerance values (those drawing near zero) indicate that multiple correlation with other variables is high, suggesting the possibility of multicollinearity. The present findings suggest that the tolerance values for the independent variable are pretty decent and the VIF values for the independent variable are nicely under the threshold of 10. In order to assess the contributions of the predictors to causing the 74.7% statistically significant positive variance in environmental sustainability, the coefficient results are relied on to this effect. The reliance on the results is pitched on two situations; standardized beta for the purposes of comparison of contributions of the predictors and unstandardized beta for purposes of estimating the regression function (Pallant, 2020).

The results show corporate structure makes a statistically significant positive contribution to predicting the 74.7% significant positive variance in

Digitized by Sam Jonah Library

environmental sustainability (Beta=0.864; p=0.002 p<0.05) when the effect of the remaining predictors in the model are statistically controlled for. In unstandardized terms, it is established that a statistically significant unit increase in scores for corporate structure causes 0.863 statistically significant increase in environmental sustainability and a statistically significant unit fall in scores for corporate structure causes 0.863 statistically significant decrease in environmental sustainability.

The implication of this result is that the state of corporate structure can actually cause a substantial increase in the state of environmental sustainability. This claim is informed by the fact that the contribution of corporate structure to predicting the 74.7% significant variance in environmental sustainability is positive. These selected upstream oil and gas companies can categorically depend on corporate structure to actually cause scientifically significant positive change in environmental sustainability. The findings are in sync with the findings of Masud, Kaium, Nurunnabi and Bae (2018) who found a positive significant effect of institutional ownership, board independence and board size on environmental sustainability.

Objective 3: Effect of Corporate Strategy on Environmental Sustainability

Objective three (3) sought to examine the effect of corporate strategy on environmental sustainability in the upstream oil and gas companies. Multiple regression analysis was carried out to assess this specific research objective. After substantiating the validity and reliability of the constructs and primary data respectively, data transformation exercise was carried to facilitate holistic analysis of the second-order formative constructs under consideration.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Also, Objective three sought to examine the effect of corporate strategy on environmental sustainability in the upstream oil and gas companies. Multiple regression analysis was carried out to assess this specific research objective.

After authenticating the validity and reliability of the constructs and primary data respectively, data transformation exercise was carried to facilitate holistic analysis of the second-order formative constructs under consideration Again, assumption of multicollinearity was tested the using correlation matrix and collinearity diagnostics. Hair et al (2006) advice that inter-correlation of more than 0.9 is considered to be a demonstration of high multicollinearity. For this observe, correlation values for all independent predictor was under 0.9 indicating that the policies underlying multicollinearity was not violated.

Further, linearity assumption was studied by means of scatter plots of the variable to discover any non-linear patterns in the data. In step with Hair et al., (2006) linearity of relationship among dependent and independent variable represents the degree to which the change in the dependent variable is related to the independent variable. In multiple regression with multiple independent variables, partial regression plots are used to expose the relationship of single independent variable to dependent variable. An examination of the residual probability plots showed that there was no non-linearity in any of the connection (see appendix E). Also, cases with ratings which can be very special from the rest are taken into consideration as outliers (Kline, 2005). Outliers can be detected via inspecting the scatter plots of standardised residuals.

The residuals must be rectangularly dispensed with most score concentrated within the centre (alongside the zero point) (Tabachnick &

Digitized by Sam Jonah Library

Fidell, 2007). Tabachnick Deviation from the centralised rectangle violates this assumption (Tabachnick et al., 2007). This was absent within the present thesis from the examination of the residual plot (see appendix G). The Mahalanobis distance was additionally examined to check for viable outliers. The result confirmed a maximum value of 11.101 which is below the critical value of 13. This however shows no presence of some outliers, an investigation of the prepare Cook's distance with a maximum value of .096 that is below 1 (Tabachnick et al., 2007) also suggests no essential problem (see appendix F). The results are presented in tables 13, 14 and 15 respectively.

Table 13: Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898[a]	.806	.804	.31505

a. Predictors: (Constant), Corporate Strategy

b. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The study reveals that there is a positive relationship between corporate strategy and environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) after controlling for the effect of other factors in the configured model (r=0.898). Co-efficient of determination is the measuring of how change in the independent variable (corporate strategy) cause changes in the dependent variable (environmental sustainability). It is measured by the r-square score in the regression models. R-square above 0.67 is classified as substantive, 0.33 are labelled moderate and those less than 0.19 are termed weak (Kasuya, 2019).

Digitized by Sam Jonah Library

The results from the study revealed that changes in corporate strategy accounts for substantial (80.6%) positive change in environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) (r^2=0.806). Other factoring affecting changes in environmental sustainability aside corporate strategy could account for 19.4% positive change in environmental sustainability at the selected upstream oil and gas companies in Ghana. This result does not however reveal the degree of significance of the effect hence the need to examine the p-value in the ANOVA in Table 14.

Table 14: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.826	1	45.826	461.708	.000[b]
	Residual	11.017	111	.099		
	Total	56.843	112			

a. Dependent Variable: Environmental Sustainability

b. Predictors: (Constant), Corporate Strategy

Source: Field survey, (2021)

The ANOVA results indicate that corporate strategy significantly accounts for a substantial positive change in environmental sustainability after controlling for the effect of other factors having influence on environmental sustainability at the work context has been statistically controlled for (p=0.000: p<0.05). Thus, the change in environmental sustainability as occasioned by changes in corporate strategy is not by mere chance or coincidence but by the scientific interaction among the factors in the configured model in this study. This result therefore shows corporate strategy displayed by these selected upstream oil and gas companies causes a

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

statistically significant positive and substantial change in environmental sustainability.

Table 15: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.979	.180		5.433	.000		
	Corporate Strategy	.805	.037	.898	21.487	.000	1.000	1.000

a. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The results in table 15 revealed that Collinearrity diagnostics were determined by way of noting tolerance values and variance inflation factor (VIF). Low tolerance values (those drawing near zero) indicate that multiple correlation with other variables is high, suggesting the possibility of multicollinearity. The present findings suggest that the tolerance values for the independent variable are pretty decent and the VIF values for the independent variable are nicely under the threshold of 10. In order to evaluate the contributions of the predictors to causing the 80.6% statistically significant positive variance in environmental sustainability, the coefficient results are relied on to this effect.

The reliance on the results is pitched on two prepositions; standardized beta for the purposes of comparison of contributions of the predictors and unstandardized beta for purposes of estimating the regression function (Pallant, 2020). The results show corporate strategy makes a statistically

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

significant positive contribution to predicting the 74.7% significant positive variance in environmental sustainability (Beta=0.898; p=0.000 p<0.05) when the effect of the remaining predictors in the model are statistically controlled for.

In unstandardized terms, it is established that a statistically significant unit increase in scores for corporate strategy causes 0.805 statistically significant increase in environmental sustainability and a statistically significant unit fall in scores for corporate strategy causes 0.805 statistically significant decrease in environmental sustainability. The implication of this result is that the state of corporate strategy can actually cause a substantial increase in the state of environmental sustainability. This claim is informed by the fact that the contribution of corporate strategy to predicting the 80.6% significant variance in environmental sustainability is positive. These selected upstream oil and gas companies can categorically rely on corporate strategy to actually cause scientifically significant positive change in environmental sustainability. The finding in this study has established the empirical stands on the positive effect of corporate strategy on environmental sustainability which can be used in literature.

Objective 4: Effect of Corporate Social Responsibility on Environmental Sustainability

Objective four (4) sought to examine the effect of corporate social responsibility on environmental sustainability in the upstream oil and gas companies. Multiple regression analysis was carried out to assess this specific research objective. After substantiating the validity and reliability of the constructs and primary data respectively, data transformation exercise was

Digitized by Sam Jonah Library

carried to facilitate holistic analysis of the second-order formative constructs under consideration. Objective four sought to examine the effect of corporate social responsibility on environmental sustainability in the upstream oil and gas companies. Multiple regression analysis was carried out to assess this specific research objective.

After authenticating the validity and reliability of the constructs and primary data respectively, data transformation exercise was carried to facilitate holistic analysis of the second-order formative constructs under consideration Again, assumption of multicollinearity was tested the using correlation matrix and collinearity diagnostics. Hair et al (2006) advice that inter-correlation of more than 0.9 is considered to be a demonstration of high multicollinearity. For this observe, correlation values for all independent predictor were under 0.9 indicating that the policies underlying multicollinearity was not violated.

