UNIVERSITY OF CAPE COAST

ENVIRONMENTAL REPORTING PRACTICES OF MINERALS EXTRACTION COMPANIES IN GHANA: A CASE STUDY OF SHAANXI MINING COMPANY AND UPPER QUARRY GHANA LIMITED

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BY

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DECLARATION

Candidate's Declaration

I hereby testify that this dissertation is my original work; accomplished on my own effort and where it is indebted to the work of others, acknowledgement has duly been made. I confirm that this work has not been presented in this or any other University for award of a diploma or degree.

Candidate's Signature…………………… Date………………………

Candidate's Name: Issah Naima Yelsoma

Supervisor's Declaration

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

Supervisor's Signature……………………. Date……………………..

Supervisor's Name: Rev. Dr. George Tackie

ABSTRACT

In recent years, concerns about sustainability and Environmental Accounting and Reporting (EAR) disclosures have received a great amount of discussion in various countries and industries, particularly in the mining industry. The purpose of this study was to assess the motivations of mineral extraction firms in Ghana to undertake environmental reporting practices and the perceived benefits accrued from it. A case study method was employed involving primary data from a census of management and accounting staff from Shaanxi Mining Company Limited and Upper Quarry Limited in the Upper East Region. Descriptive statistics were used to analyse the determinants of EAR practices of the two firms. The study offered support for the political economy, legitimacy and stakeholder theories generally applied to the study of EAR practices. Specifically, the study concluded that EAR practices are common to mining and quarry firms in Ghana. Pressure from government, media influence, shareholders' influence and the existence of environmental committee in the firms are perceived to influence mineral extraction firms' level of EAR practices. Meanwhile, perceived benefits from EAR practices include fostering cordial relationship between mining and quarry firms and the society, preventing government fines and improving firm reputation. The study recommends that government should adopt green tax policy to encourage EAR practices while regulatory bodies make the practices mandatory.

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DEDICATION

I am grateful all who have helped me physically and spiritually to the completion of this dissertation and more especially to my family.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

LIST OF ABBREVIATIONS

CSR	Corporate Social Responsibility
EAR	Environmental Accounting and Reporting
ER	Environmental Reporting
EPA	Environmental Protection Agency
SMCL	Shaanxi Mining Company Limited
SPSS	Statistical Package for Social Sciences
TBL	Triple Bottom Line
UQL	Upper Quarry Limited

CHAPTER ONE

INTRODUCTION

The promotion of sustainable development is also being encouraged in order to address the problems associated with the manufacturing industry (Jasch, 2003). Because of public concerns about environmental sustainability, environmental accounting and reporting (EAR) has risen to prominence as a primary issue for accounting bodies and practitioners. EAR is a means of responding to those concerns (Gray, 2001). As a result of this argument, the recent increase in empirical attention (Deloitte & Van, 2011) to EAR can be explained.

Background of the Study

As a result of global dynamics and commercial practices, stakeholders and the entire society have shifted their attention to environmental challenges (Agyei & Yankey, 2019). For example, pollution, forest loss, and the dumping of chemical waste are all considered to be negative environmental consequences of large corporations' activities, according to Dutta and Bose (2008). According to this, major corporations in Europe, the United States of America, and Australia have significantly improved their social and environmental reporting credentials in recent years, substantiating their claims with substantial paper-based or web-based environmental and social sustainability reports, as well as more recently with social and sustainability reports (Cooper & Owen, 2007).

Given the fallout from the Enron and related scandals, it is perhaps unsurprising that reputation management appears to be a significant motivator for businesses seeking to comply with environmental reporting requirements.

A growing number of businesses are voluntarily disclosing their environmental and social responsibility activities in their annual reports, despite the fact that the accounting profession and theoretical accounting literature are at odds over why companies should do so (Hackston & Milne, 1996). It is the provision of financial and non-financial information about an organization's interactions with its physical and social environment, as indicated in annual reports or supplemental social reports (Guthrie and Mathews, 1985).