Further, linearity assumption was studied by means of scatter plots of the variable to discover any non-linear patterns in the data. In step with Hair et al., (2006) linearity of relationship among dependent and independent variable represents the degree to which the change in the dependent variable is related to the independent variable. In multiple regression with multiple independent variables, partial regression plots are used to expose the relationship of single independent variable to dependent variable. An examination of the residual probability plots showed that there was no non-linearity in any of the connection (see appendix H). Also, cases with ratings which can be very special from the rest are taken into consideration as outliers (Kline, 2005). Outliers can be detected via inspecting the scatter plots of standardised residuals.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

The residuals must be rectangularly dispensed with most score concentrated within the centre (alongside the zero point) (Tabachnick & Fidell, 2007). Tabachnick Deviation from the centralised rectangle violates this assumption (Tabachnick et al., 2007). This was absent within the present thesis from the examination of the residual plot (see appendix J). The Mahalanobis distance was additionally examined to check for viable outliers. The result confirmed a maximum value of 11.674 which is below the critical value of 13. This however shows no presence of some outliers, an investigation of the prepare Cook's distance with a maximum value of .159 that is below 1 (Tabachnick et al., 2007) also suggests no essential problem (see appendix I). The results are presented in tables 16, 17 and 18 respectively.

Table 16: Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.703[a]	.494	.489	.50915

a. Predictors: (Constant), Corporate Social Responsibility

b. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The study revealed that there is a positive relationship between corporate social responsibility and environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) after controlling for the effect of other factors in the configured model (r=0.703). Co-efficient of determination is the estimating how change in the independent variable (corporate social responsibility) cause changes in the dependent variable (environmental sustainability). It is measured by the r-square score in the regression models. R-square above 0.67

Digitized by Sam Jonah Library

is classified as substantive, 0.33 are labelled moderate and those less than 0.19 are termed weak (Kasuya, 2019).

The results from the study revealed that changes in corporate social responsibility accounts for moderate (49.4%) positive change in environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) (r^2=0.494). Other factoring affecting changes in environmental sustainability aside corporate social responsibility could account for 19.4% positive change in environmental sustainability at the selected upstream oil and gas companies in Ghana. This result does not however reveal the degree of significance of the effect hence the need to examine the p-value in the ANOVA in Table 17.

Table 17: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.069	1	28.069	108.279	.000[b]
	Residual	28.774	111	.259		
	Total	56.843	112			

a. Dependent Variable: Environmental Sustainability

b. Predictors: (Constant), Corporate Social Responsibility

Source: Field survey, (2021)

The ANOVA results in table 13 indicate that corporate social responsibility significantly accounts for a moderate positive change in environmental sustainability after controlling for the effect of other factors having impact on environmental sustainability as the work context has been statistically controlled for (p=0.000: p<0.05). Thus, the change in environmental sustainability as occasioned by changes in corporate social responsibility is not by mere chance and luck but by the scientific interaction

Digitized by Sam Jonah Library

among the factors in the configured model in the study. This outcome therefore reveals corporate social responsibility displayed by these selected upstream oil and gas companies causes a statistically significant positive and moderate change in environmental sustainability in the upstream oil and gas sector in Ghana.

Table 18: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.894	.378		2.361	.020		
	Corporate Social Responsibility	.784	.075	.703	10.406	.000	1.000	1.000

a. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The results in table 18 revealed that Collinearrity diagnostics were determined by way of noting tolerance values and variance inflation factor (VIF). Low tolerance values (those drawing near zero) indicate that multiple correlation with other variables is high, suggesting the possibility of multicollinearity. The present findings suggest that the tolerance values for the independent variable are pretty decent and the VIF values for the independent variable are nicely under the threshold of 10.

In order to assess the contributions of the predictors to causing the 49.4% statistically significant positive variance in environmental sustainability, the coefficient results are relied on to this effect. The reliance

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

on the results is pitched on two prepositions; standardized beta for the purposes of comparison of contributions of the predictors and unstandardized beta for purposes of estimating the regression function (Pallant, 2020). The results show corporate social responsibility makes a statistically significant positive contribution to predicting the 49.4% significant positive variance in environmental sustainability (Beta=0.703; p=0.000 p<0.05) when the effect of the remaining predictors in the model are statistically controlled for.

In unstandardized terms, it is founded that a statistically significant unit increase in scores for corporate social responsibility causes 0.784 statistically significant increase in environmental sustainability and a statistically significant unit fall in scores for corporate social responsibility causes 0.784 statistically significant decrease in environmental sustainability. The implication of this finding is that the state of corporate social responsibility can actually cause a substantial increase in the state of environmental sustainability. This claim is informed by the fact that the contribution of corporate social responsibility to predicting the 49.4% significant variance in environmental sustainability is positive. These selected upstream oil and gas companies can categorically rely on corporate social responsibility to actually cause scientifically significant positive change in environmental sustainability. The finding in this study is in line with some empirical stands which found a positive effect of corporate social responsibility on environmental sustainability (May, Hao & Carter, 2021; Chuang & Huang, 2018).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Effect of Corporate Governance on Environmental Sustainability

This section sought to examine the holistic effect of corporate governance on environmental sustainability in the upstream oil and gas companies. Multiple regression analysis was carried out to assess the combined effect of the various constructs used to measure corporate governance on environmental sustainability in a single model. After substantiating the validity and reliability of the constructs and primary data respectively, data transformation exercise was carried to facilitate holistic analysis of the second-order formative constructs under consideration. Auto-correlation assumption was measured with the Durbin-Watson criterion. To avoid auto-correlation, Durbin-Watson score must fall within the range 1.5-2.5. The results show there is no problem of auto-correlation hence warranting the interpretation in respect of the regression results. The results are presented in tables 19, 20 and 21 respectively.

Table 19: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.892[a]	.795	.793	.32395	1.653

a. Predictors: (Constant), Corporate Governance
b. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

The study reveals that there is a positive relationship between corporate governance and environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) after controlling for the effect of other factors in the configured model (r=0.892). Co-efficient of determination is the assessing of how change in the independent variable (corporate governance) cause changes

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

in the dependent variable (environmental sustainability) (Kassem, Khoiry & Hamzah, 2020). It is measured by the r-square score in the regression models. R-square above 0.67 is classified as substantive, 0.33 are labelled moderate and those less than 0.19 are termed weak.

The results from table 19 revealed that changes in corporate governance accounts for substantial (79.5%) positive change in environmental sustainability at the selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) (r^2=0.795). Other factoring affecting changes in environmental sustainability aside corporate governance could account for 20.5% positive change in environmental sustainability at the selected upstream oil and gas companies in Ghana. The results also revealed that the combined effect of the various constructs that measured corporate governance in a single model on environmental sustainability was far greater as compared to the effect of the individual constructs on environmental sustainability. This result does not however show the degree of significance of the impact hence the need to examine the p-value in the ANOVA in Table 20.

Table 20: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.195	1	45.195	430.653	.000[b]
	Residual	11.649	111	.105		
	Total	56.843	112			

a. Dependent Variable: Environmental Sustainability

b. Predictors: (Constant), Corporate Governance

Source: field survey, (2021)

The ANOVA results indicate that corporate governance significantly contribute a substantial positive change in environmental sustainability after

Digitized by Sam Jonah Library

controlling for the effect of other factors having influence on environmental sustainability has been statistically controlled for (p=0.000: p<0.05). Thus, the change in environmental sustainability as occasioned by changes in corporate governance is not by mere chance but by the scientific interaction among the factors in the configured model in this study. This result therefore shows corporate governance exhibited by these selected upstream oil and gas companies causes a statistically significant positive and substantial change in environmental sustainability.

Table 21: Co-efficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.200	.224		.893	.374		
	Corporate Governance	.956	.046	.892	20.752	.000	1.000	1.000

a. Dependent Variable: Environmental Sustainability

Source: Field survey, (2021)

Table 21's results showed that there was no evidence of the multi-collinearity threat that Kock predicted (2015) (VIF=1:5). The coefficient results are used in this regard to assess the predictors' contributions to the 79.5% statistically significant positive variation in environmental sustainability. In order to compare the contributions of the predictor, the results are compared using standardized beta, and the regression function is estimated using unstandardized beta (Pallant, 2005). When the impact of the other variables in the model are statistically controlled for, the results

Digitized by Sam Jonah Library

demonstrate corporate governance makes a statistically significant positive contribution to predicting the 79.5% significant positive variance in environmental sustainability (Beta=0.892; p=0.000; p<0.05). According to unstandardized calculations, it is proven that an increase in corporate governance scores that is statistically significant causes an increase in environmental sustainability of 0.956, and a decrease in corporate structure scores that is statistically significant results in a 0.956 decrease in environmental sustainability.

The implication of this finding is that the condition of corporate governance may actually contribute significantly to an improvement in the sustainability of the environment. This assertion is supported by the finding that corporate governance positively predicts the 79.5% meaningful variance in environmental sustainability. The results are consistent with those of Olayinka and Owolabi (2021) who also found a positive substantial change in environmental when there was a change in corporate governance.

Chapter Summary

Information on the study's findings and conclusions is given in this area, particularly those that relate to the specific research goals that were examined and interpreted. Given consideration for their managerial ramifications, practical significance, and positions of prior observed studies, the deductions were also explored. The implementation of corporate governance initiatives was found to be very successful, and corporate governance (as measured by corporate structure, corporate strategy, and corporate social responsibility) also led to a statistically significant

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

improvement in environmental sustainability among these chosen upstream oil and gas companies in Ghana.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The study assessed the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana. The previous chapter provided information relating to the findings based on the specific research objective and discussions made with reference to managerial implication and empirical position connections. This current chapter provides information regarding the summary of the key findings, conclusions drawn on the specific objectives and recommendations offered based on the findings in respect of the specific research objectives.

Summary of the Key Findings

The first specific research objective examined the perception of the respondents about the effectiveness of corporate governance in the upstream oil and gas sector in Ghana. This analysis was done for each respective construct. The results in terms of perception of the degree of effectiveness of corporate structure prove the variables that measured corporate structure are all very effective. Again, the perception of the degree of effectiveness of corporate strategy proves the variables that measured corporate strategy are all very effective. Finally, the results in terms of perception of the respondents about the degree of effectiveness of corporate social responsibility prove the variables that measured corporate social responsibility are all very effective.

However, the relative importance index (RII) was estimated to ascertain the degree of importance of each of the variables with respect to its contribution to the effectiveness of corporate governance. The results

Digitized by Sam Jonah Library

revealed that corporate social responsibility was of more importance (it was ranked first among the variables) with regards to its effectiveness in corporate governance. This was followed by corporate structure and corporate strategies as the least of importance.

The second objective sought to examine the effect of corporate structure on environmental sustainability in the upstream oil and gas sector. The multiple regression results prove there is substantive and positive correlation between corporate structure and environmental sustainability after controlling for the effect of other factors in the configured model. Changes in the components of corporate structure collectively accounts for a statistically significant positive substantial improvement in environmental sustainability in the selected upstream oil and gas companies when the effect of other factors that may affect environmental sustainability but are not included in the estimated regression model is statistically controlled for.

The objective three sought to estimate the effect of corporate strategy on environmental sustainability in the upstream oil and gas sector in Ghana. The study also proves corporate strategy makes the strongest unique statistically significant contribution to predicting the statistically significant substantial change in environmental sustainability. Changes in the components of corporate structure collectively accounts for a statistically significant positive substantial improvement in environmental sustainability in the selected upstream oil and gas companies when the effect of other factors that may affect environmental sustainability but are not included in the estimated regression model is statistically controlled for.

Digitized by Sam Jonah Library

Again, the fourth objective sought to determine the effect of corporate social responsibility (CSR) on environmental sustainability. The results revealed that CSR makes statistically significant contribution to predicting the statistically significant moderate change in environmental sustainability when the effect of other factors in the configured regression model is statistically controlled for. The changes in the components of CSR collectively accounts for a statistically significant positive moderate improvement in environmental sustainability in the selected upstream oil and gas companies when the effect of other factors that may affect environmental sustainability but are not included in the estimated regression model is statistically controlled for.

Lastly, another analysis was done to determine the combined effect of the constructs of corporate governance on environmental sustainability in a single model. The study revealed that corporate governance makes statistically significant contribution to predicting the statistically significant substantial change in environmental sustainability when the effect of other factors in the configured regression model is statistically controlled for. The changes in the components of corporate governance jointly accounts for a statistically significant positive substantial improvement in environmental sustainability in the selected upstream oil and gas companies when the effect of other factors that may affect environmental sustainability but are not included in the estimated regression model is statistically controlled for. Thus, the joint changes that was accounted for by the corporate governance components on environmental sustainability in a single model was greater as compared to the changes that came about when the individual components of corporate governance were used independently on environmental sustainability.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Conclusions

Conclusively, the study proves by the first objective that corporate governance (measured as corporate structure, corporate strategy and corporate social responsibility) as perceived by the various components as being very effective hence the need for management of these selected (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) upstream oil and gas companies to maintain conditions that affect the effectiveness of such corporate governance. Likewise, the remaining three research questions proved that corporate structure account for statistically significant positive substantial improvement in environmental sustainability in the upstream oil and gas sector in Ghana. Corporate strategy and corporate social responsibility all predicted significant positive substantial and moderate improvement in environmental sustainability in the upstream oil and gas sector in Ghana respectively. Likewise, the combined effect of the components of corporate governance in a joint model also predicted significant positive substantial and large improvement in environmental sustainability in the upstream oil and gas sector in Ghana. These upstream oil and gas industries can confidently rely on corporate governance programmes as a way of improving upon their practices of environmental sustainability in their respective operations in the country.

Recommendations

Based on the findings of the study founded on the nature of the specific research objectives, the following recommendations were offered. The study recommended that:

- Management of these selected upstream oil and gas companies (Kosmos energy, ENI, Aker energy, Tullow oil and Springfield) must

Digitized by Sam Jonah Library

continue to implement corporate governance that are modelled around the corporate governance programmes contextualized in the estimated model if they are to keep on improving the level of environmental sustainability of their companies.

- This recommendation is based on the findings that portrayed that the individual interaction among the corporate governance components (corporate structure, corporate strategy and corporate social responsibility) account for a statistically significant substantial and moderate improvement in the state of environmental sustainability.
- Again, special managerial attention and investment should be centred the corporate social responsibility as well as on the conditions affecting the effective implementation of his construct of corporate governance at the selected upstream oil and gas companies. This call is genuine in that extrapolation is made to the statistically significant substantial positive contributions it respective constructs of corporate governance made to cause the statistically significant positive variance in environmental sustainability.
- For policy purposes, the study recommends that policy makers for private sector industries especially in the upstream oil and gas sector should initiates policies and regulations that are more focused on environmental protection and development in all upstream oil and gas companies in Ghana.
- Special attention must be given to corporate governance programmes that are connected to improving environmental sustainability. To this effect, practices such as corporate social responsibility reporting must

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

be implemented to help society know the contribution and effort been made by these upstream oil and gas companies in ensuring a sustainable environment in their daily operations.

Contribution to Knowledge and Practice

The main contribution of this study, therefore, is the gathering of primary data for examining the effect of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana. Even though the significance of previous studies that focused mainly on literature search has not been discarded, the gathering of primary data through quantitative research approach has helped to empirically authenticate the effect of corporate governance on environmental sustainability not only in the data collection procedures but also in the analysis of the primary data.

Suggestions for Further Studies

Further studies on the effect of corporate governance on the sustainability of the environment could be replicated in the mining sector in Ghana. This can help us know the extent to which these sectors are developing, sustaining and protecting the environment.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

REFERENCES

Abutabenjeh, S., & Jaradat, R. (2018). Clarification of research design, research methods, and research methodology: A guide for public administration researchers and practitioners. *Teaching Public Administration*, *36*(3), 237-258.

Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., & Overy, P. (2016). Sustainability- oriented innovation: A systematic review. *International Journal of Management Reviews*, *18*(2), 180-205.

Adedeji, B. S., San Ong, T., Uzir, M. U. H., & Hamid, A. B. A. (2020). Corporate governance and performance of medium-sized firms in Nigeria: does sustainability initiative matter?. *Corporate Governance: The International Journal of Business in Society*, *8*(14), 324-361.

Adedoyin, F. F., Alola, A. A., & Bekun, F. V. (2020). An assessment of environmental sustainability corridor: The role of economic expansion and research and development in EU countries. *Science of the Total Environment*, *7*(13), 136726.

Ademola, O. J., Moses, O. I., & Ucheagwu, C. J. (2016). Corporate governance and financial performance of selected manufacturing companies in Nigeria. *Corporate Governance*, *2*(10), 763-791.

Adeniyi, A. J., Marsidi, A., & Babatunji, A. S. (2020). Capital Structure and Commercial Banks Performance in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *10*(1), 239-249.

Digitized by Sam Jonah Library

Adèr, H. J. (2008). *Advising on research methods: A consultant's companion*. Johannes van Kessel Publishing.

Adusah-Karikari, A. (2015). Black gold in Ghana: Changing livelihoods for women in communities affected by oil production. *The Extractive Industries and Society*, *2*(1), 24-32.

Advantage, C. (2020). Corporate social responsibility. *CSR and Socially Responsible Investing Strategies in Transitioning and Emerging Economies*, *65*.

Aguilera, R. V., Aragón-Correa, J. A., Marano, V., & Tashman, P. A. (2021). The corporate governance of environmental sustainability: A review and proposal for more integrated research. *Journal of Management*, *47*(6), 1468-1497.