Corporate social disclosure can include information about the physical environment, energy consumption, human resources, products, and community involvement (Guthrie and Mathews, 1985). Business has also evolved into a strategy for integrating social, environmental, and economic concerns. This is known as corporate social responsibility (CSR). The concept of corporate social responsibility (CSR) has been evolving since the nineteenth century, when it first emerged in the United States, and it is currently in various stages of development in different parts of the world.

The European Union has surpassed the majority of countries and is now followed by the United States, while developing countries continue to be at the bottom of the CSR ladder, according to Hopkins (2015). Business organizations worldwide are now learning to do what the current generation has tasked them with doing: producing in a way that meets the demands of today's consumers while also considering the needs of future generations.

The effects of manufacturing operations on the immediate environment are increasingly being held accountable by the public and regulatory authorities (Owusu-Mensah, 2015). Their efforts to ensure sustainability through the use of clean and efficient manufacturing processes as well as the mitigation of already existing impacts on both the natural and built environments are being urged. According to Yakovleva (2004), issues such as sustainability and environmental reporting (ER) have gotten a lot of attention recently in a variety of countries and industries, with the mining industry being the most prominent. Because mineral extraction has the potential to affect a wide variety of ecological bodies and is significant to a diverse array of interested party groups, there is a reasonable expectation that the industry will function more sustainably in the future (Owusu-Mensah, 2015).

According to popular belief in Ghana, poverty and a lack of sustainable development in mineral-rich communities are caused by the behavior and operations of the mineral extraction corporations themselves. Environmental and social consequences of mineral extraction have been documented, as well as the social and economic character of mining communities (Boocock, 2002). Business owners have also come under fire for allegedly abdicating their responsibilities to the communities in which they operate, thereby increasing local poverty and vulnerability, as well as making it more difficult to access essential social services such as health care, clean water, and education. This is the context in which the research will look into the impact of ER on the performance of a company.

Statement of the Problem

Profitability is necessary of businesses, and it has remained their defining trait (Waniak-Michalak, Macuda & Krasodomska, 2016). Keith (2003), on the other hand, claimed that business does not live in isolation in our society and that a good business system cannot thrive in a diseased society. Additionally, business is typically aided by a stable and well-managed social and political environment. Prejudice-related societal unrest is detrimental to business. It is consequently critical for corporate entities to assess their actions in the context of the entire ecosystem.

The potential impact of corporate environmental disclosure practices on shareholder wealth maximization via increased revenue, cost savings (Loew et al., 2004; Agyei & Yankey, 2019), financial performance, and firm reputation is what has fueled the recent surge in shareholder interest in environmental reporting. Despite these advancements, empirical research on environmental reporting has generally focused on wealthy economies (see Abu-Baker & Naser, 2000; Bewley & Li, 2000; Cormier & Magnan, 2003; Dutta & Bose, 2008).

Even in developed economies, concerns have been raised about the veracity of sustainability issues raised at press conferences and in sustainability reports, as Boiral (2013) views such reports as "simulacra that conceal really sustainable-development problems by presenting an idealized version of business situations" (p. 1061). Given the dynamic nature of environmental reporting, it is critical to include perspectives from a variety of environments in order to develop a comprehensive perspective on the phenomena. Additionally, existing disparities in the regulatory contexts in which enterprises operate may have a varied effect on the reasons for environmental reporting. These distinctions are likely to be important, as environmental reporting has remained optional to date, at least in terms of accounting standards. The current study will analyze the environmental reporting methods of mineral extraction businesses in Ghana against this backdrop.

Purpose of the Study

The study examined environmental accounting and reporting practices of minerals extraction companies in Ghana. The study used Shaanxi Mining Company Limited and Upper Quarry Limited in Upper East Region as a case study.

Research Objectives

The specific objectives are as follows:

i. To determine the level of environmental reporting practices by mineral extraction companies.

ii. To identify the factors that influence mineral extraction companies environmental accounting practices.

iii. To assess the benefits of environmental accounting disclosure to minerals extraction companies.

Research Questions

The research questions of the study include the following:

i. What is the level of environmental reporting practices by mineral extraction companies?

ii. What factors influence mineral extraction company's environmental reporting practices?

iii. What are the benefits of environmental accounting disclosure to minerals extraction companies?