Aguilera, R. V., Marano, V., & Haxhi, I. (2019). International corporate governance: A review and opportunities for future research. *Journal of International Business Studies*, *50*(4), 457-498.

Ajala, O. A., Amuda, T., & Arulogun, L. (2012). Evaluating the effects of corporate governance on the performance of Nigerian banking sector. *Review of Contemporary Business Research*, *1*(1), 32-42.

Akingunola, R. O., Adekunle, O. A., & Adedipe, O. A. (2013). Corporate governance and bank's performance in Nigeria (Post–bank's consolidation). *European Journal of Business and Social Sciences*, *2*(8), 89-111.

Akumperigya, R. (2015). *Licensing or safety: the regulatory dilemma of the Ghana Petroleum Commission* (Doctoral dissertation, University of Aberdeen).

Digitized by Sam Jonah Library

Al Amosh, H., & Khatib, S. F. (2021). Ownership structure and environmental, social and governance performance disclosure: the moderating role of the board independence. *Journal of Business and Socio-Economic Development*, *8*(4), 219-253.

Alabdullah, T. T. Y., Ahmed, E. R., & Muneerali, M. (2019). Effect of board size and duality on corporate social responsibility: what has improved in corporate governance in Asia?. *Journal of Accounting Science*, *3*(2), 121-135.

Al-Gamrh, B., Al-Dhamari, R., Jalan, A., & Jahanshahi, A. A. (2020). The impact of board independence and foreign ownership on financial and social performance of firms: evidence from the UAE. *Journal of Applied Accounting Research*, *21*(2), 201-229.

Alhassan, A. L., Zyambo, K., & Boakye, M. A. A. (2021). Welcome on board: Resource dependency and agency theoretic evidence from the South African life insurance market. *Corporate Governance: The International Journal of Business in Society*, *21*, 452-563.

Ali, M. (2017). Determinants and consequences of board size: conditional indirect effects. *Corporate Governance: The international Journal of Business in Society*, *5*(18), 97-123.

Almor, T., Bazel-Shoham, O., & Lee, S. M. (2019). The dual effect of board gender diversity on R&D investments. *Long Range Planning*, 101884.

Anderson, M. L., Dickhaus, J., & Brown, K. A. (2021). Resource Dependency Theory and Off-the-Field Behavior. *Revolution of the Modern Sports Fan*, 87.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Arens, U., Convery, L., Garton, L., Hood, S., Mason, P., Pettinger, C., & Lewis, J. (2018). One Blue Dot Eating Patterns for Health and Environmental Sustainability: A Reference Guide for Dietitians. *British Dietetic Association: Birmingham, UK*, 92.

Atan, R., Alam, M. M., & Said, J. (2017). Practices of corporate integrity and accountability of non-profit organizations in Malaysia. *International Journal of Social Economics*, 12(2), 27-43.

Awadallah, E. (2020). Measuring the effectiveness of selected corporate governance practices and their implications for audit quality: evidence from Qatar. *Afro-Asian Journal of Finance and Accounting*, *10*(1), 24-47.

Babalola, M. T., Stouten, J., & Euwema, M. (2016). Frequent change and turnover intention: The moderating role of ethical leadership. *Journal of Business Ethics*, *134*(2), 311-322.

Baker, H. K., Pandey, N., Kumar, S., & Haldar, A. (2020). A bibliometric analysis of board diversity: Current status, development, and future research directions. *Journal of Business Research*, *108*, 232-246.

Balabanov, V., Balabanova, A., & Dudin, M. (2015). Social responsibility for sustainable development of enterprise structures. *Asian Social Science*, *11*(8), 111-118.

Balachandran, B., & Faff, R. (2015). Corporate governance, firm value and risk: Past, present, and future. *Pacific-Basin Finance Journal*, *35*, 1-12.

Bansal, M., & Kumar, V. (2021). Forcing responsibility? Examining earnings management induced by mandatory corporate social responsibility:

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

evidence from India. *Review of Accounting and Finance*, 12(6), 113-126.

Bansal, P., & Song, H. C. (2017). Similar but not the same: Differentiating corporate sustainability from corporate responsibility. *Academy of Management Annals*, *11*(1), 105-149.

Baral, N., & Pokharel, M. P. (2017). How sustainability is reflected in the S&P 500 companies' strategic documents. *Organization & Environment*, *30*(2), 122-141.

Berndt, A. E. (2020). Sampling methods. *Journal of Human Lactation*, *36*(2), 224-226.

Bhagat, S., & Bolton, B. (2019). Corporate governance and firm performance: The sequel. *Journal of Corporate Finance*, *58*, 142-168.

Bowman, E. H., & Helfat, C. E. (2001). Does corporate strategy matter?. *Strategic Management Journal*, *22*(1), 1-23.

Brown, K. A., Dickhaus, J., Harrison, R., & Rush, S. (2021). Explaining the "racial contradiction": An experimental examination of the impact of sports media use and response strategy on racial bias towards athlete transgressors. *Communication & Sport*, *9*(5), 833-855.

Buallay, A. (2018). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Bueno-García, M., Delgado-Márquez, B., Georgallis, P., & Aragón-Correa, J. A. (2022). How do shareholders influence international firms' environmental strategies? The differential impact of strategic and financial investors. *Long Range Planning*, 102183.

Buntin, G. D. (2020). Developing a primary sampling program. In *Handbook of sampling methods for arthropods in agriculture* (pp. 99-115). CRC Press.

Cancela, B. L., Neves, M. E. D., Rodrigues, L. L., & Dias, A. C. G. (2020). The influence of corporate governance on corporate sustainability: new evidence using panel data in the Iberian macroeconomic environment. *International Journal of Accounting & Information Management*, 17(6), 230-254.

Cardoni, A., Kiseleva, E., & Lombardi, R. (2020). A sustainable governance model to prevent corporate corruption: Integrating anticorruption practices, corporate strategy and business processes. *Business Strategy and the Environment*, *29*(3), 1173-1185.

Carroll, A. B. (2015). Corporate social responsibility (CSR) is on a sustainable trajectory. *Journal of Defense Management*, *5*(2), 1-2.

Castellanos, J. D., & George, B. (2020). Boardroom leadership: The board of directors as a source of strategic leadership. *Economics and Business Review*, *6*(1), 103-119.

Chamchong, P. (2019). The Influence of Socio-cultural Conditions on Inter-Local Collaboration: Rethinking Resource-Dependency Theory from the Lessons of Thailand. *Asia-Pacific Social Science Review*, *19*(3), 26-67.

Digitized by Sam Jonah Library

Chancharat, S., & Chancharat, N. (2019). Board structure, ownership structure, and performance of Thai listed companies. *Australasian Accounting, Business and Finance Journal*, *13*(3), 53-70.

Cheng, L., Xie, E., Fang, J., & Mei, N. (2022). Performance feedback and firms' relative strategic emphasis: The moderating effects of board independence and media coverage. *Journal of Business Research*, *139*, 218-231.

Christopher, E. (2018). *Meeting Expectations in Management EducationSocial and Environmental Pressures on Managerial Behaviour*. Palgrave Macmillan.

Chuang, S. P., & Huang, S. J. (2018). The effect of environmental corporate social responsibility on environmental performance and business competitiveness: The mediation of green information technology capital. *Journal of business ethics*, *150*(4), 991-1009.

Coetsee, J., Skurak, H. H., & Flood, P. C. (2022). Implementing Corporate Social Responsibility Initiatives–A Change Approach. In *Leadership and Business Ethics* (pp. 405-424). Springer, Dordrecht.

Comyns B (2016) Determinants of GHG reporting: an analysis of global oil and gas companies. J Bus Ethics 136(2):349–369.

Corak, K. (2016). TOWARD BETTER CORPORATE GOVERNANCE IN SMALL AND MEDIUM-SIZED ENTERPRISES. *Economic and Social Development: Book of Proceedings*, 402.

Costa, R., & Menichini, T. (2013). A multidimensional approach for CSR assessment: The importance of the stakeholder perception. *Expert systems with applications*, *40*(1), 150-161.

Digitized by Sam Jonah Library

Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.

Crifo, P., Escrig-Olmedo, E., & Mottis, N. (2019). Corporate governance as a key driver of corporate sustainability in France: The role of board members and investor relations. *Journal of Business Ethics*, *159*(4), 1127-1146.

Cumming, D., Leung, T. Y., & Rui, O. (2015). Gender diversity and securities fraud. *Academy of Management Journal*, *58*(5), 1572-1593.

Danso, A., Fosu, S., Owusu- Agyei, S., Ntim, C. G., & Adegbite, E. (2021). Capital structure revisited. Do crisis and competition matter in a Keiretsu corporate structure?. *International Journal of Finance & Economics*, *26*(4), 5073-5092.

De Giacomo, M. R., & Bleischwitz, R. (2020). Business models for environmental sustainability: Contemporary shortcomings and some perspectives. *Business Strategy and the Environment*, *29*(8), 3352-3369.

De Villiers, C., & Hsiao, P. C. K. (2017). Why organizations voluntarily report–agency theory. In *Sustainability accounting and integrated reporting* (pp. 49-56). Routledge.

Desender, K., & Epure, M. (2015). Corporate governance and corporate social performance: boards, ownership and institutions. In *Academy of Management Proceedings* (Vol. 2015, No. 1, p. 16433). Briarcliff Manor, NY 10510: Academy of Management.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Dhaliwal, D., Li, O. Z., Tsang, A., & Yang, Y. G. (2014). Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency. *Journal of accounting and public policy*, *33*(4), 328-355.

Dimitriou, D. (2021). The evolution in transport operator's corporate structure: Ownership and governance. *Outsourcing and Offshoring*, 252-265.

Dong, J. Q., Karhade, P. P., Rai, A., & Xu, S. X. (2021). How firms make information technology investment decisions: Toward a behavioral agency theory. *Journal of Management Information Systems*, *38*(1), 29-58.

Duque- Grisales, E., Aguilera- Caracuel, J., Guerrero- Villegas, J., & García- Sánchez, E. (2020). Does green innovation affect the financial performance of Multilatinas? The moderating role of ISO 14001 and R&D investment. *Business Strategy and the Environment*, *29*(8), 3286-3302.

Eljayash, K. M., James, K., & Kong, E. (2012). The Quantity and Quality of Environmental Disclosure in Annual Report of National Oil and Gas Companies in Middle East and North Africa. *International Journal of Economics and Finance*, *3*(8), 231-263.

Elsayed, N., & Elbardan, H. (2018). Investigating the associations between executive compensation and firm performance: Agency theory or tournament theory. *Journal of Applied Accounting Research*, *21*(2), 56-76.

Digitized by Sam Jonah Library

Elsayih, J., Tang, Q., & Lan, Y. C. (2018). Corporate governance and carbon transparency: Australian experience. *Accounting Research Journal*, *31*(3), 405-422.

Engelbrecht, A. S., Heine, G., & Mahembe, B. (2017). Integrity, ethical leadership, trust and work engagement. *Leadership & Organization Development Journal*, *38*(3), 368-379.

Eruemegbe, G. O. (2015). *Impact of business environment on organization performance in Nigeria: A study of Union Bank of Nigeria*. Lagos: Nigeria.

Esmaili Kia, G., Najafnia, S., & Oshani, M. (2019). Investigating the Relationship between External Corporate Governance Mechanisms and Financial Fraud, Focusing on Cognitive Evaluation Theory Insights on Agency Theory Prescriptions. *Accounting and Auditing Review*, *26*(2), 169-192.

Fauzi, F., and Locke, S. (2012). Board structure, ownership structure and firm performance: A study of New Zealand listed-firms. *Asian Academy of Management Journal of Accounting and Finance*, *8*(2), 43-67.

Feldman, E. R. (2020). Corporate strategy: Past, present, and future. *Strategic Management Review*, *1*(1), 179-206.

Fernández-Temprano, M. A., & Tejerina-Gaite, F. (2020). Types of director, board diversity and firm performance. *Corporate Governance: The International Journal of Business in Society*.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Fernando, A. G. N. K., & Sutha, J. (2022). Influence of internal corporate social responsibility on employee retention with special reference to the apparel industry in Sri Lanka. In *Research Anthology on Developing Socially Responsible Businesses* (pp. 2090-2106). IGI Global.

Fernando, J. M., Li, L., & Hou, Y. (2020). Corporate governance and correlation in corporate defaults. *Corporate Governance: An International Review*, *28*(3), 188-206.

Filatotchev, I., & Nakajima, C. (2014). Corporate governance, responsible managerial behavior, and corporate social responsibility: organizational efficiency versus organizational legitimacy?. *Academy of Management Perspectives*, *28*(3), 289-306.

Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. *Strategic Management Journal*, *40*(7), 1097-1122.

Forsyth, J. A. (2016). *Is agency theory incompatible with stewardship theory.* Sage Publications.

Frooman, J. (1999). Stakeholder influence strategies. *Academy of Management Review*, *24*(2), 191-205.

Fukuda, K. and Ouchida, Y. (2020). Corporate social responsibility (CSR) and the environment: Does CSR increase emissions? *Energy Economics*, *92*, 104933.

Digitized by Sam Jonah Library

García- Sánchez, I. M., Hussain, N., Khan, S. A., & Martínez- Ferrero, J. (2022). Assurance of corporate social responsibility reports: Examining the role of internal and external corporate governance mechanisms. *Corporate Social Responsibility and Environmental Management*, *29*(1), 89-106.

Guetterman, T. C., Creswell, J. W., Wittink, M., Barg, F. K., Castro, F. G., Dahlberg, B., ... & Gallo, J. J. (2017). Development of a self-rated mixed methods skills assessment: The NIH mixed methods research training program for the health sciences. *The Journal of continuing education in the health professions*, *37*(2), 76.

Hair, E., Halle, T., Terry-Humen, E., Lavelle, B., & Calkins, J. (2006). Children's school readiness in the ECLS-K: Predictions to academic, health, and social outcomes in first grade. *Early Childhood Research Quarterly*, *21*(4), 431-454.

Han, H. (2021). Consumer behavior and environmental sustainability in tourism and hospitality: A review of theories, concepts, and latest research. *Journal of Sustainable Tourism*, *29*(7), 1021-1042.

Harjito, D. A., Santoso, A. R. C., & McGowan Jr, C. B. (2021). The effect of corporate governance and corporate strategy on family firm performance in Indonesia. *Journal of Applied Business Research (JABR)*, *37*(1), 11-16.

Harjoto, M. A., & Rossi, F. (2019). Religiosity, female directors, and corporate social responsibility for Italian listed companies. *Journal of Business Research*, *95*, 338-346.

Digitized by Sam Jonah Library

Herdjiono, I., & Sari, I. M. (2017). The effect of corporate governance on the performance of a company. Some empirical findings from Indonesia. *Central European Management Journal*, *25*(1), 33-52.

Hernandez, E., & Menon, A. (2021). Corporate strategy and network change. *Academy of Management Review*, *46*(1), 80-107.

Hillman, A.J., & T. Dalziel. 2003. "Boards of Directors and Firm Performance: Integrating Agency and Resource Dependence Perspectives." *Academy of Management Review* 28(3):383–396.

Huang, J., & Kisgen, D. J. (2013). Gender and corporate finance: Are male executives overconfident relative to female executives?. *Journal of Financial Economics*, *108*(3), 822-839.

Hussain, N., Rigoni, U., & Orij, R. P. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of Business Ethics*, *149*(2), 411-432.

Hutsaliuk, O., Koval, V., Tsimoshynska, O., Koval, M., & Skyba, H. (2020). Risk management of forming enterprises integration corporate strategy. *TEM Journal*, *9*(4), 1514.

Iglesias, O., Markovic, S., Bagherzadeh, M., & Singh, J. J. (2020). Co-creation: A key link between corporate social responsibility, customer trust, and customer loyalty. *Journal of business ethics*, *163*, 151-166.

Igwenagu, C. (2016). *Fundamentals of research methodology and data collection*. Lagos: LAP Lambert Academic Publishing.

Iqbal, K., & Kakakhel, S. J. (2016). Corporate governance and its impact on profitability of the pharmaceutical industry in Pakistan. *Journal of Managerial Sciences*, *10*(1), 74.

Digitized by Sam Jonah Library

Jain, S., & Bagga, T. (2021, September). Role of E-Governance in Corporate Governance and Board effectiveness. In *2021 9th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO)* (pp. 1-6). IEEE.

Jain, T., & Jamali, D. (2016). Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corporate governance: an international review*, *24*(3), 253-273.

Jantadej, K., & Wattanatorn, W. (2020). The effect of corporate governance on the cost of debt: Evidence from Thailand. *The Journal of Asian Finance, Economics and Business*, *7*(9), 283-291.

Jensen, M. C. and W. H. Meckling (1976) 'Theory of the Firm: Managerial behaviour, agency costs and ownership structure', *Journal of Financial Economics*, *3*(4), 305–360.

Jiang, F., & Kim, K. A. (2020). Corporate governance in China: A survey. *Review of Finance*, *24*(4), 733-772.

Jílková, P. (2021). Sustainable corporate strategy: the role of human capital in the time of COVID-19 Crisis. *TEM Journal*, *10*(2), 699-706.