Significance of the Study

This study aims to provide answers to an existing grey area regarding the present finance field. It is the intention of this study to provide insight into whether mineral extraction companies look beyond their core mandate of wealth creation for their respective stakeholders.

Furthermore, the study will provide information that will engineer further researches into the activities of mineral extraction firms and interventions that have been adopted to minimize the negative impacts of mineral extraction operations on the environment. This effort could be replicated in other regions where mineral extraction is a major economic activity.

The study will also fill in the gap identified in existing literature with regards to environmental reporting practices and firm performance. Also, the study could serve as a means for advocating for support from both government and non-governmental institutions. For instance, where more is expected from mineral extraction firms than what has currently been done, the government can intervene to get things rightly done to ensure improved standards of living and protection of the environment.

Finally, people in academia will also be beneficiaries of the findings of the study. The study will serve as literature that will contribute and add up to the existing knowledge of the proposed topic.

Delimitation of the Study

Delimitations are conditions researchers place on a study because of specific choices (Oppong, 2013). The delimitations of this study included the geographic location of the study, which excludes mineral extraction companies who are not located in Upper East region of Ghana. Thus, the study focused on two mineral extraction companies in the Upper East Region of Ghana. That is, Shaanxi Mining Company Limited (SMCL) and Upper Quarry Limited (UQL). Contextually, the research emphasized on the assessment of environmental reporting practices and its effect on the performance of minerals extraction companies.

Limitations of the Study

As with any research work, this study came across the following restrictions; the study did not cover all mineral extraction firms in Ghana. It was limited to only two firms (SMCL and UQL) in Upper East region. This is therefore a limitation for generalization purposes.

Second, it is anticipated that access to recent and relevant studies on the ER-performance nexus from approved journals will be difficult. This created a significant obstacle to the study's objective of providing current information about the subject under evaluation to its users. Another constraint encountered was the researcher's reluctance to offer information for the research. However, considering the benefits of ER practices and the reliability/validity procedures used to assess the instruments and respondents, this limitation was minimized.

Organization of the Study

The study has five sections. The study's context, problem statement, aims, research questions, importance, delimitation, and constraints are discussed in Chapter One. The second Chapter reviewed previous research papers. Individually, previous theoretical and empirical research related to the inquiry was evaluated to help the researcher present a thorough work. The study's conceptual approach and empirical literature review were discussed. Chapter Three discusses the research design, study population, sampling methods, data sources, data collection tools, data collection procedures, and data analysis approaches. The findings are discussed and analyzed in Chapter Four. A recent study may confirm or contradict earlier empirical work, as well. Finally, Chapter Five summarized the study's findings and made detailed recommendations. This chapter also recommended future research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviewed prior writings available on environmental reporting practices. It begins with conceptual review of the study. It also looks at the theoretical orientations and discusses the various theories underpinning the study. The chapter further reviews empirical literature on the benefits of environmental accounting and reporting practices in organizations. The chapter ends with the conceptual framework and summarized the relationship between key variables and the gaps to be filled by the study.

Conceptual Review

In this study, the conceptual review involves the role of minerals reserves to the economy of Ghana, the description of environmental accounting and reporting practices. The section of the study further looked at the factors that influence environmental accounting disclosures of firms.

Contribution of mineral extraction industry in the Ghanaian economy

Ghana has enormous mineral reserves, and the country's mineral endowment potential is well-known and recorded internationally. Ghana is the world's ninth largest gold producer (Aryee, 2001; Aryee, Soreide, Shukla & Le, 2011). Ghana's gold output climbed by 2.1 percent to 97.8 tonnes in 2013, although its percentage of total gold production remained stable at 3% (Ghana Chamber of Mines, 2013; Boakye, Dessus, Foday & Oppong, 2012). Between 1984 and 2011, total foreign direct investment (FDI) in the minerals and mining sector totaled around USS11.2 billion, with the large-scale mining and mine support services sub-sector employing approximately 27,000 people (Boakye et al, 2012). Minerals continue to have a substantial impact on the country's current account balance.