Jo, H., & Harjoto, M. (2011). Corporate governance and firm value: the impact of corporate social responsibility. *Journal of Business Ethics*, *103*(3), 351-383.

Johnson, L., Levine, A., Smith, R., & Stone, S. (2010). *The 2010 Horizon Report*. New Media Consortium. 6101 West Courtyard Drive Building One Suite 100, Austin, TX 78730.

Digitized by Sam Jonah Library

Jungin, C., & Jae, M. M. (2021). Research funding programs and Innovative Outcomes: Perspectives from Resource Dependency Theory. 지방정부연구, *25*(3), 125-146.

Kaewkungwal, J., & Adams, P. (2019). Ethical consideration of the research proposal and the informed-consent process: An online survey of researchers and ethics committee members in Thailand. *Accountability in Research*, *26*(3), 176-197.

Karim, S., Manab, N. A., & Ismail, R. B. (2020). The dynamic impact of board composition on CSR practices and their mutual effect on organizational returns. *Journal of Asia Business Studies*, 10(4), 231-268.

Kassem, M. A., Khoiry, M. A., & Hamzah, N. (2020). Assessment of the effect of external risk factors on the success of an oil and gas construction project. *Engineering, Construction and Architectural Management*, *27*(9), 2767-2793.

Kasuya, E. (2019). *On the use of r and r squared in correlation and regression* (34(1), 235-236). Hoboken, USA: John Wiley & Sons, Inc..

Kazzim, R. O. (2020). *Corporate social responsibility and sustainability in For-Profit Industry* (Doctoral dissertation, Walden University).

Kline, T. J. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage publications.

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration (ijec)*, *11*(4), 1-10.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Kolyperas, D., Anagnostopoulos, C., Chadwick, S., & Sparks, L. (2016). Applying a communicating vessels framework to CSR value co-creation: Empirical evidence from professional team sport organizations. *Journal of Sport Management*, *30*(6), 702-719.

Komba, M. M., & Lwoga, E. T. (2020). Systematic review as a research method in library and information science. *Handbook of Research on Connecting Research Methods for Information Science Research*, 80-94.

Koutoupis, A., Kyriakogkonas, P., Pazarskis, M., & Davidopoulos, L. (2021). Corporate governance and COVID-19: A literature review. *Corporate Governance: The International Journal of Business in Society*,

Kovermann, J., & Velte, P. (2019). The impact of corporate governance on corporate tax avoidance—A literature review. *Journal of International Accounting, Auditing and Taxation*, *36*, 100270.

Kruk, S. (2021). Impact of capital structure on corporate value—review of the literature. *Journal of Risk and Financial Management*, *14*(4), 155.

Kuye, J. O. (2004). Continental policy targeting and the nepadisation process: issues, trends, and options. *Journal of Public Administration*, *39*(si-1), 458-469.

Kyere, M., & Ausloos, M. (2021). Corporate governance and firms financial performance in the United Kingdom. *International Journal of Finance & Economics*, *26*(2), 1871-1885.

Digitized by Sam Jonah Library

Lagasio, V., & Cucari, N. (2019). Corporate governance and environmental social governance disclosure: A meta- analytical review. *Corporate Social Responsibility and Environmental Management*, *26*(4), 701-711.

Lee, W., Rahman, M. H., Kersh, M. E., & Toussaint Jr, K. C. (2017). Application of quantitative second-harmonic generation microscopy to posterior cruciate ligament for crimp analysis studies. *Journal of Biomedical Optics*, *22*(4), 046009.

Lenz, I., Wetzel, H. A., & Hammerschmidt, M. (2017). Can doing good lead to doing poorly? Firm value implications of CSR in the face of CSI. *Journal of the Academy of Marketing Science*, *45*(5), 677-697.

Leonidou, E., Christofi, M., Vrontis, D., & Thrassou, A. (2020). An integrative framework of stakeholder engagement for innovation management and entrepreneurship development. *Journal of Business Research*, *119*, 245-258.

Liang, D., Tsai, C. F., Lu, H. Y. R., & Chang, L. S. (2020). Combining corporate governance indicators with stacking ensembles for financial distress prediction. *Journal of Business Research*, *120*, 137-146.

Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *The British accounting review*, *47*(4), 409-424.

Lisimba, A. F., & Lisimba, A. F. (2020). Theoretical Understanding/Literature Review Dependency Theory. *China's Trade and Investment in Africa: Impact on Development, Employment Generation & Transfer of Technology*, 21-47.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Littlewood, D., & Holt, D. (2018). Social entrepreneurship and CSR theory: insights, application and value. In *Research Handbook on Small Business Social Responsibility* (pp. 292-319). Edward Elgar Publishing.

López-López, D., Navarro Flores, E., Becerro-de-Bengoa-Vallejo, R., Losa-Iglesias, M. E., Palomo-López, P., Sánchez Gómez, R., & Calvo-Lobo, C. (2020). Cross-cultural adaptation and test-retest reliability of the spanish ROWAN foot pain assessment questionnaire (ROFPAQ-S). *Pain Physician*, *23*(1).

López-López, D., Navarro Flores, E., Becerro-de-Bengoa-Vallejo, R., Losa Iglesias, M. E., Palomo-López, P., Sánchez Gómez, R., & Calvo-Lobo, C. (2020). Cross-cultural adaptation and test-retest reliability of the Spanish ROWAN foot pain assessment questionnaire (ROFPAQ-S). *Pain Physician*, *23*(1).

Lund, D. S. (2019). Nonvoting shares and efficient corporate governance. *Stan. L. Rev.*, *71*, 687.

Lund, D. S., & Pollman, E. (2021). The corporate governance machine. *Colum. L. Rev.*, *121*, 2563.

Maestrini, V., Luzzini, D., Caniato, F., & Ronchi, S. (2018). Effects of monitoring and incentives on supplier performance: An agency theory perspective. *International Journal of Production Economics*, *203*, 322-332.

Makhmudov, S. (2020). Analysis of the dividend policy trends of corporate structures of the Republic of Uzbekistan. *Архив научных исследований*.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Malhotra, N., & Birks, D. F. (2007). *An applied approach. Marketing research.* London: Prentice Hall.

Maroun, W. (2020). A conceptual model for understanding corporate social responsibility assurance practice. *Journal of Business Ethics*, *161*(1), 187-209.

Masud, M., Kaium, A., Nurunnabi, M., & Bae, S. M. (2018). The effects of corporate governance on environmental sustainability reporting: Empirical evidence from South Asian countries. *Asian Journal of Sustainability and Social Responsibility*, *3*(1), 1-26.

Maxwell, J. A. (2012). *Qualitative research design: An interactive approach*. Sage publications.

May, A. Y. C., Hao, G. S., & Carter, S. (2021). Intertwining corporate social responsibility, employee green behavior, and environmental sustainability: The mediation effect of organizational trust and organizational identity. *Economics, Management and Financial Markets*, *16*(2), 32-61.

McColl, E. (2005). Developing questionnaires. *Assessing quality of life in clinical trials*, *2*, 9-23.

Menz, M., Kunisch, S., Birkinshaw, J., Collis, D. J., Foss, N. J., Hoskisson, R. E., & Prescott, J. E. (2021). Corporate Strategy and the Theory of the Firm in the Digital Age. *Journal of Management Studies*, *58*(7), 1695-1720.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Menz, M., Kunisch, S., Birkinshaw, J., Collis, D. J., Foss, N. J., Hoskisson, R. E., & Prescott, J. E. (2021). Corporate Strategy and the Theory of the Firm in the Digital Age. *Journal of Management Studies*, *58*(7), 1695-1720.

Miko, N. U., & Ya'u, K. (2018). Determinants of corporate social responsibility in the Nigerian listed conglomerate firms. *Kaduna Journal of Postgraduate Research*, *1*(1), 31-46.

Mohajan, H. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University Economics Series*, (4).

Muhoro, M. M. (2019). *An Evaluation of the legal and institutional framework governing insurance of upstream petroleum operations: a case study of Ghana* (Doctoral dissertation, Strathmore University).

Munis, J. K. (2020). *The effectiveness of Computerized Accounting System on organisation performance: a case study of national audit-Dodoma* (Doctoral dissertation, Mzumbe University).

Mura, M., Longo, M., Micheli, P., & Bolzani, D. (2018). The evolution of sustainability measurement research. *International Journal of Management Reviews*, *20*(3), 661-695.

Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, *237*, 117727.

Digitized by Sam Jonah Library

Naz, M. A., Ali, R., Rehman, R. U., & Ntim, C. G. (2022). Corporate governance, working capital management, and firm performance: Some new insights from agency theory. *Managerial and Decision Economics*, *43*(5), 1448-1461.