The mining sector continued to be a significant source of foreign money for the country, accounting for 37.6 percent of total merchandise exports in 2013 compared to 43 percent in 2012. The importance of this inflow in maintaining the currency's value cannot be overstated. Without a doubt, the decline in mineral export revenue contributed significantly to the local currency's sharp depreciation in 2013 (Ghana Chamber of Mines, 2013). According to Amponsah-Tawiah and Dartey-Baah (2011), Ghana's mining sector received unparalleled priority attention during the Economic Recovery Programme (ERP) in 1983. Apart from the country's broad macroeconomic policy reforms, there were sector-specific measures aimed at reviving investor interest in the mining sector. For example, between 1984 and 1995, considerable institutional development and legislative reforms were made that provided generous incentives to investors in order to reflect the new paradigm. The Minerals Commission was established in 1984; the minerals and mining code was promulgated in 1986; the small-scale mining law was promulgated in 1989; and the Environmental Protection Agency was established in 1994.

Along with the regulatory framework established through laws and organizations, considerable incentives were offered to international investors in order to increase foreign direct investment in mining. For instance, in Ghana, corporate income tax on private enterprises engaged in mineral production reduced from 50-55 percent in 1975 to 45 percent in 1986 and 35 percent in 1994. (Campbell, 2003; Akabzaa, & Darimani, 2001). Businesses received duty exemptions on equipment and accessories required for mining production. Additionally, mining corporations were permitted to hold a minimum of 25% of foreign currency in an external account for a variety of objectives, including the acquisition of physical capital required for production and dividend payments, as well as for expatriate labor. The benefits accruing to mining corporations as a result of the dynamic evolution of mineral laws and regulations have resulted in a rapid expansion of Ghana's mining industry. Between 1983 and 1998, the mining industry brought nearly US$ 4 billion in foreign direct investment to Ghana, accounting for more than 60% of total FDI in the country (Ghana Minerals Commission, 2000).

The mining sector is credited with generating large foreign exchange revenues, employment, mineral royalties, employee income, and tax payments, among other things. It's worth noting that mining's contribution to GDP climbed from 1.3 percent in 1991 to around 5.2 percent on average between 2001 and 2004 (Ghana Minerals Commission, 2006). Additionally, the sector's contribution to the country's gross foreign exchange earnings climbed gradually, from 15.60 percent in 1986 to 46 percent in 1998. The sector generated US$ 124.4 million in 1986 and US$ 793 million in 1998 in absolute terms (Ghana Minerals Commission, 2000).

The sector continues to contribute significantly to the Ghana Revenue Authority through mineral royalties, employee income taxes, corporate taxes, and ancillary levies (Amponsah-Tawiah & Dartey-Baah, 2011). However, the sector has a relatively limited capability for job creation. This is because the majority of mining companies in the country operate surface mining operations that are capital-intensive but need little labor. Employment in the mining sector, while not as high as in other areas of the economy, increased significantly, at least until the end of 1995. The sector's overall labor force increased from 15,069 in 1987 to 22,500 in 1995 (Ghana Minerals Commission, 2000). According to the Ghana Chamber of Mines, direct employment generated by producing members amounted at 10,624 in December 2004. Only 1.4 percent of this workforce were expatriates, while the remainder were solely Ghanaians.

This level of employment does not include personnel in exploration, contractors, mining support service companies, or suppliers to large-scale mining companies, not to mention unregistered mining companies. While the mining sector generates a relatively small share of direct employment throughout Ghana, it is a significant source of both direct and secondary employment in the regional areas of the key mining regions of Western, Ashanti, Eastern, and Brong-Ahafo. The sector has attracted a sizable number of sector support companies in these locations, including security services, transportation companies, explosive producers, and mineral assay laboratories (Amponsah-Tawiah & Dartey-Baah, 2011). Mineral production in the country has increased significantly since the reforms, which is reflected in the state's export revenues. Ghana increased production of all minerals significantly in

2005, with gold displacing cocoa as the country's main foreign exchange earner.