Nderitu, J. W., Waiganjo, E., & Orwa, G. O. (2021). Effect of Market Culture and Hierarchy Culture on the Implementation of Corporate Strategy in Private Chartered Universities in Kenya. *Journal of Business and Economic Development*, *6*(3), 133.

Nordensvard, J. (2014). Dystopia and disutopia: Hope and hopelessness in German pupils' future narratives. *Journal of Educational Change*, *15*(4), 443-465.

Okpeku, O. M. (2020). *The effect of corporate governance on a companys' financial performance (the Nigerian banking sector)* (Doctoral dissertation, Dublin, National College of Ireland).

Oláh, J., Aburumman, N., Popp, J., Khan, M. A., Haddad, H., & Kitukutha, N. (2020). Impact of Industry 4.0 on environmental sustainability. *Sustainability*, *12*(11), 4674.

Olayinka, O. M., & Owolabi, S. A. (2021). Corporate governance and environmental sustainability reporting: The Nigerian perspective. *International Journal of Scientific and Research Publications*, *11*(4), 487-497.

Olayiwola, J., & Okoro, S. (2021). Tax Planning, Corporate Governance and Financial Performance of Selected Quoted Non-Financial Companies in Nigeria (2007–2018). *Organizations and Markets in Emerging Economies*, *12*(2), 332-352.

Digitized by Sam Jonah Library

Olayiwola, K. T. (2018). The effect of corporate governance on financial performance of listed companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, *6*(9), 85-98.

Oluseyi-sowunmi, S. O., Owolabi, A. A., Iyoha, F. O., & Uwuigbe, O. R. (2019, September). Corporate ethical standard and the quality of sustainability reporting: empirical evidence from commercial banks in Nigeria. In *IOP Conference Series: Earth and Environmental Science* (Vol. 331, No. 1, p. 012067). IOP Publishing.

Oncioiu, I., Petrescu, A. G., Bilcan, F. R., Petrescu, M., Fülöp, M. T., & Topor, D. I. (2020). The influence of corporate governance systems on a company's market value. *Sustainability*, *12*(8), 3114.

Ong, T., & Djajadikerta, H. G. (2018). Corporate governance and sustainability reporting in the Australian resources industry: An empirical analysis. *Social Responsibility Journal*.

Oppong, R., & Kwame Amoni, E. (2021, August). Assessing Investment in Ghana's Upstream Oil and Gas Industry: the Risk and Returns. In *SPE Nigeria Annual International Conference and Exhibition*. OnePetro.

Ortiz- de- Mandojana, N., & Bansal, P. (2016). The long- term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal*, *37*(8), 1615-1631.

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.

Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS*. McGraw-hill Education (UK).

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Pasricha, P., Singh, B., & Verma, P. (2018). Ethical leadership, organic organizational cultures and corporate social responsibility: An empirical study in social enterprises. *Journal of Business Ethics*, *151*(4), 941-958.

Pasricha, P., Singh, B., & Verma, P. (2018). Ethical leadership, organic organizational cultures, and corporate social responsibility: An empirical study in social enterprises. *Journal of Business Ethics*, *151*, 941-958.

Perrault, E., & Clark, C. (2016). Environmental shareholder activism: Considering status and reputation in firm responsiveness. *Organization & Environment*, *29*(2), 194-211.

Peters, J., & Simaens, A. (2020). Integrating sustainability into corporate strategy: A case study of the textile and clothing industry. *Sustainability*, *12*(15), 6125.

Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly*, *4*(12), 218-228.

Pfeffer, J. (1973). Size, composition, and function of hospital boards of directors: A study of organization-environment linkage. *Administrative Science Quarterly*, 349-364.

Plänitz, E., & Kuzu, D. (2015). *Oil production and the transformation of livelihoods of communities in Ghana*. Sage publications.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Potwarka, L. R., Snelgrove, R., Drewery, D., Bakhsh, J., & Wood, L. (2020). From intention to participation: Exploring the moderating role of a voucher-based event leveraging initiative. *Sport Management Review*, *23*(2), 302-314.

Potwarka, L. R., Snelgrove, R., Drewery, D., Bakhsh, J., & Wood, L. (2020). From intention to participation: Exploring the moderating role of a voucher-based event leveraging initiative. *Sport Management Review*, *23*(2), 302-314.

Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*.

Rahman, M. S. (2020). *The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "testing and assessment" research: A literature review.* Sage publications.

Rao, K., & Tilt, C. (2016). Board composition and corporate social responsibility: The role of diversity, gender, strategy and decision making. *Journal of Business Ethics*, *138*(2), 327-347.

Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal Of Management Reviews*, *15*(1), 1-14.

Rossiter, N. (2021). Harold A. Innis, Asian media and dependency theory: remembering the work of Brian Shoesmith. *Continuum*, *35*(3), 335-342.

Digitized by Sam Jonah Library

Ruwanti, G., Chandrarin, G., & Assih, P. (2019). Corporate social responsibility and earnings management: The role of corporate governance. *Humanities & Social Sciences Reviews*, *7*(5), 1338-1347.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 224-253.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative science quarterly*, 224-253.

Sandu, I. S., Butorin, S. N., & Kirova, I. V. (2021, March). Corporate structure of innovative development management of economic entities in the agricultural sector of the regional economy. In *IOP Conference Series: Earth and Environmental Science* (Vol. 650, No. 1, p. 012088). IOP Publishing.

Sarango-Lalangui, P., Álvarez-García, J., & del Río-Rama, M. D. L. C. (2018). Sustainable practices in small and medium-sized enterprises in Ecuador. *Sustainability*, *10*(6), 2105.

Sarkodie, S. A., & Strezov, V. (2018). Empirical study of the environmental Kuznets curve and environmental sustainability curve hypothesis for Australia, China, Ghana and USA. *Journal of Cleaner Production*, *201*, 98-110.

Scherer, A. G., & Voegtlin, C. (2020). Corporate governance for responsible innovation: Approaches to corporate governance and their implications for sustainable development. *Academy of Management Perspectives*, *34*(2), 182-208.

Digitized by Sam Jonah Library

Shafiee, H., Razminia, E., & Zeymaran, N. K. (2016). Investigating the relationship between organizational structure factors and personnel performance. *International Journal of Management, Accounting & Economics*, *3*(2), 160-165.

Shrivastava, P., & Addas, A. (2014). The impact of corporate governance on sustainability performance. *Journal of Sustainable Finance & Investment*, *4*(1), 21-37.

Shu, P. G., & Chiang, S. J. (2020). The impact of corporate governance on corporate social performance: Cases from listed firms in Taiwan. *Pacific-Basin Finance Journal*, *61*, 101-332.

Singer, E., & Couper, M. P. (2017). Some methodological uses of responses to open questions and other verbatim comments in quantitative surveys. *Methods, data, analyses: a journal for quantitative methods and survey methodology (mda)*, *11*(2), 115-134.

Singh, S., Tabassum, N., Darwish, T. K., & Batsakis, G. (2018). Corporate governance and Tobin's Q as a measure of organizational performance. *British Journal of Management*, *29*(1), 171-190.

Smith, F. (2020). *Environmental sustainability: practical global applications*. New Jersey, NJ: CRC Press.

Solomon, J. (2020). *Corporate governance and accountability*. John Wiley & Sons.

Stobierski, T. 2021. Types of corporate social responsibility to be aware of.

Digitized by Sam Jonah Library

Strouse, J., Donovan, B. M., Fatima, M., Fernandez-Ruiz, R., Baer, R. J., Nidey, N., ... & Singh, N. (2019). Impact of autoimmune rheumatic diseases on birth outcomes: a population-based study. *RMD open*, *5*(1), e000878.

Subramanian, S. (2018). Stewardship theory of corporate governance and value system: The case of a family-owned business group in India. *Indian Journal of Corporate Governance*, *11*(1), 88-102.

Suleman, S., & Zaato, J. J. (2021). Local content implementation and development in Ghana's upstream oil and gas sector for sustainable development: contemporary issues on policy management. *Discover Sustainability*, *2*(1), 1-15.

Sun, H., Mohsin, M., Alharthi, M., & Abbas, Q. (2020). Measuring environmental sustainability performance of South Asia. *Journal of Cleaner Production*, *251*, 119519.

Surachai, C., Umawadee, D., & Nongnit, C. (2019). *Board structure, political connection and firm performance: Evidence from Thailand.* Sage publications.

Tabachnick, B. G., & Fidell, L. S. (2007). *Experimental designs using ANOVA* (Vol. 724). Belmont, CA: Thomson/Brooks/Cole.

Taiwo, O. J., Owowlabi, B. A., Adedokun, Y., & Ogundajo, G. (2021). Sustainability reporting and market value growth of quoted companies in Nigeria. *Journal of Financial Reporting and Accounting*.

Thanasegaran, G. (2009). Reliability and Validity Issues in Research. *Integration & Dissemination*, *4*.

Turnbull, S. (2015). Defining and achieving good governance.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Udeh, D., Abiahu, M. F. C., & Tambou, L. (2017). Impact of corporate governance on firms financial performance: A study of quoted banks in Nigeria. *Udeh, FN, Abiahu, MC, & Tambou, LE (2017). Impact of Corporate Governance on Firms Financial Performance: A Study of Quoted Banks in Nigeria. The Nigerian Accountant*, *2*(50), 54-62.

Vadasi, C., Bekiaris, M., & Andrikopoulos, A. (2019). Corporate governance and internal audit: an institutional theory perspective. *Corporate Governance: The International Journal of Business in Society*.

Valeri, M., Matondang, A. R., & Siahaan, E. (2020). The Influence of Employee Participation and Employee Readiness to Employee Commitments against Corporate Strategy (Spin off) Through Organizational Support as a Moderating Variable on BPD Banks. *International Journal of Research and Review*, *7*(2), 56-71.

Vitolla, F., Raimo, N., & Rubino, M. (2019). Intellectual capital disclosure and firm performance: an empirical analysis through integrated reporting. In *7th International OFEL Conference on Governance, Management and Entrepreneurship: Embracing Diversity in Organisations. April 5th-6th, 2019, Dubrovnik, Croatia* (pp. 245-255). Zagreb: Governance Research and Development Centre (CIRU).

Vitolla, F., Raimo, N., & Rubino, M. (2020). Board characteristics and integrated reporting quality: An agency theory perspective. *Corporate Social Responsibility and Environmental Management*, *27*(2), 1152-1163.

Digitized by Sam Jonah Library

Walls, J. L., & Berrone, P. (2017). The power of one to make a difference: How informal and formal CEO power affect environmental sustainability. *Journal of Business Ethics*, *145*(2), 293-308.

Wang, H., Jiang, Z., Zhang, H., Wang, Y., Yang, Y., & Li, Y. (2019). An integrated MCDM approach considering demands-matching for reverse logistics. *Journal of Cleaner Production*, *208*, 199-210.

Warrad, L., & Khaddam, L. (2020). The effect of corporate governance characteristics on the performance of Jordanian banks. *Accounting*, *6*(2), 117-126.

Widani, N. A., & Bernawati, Y. (2020). Effectiveness of corporate governance and audit quality: The role of ownership concentration as moderation. *Jurnal Etikonomi*, *19*(1), 131-140.

Young, R. B., & Javalgi, R. G. (2007). International marketing research: A global project management perspective. *Business Horizons*, *50*(2), 113-122.

Yu, W., & Ramanathan, R. (2015). An empirical examination of stakeholder pressures, green operations practices and environmental performance. *International Journal of Production Research*, *53*(21), 6390-6407.

Yuan, Y., Lu, L. Y., Tian, G., & Yu, Y. (2020). Business strategy and corporate social responsibility. *Journal of Business Ethics*, *162*(2), 359-377.

Yusuf, M., Shabbir, M., & Mohammad, F. (2017). Natural colorants: Historical, processing and sustainable prospects. *Natural products and bioprospecting*, *7*(1), 123-145.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Zaman, R., Jain, T., Samara, G., & Jamali, D. (2022). Corporate governance meets corporate social responsibility: Mapping the interface. *Business & Society*, *61*(3), 690-752.

Zaman, R., Jain, T., Samara, G., & Jamali, D. (2022). Corporate governance meets corporate social responsibility: Mapping the interface. *Business & Society*, *61*(3), 690-752.

Zaripov, R. N., Murakaev, I. M., Novikov, S. V., & Ryapukhin, A. V. (2020). Corporate structure for innovative enterprises. *Russian Engineering Research*, *40*, 137-139.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

APPENDIX A

QUESTIONNAIRE FOR RESPONDENTS

This questionnaire is to solicit information on the topic "Effects of corporate governance on environmental sustainability in the upstream oil and gas sector in Ghana". This research is purely for academic purposes and it is to serve as a partial fulfilment for the award of an MBA degree in Oil and Gas Management at the University of Cape Coast. The respondent may therefore institute legal action against the researcher in the event that any or part of the information herein provided are relayed to third parties for any purposes other than academic purposes. The respondent is therefore required to accurately provide answers to questions without any reservations. Thank you

Section A: Demographic Data of Respondents

Please tick [√] appropriately.

1. Gender: Male [ ] Female [ ]
2. Age: 18-28 [ ] 29-39 [ ] 40-49[ ] 50-59 [ ] Above 60
3. Level of education

   Diploma / HND ☐

   Bachelor's degree ☐

   Masters ☐

   Ph.D. ☐
4. For how many years have you been working in the upstream oil and gas industry?

   ☐Less than 2 years ☐3 to 5 years ☐6 to 8 years ☐ 9-11 years ☐

   Above 12 years
5. Position Held:

   Top management ☐

   Senior staff ☐

   Technical staff ☐

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Section B: Corporate Governance

To what extent do you agree with the following statements regarding corporate governance in the upstream oil and gas industry?

1=Strongly disagree; 2=Disagree; 3=slightly disagree 4=Neutral; 5=slightly 6=Agree; 7= Strongly agree.

	Corporate Structure Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1.	The firm's board size ensures increased monitoring and control in my company.							
2.	The size of the board at my company gives room for effective communication.							
3.	The firm's board is more effective in decision-making due to its size.							
4.	There is easy coordination among members of the board in the company due to its size.							
5	The board structure ensures active monitoring and control of firm activities.							
6	The board structure strengthens the commitment levels of the owner(s) or manager(s).							
7	There is easy management of the firm's activities within the company.							
8	The structure ensures effective environmental management whenever environmental crises arise.							
9.	The structure in my company provides efficient checks and balances over behavior of the owner(s)/manager(s)/employees.							
10	The structures in my company define the boundaries between management's monitoring function and decision control function.							
	Corporate Strategies							
1	The firm has developed and established longer-term environmental goals.							

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

2	There are achievable and realistic goals for the firm.							
3	The firm evaluates business plans thoroughly.							
4	The firm makes strategic changes responsively and flexibly.							
5	The firm applies tactical strategies when necessary.							
6	There is a financial budget for implementing a strategy.							
7	The firm has developed contingency and flexible plans according to different situations.							
8	The firm evaluates results against strategic goals.							
9	The firm determines strategic actions by weighing costs and benefits.							
10	My firm prioritizes their work in alignment with business goals.							
11	The firm shifts its business focus according to changes in the environment.							
	Corporate Social Responsibility							
1	My company have a Code of Conduct in place.							
2	My company publish a CSR/Sustainability Report.							
3	My company organise training sessions to enhance the understanding of CSR/ Sustainability.							
4	A quality assurance criterion in my company is adhered to in production.							
5	My company ensures adequate steps are taken against all forms of environmental pollution.							
6	My company participate in any voluntary CSR/sustainability initiatives.							
7	My company is committed to the health and							

Digitized by Sam Jonah Library

	safety of employees and catchment communities within which operations take place.							
8	My company have a written health & safety policy in place, which complies with local law, industry requirements and international standards.							
9	Purchasing policies in my company favour the local communities in which it operates.							
10	My company have a formal environmental policy, which includes a commitment to legal compliance, continuous measurement and continuous improvements in environmental performance.							

Questionnaire adapted from CSR Europe (2018)

SECTION C: ENVIRONMENTAL SUSTAINABILITY

To what extent do you agree with the following statements regarding the environmental sustainability in the upstream oil and gas sector in Ghana?

1=Strongly disagree; 2=Disagree; 3=slightly disagree 4=Neutral; 5=slightly 6=Agree; 7= Strongly agree

	Environmental Sustainability Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1.	My company cares for and protects the environment.							
2.	My company seeks to know the possible impacts on climate change for its business.							
3.	My company is recognized for excellence in cleaner production and in pollution prevention management.							
4.	My company carries out specific initiatives to reduce materials.							
5	My company carries out specific initiatives to reduce water consumption.							

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

6	The company carries out specific initiatives to reduce energy consumption.							
7	The company create a healthy and non-toxic environment by consuming less renewable and non-renewable materials.							
8	There is a reduction in resource consumption through effective environmental planning, management and control that are capable of identifying environmental risk.							
9	There is a design by my company that is environmental-friendly that is capable of realizing the goals of sustainable a healthy and safe interior atmosphere.							

Questionnaire adopted from Lalangui, Álvarez-García and Río-Rama (2018)

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library

University of Cape Coast https://ir.ucc.edu.gh/xmlui

Digitized by Sam Jonah Library