Mineral revenue increased from 798 million dollars in 2004 to 995.2 million dollars in 2005, accounting for almost 13% of the Ghana Revenue Authority's overall collection. Gold production increased by 63 percent, while export earnings increased by 903.9 million dollars, from 731.2 million dollars to 903.9 million dollars. Bauxite revenue went from $11.9 million in 2004 to $18.1 million in 2005, while diamond revenue increased from $26 million to $34.7 million. Manganese exports totaled 39.1 million dollars in 2005, an increase above the previous year's figure of 30.2 million dollars (Ghana Chamber of Mines, 2005). Though Ghana's economy is not classified as a mining economy by the United Nations, the minerals sector has made significant contributions to foreign exchange profits and Gross Domestic Product (GDP). Ghana's mining sector currently produces over 40% of Gross Foreign Exchange (GFE) revenues and accounts for roughly 5.2 percent of GDP (Ghana Minerals Commission, 2006). Minerals contributed for 38.96% of total export revenues in 2000, followed by cocoa (22.51%) and timber (9.03%) (ISSER, 2001). Indeed, mining continues to be a critical industry for Ghana's economic growth and development.

Ghana has recently become the favored destination for the majority of mining investors. This is demonstrated by the merger of Ashanti Goldfields and Anglo Gold, as well as the entry into Ghana's gold mining industry of the big US mining corporation Newmont. Thus, Ghana's mining business presents an excellent chance to uncover the enigma surrounding the insinuated sense of helplessness, fatalism, and other causative attributions for mine disaster occurrences and to contribute to the industry's promotion of health and safety. Ghana has joined the Extractive Industries Transparency Program (EITI), a global standard-setting initiative aimed at enhancing transparency and accountability in the administration of oil, gas, and minerals in resource-rich countries. The concept is based on the belief that prudent use of natural resource wealth is a critical engine for sustainable economic growth that contributes to sustainable development and poverty reduction, but that when not managed properly, it can have negative economic and social consequences, resulting in untold hardships for citizens who should have benefited from the natural resource wealth (Amponsah-Tawiah & Dartey-Baah, 2011).

Definition of environmental accounting and reporting practices

Accounting is not only the earliest but also the most solid management idea. Despite its stability and consistency, accounting has seen significant modifications during the last century. It would be remarkable if accounting remained unchanged a century from now. While we cannot see so far ahead, we may evaluate existing events to gain insight into what to expect in the following decades (Sunder, 1997). The term "environment" is frequently associated with something green and natural.

In business operations, it refers to the concept of well managed actions that do not harm the environment in which an organization operates (Haslinda & Lehman, 2009). This broad concept may motivate businesses to make public statements about their operations and the environment, providing tales about how they run their operations and what efforts they are undertaking. Thus, a semiotic interpretation of disclosures is suggested to provide insight into the story of environmental signals while also educating us about the reality formation process facilitated by signs - including words, images, sounds, gestures, and objects (Chandler, 2002). Crowther (2002) takes a semiotic approach to the corporate reporting of a sample of UK corporations. He is particularly interested in financial and environmental performance reporting and regards corporate reporting as a communication act and event.

Crowther says that the job of corporate reporting has evolved beyond traditional roles of communicating the business outcomes of past acts and expected future actions, to include more outward- and forward-looking roles. His thesis bears a strong resemblance to the broader context of the corporation-stakeholder interaction. According to Bartkowiak (2011), the idea of EAR is a grey area in accounting since it lacks a solid definition in the respective professions' literature or practice. The way EAR is interpreted and applied varies significantly by organization and country. Generally, it is about encouraging businesses to be more conscious of their impact on society and the environment (Waniak-Michalak, Macuda & Krasodomska, 2016). There are various EAR synonyms, the most frequently used being business ethics, corporate citizenship, sustainability or sustainable development, corporate environmental management, business and society, business and governance, business and globalization, and stakeholder management. CSR, on the other hand, is seen as a catch-all term that encompasses corporate citizenship, corporate sustainability, stakeholder management, environmental management, business ethics, and corporate social performance.

One of the primary justifications for environmental accounting and reporting is that it improves the sharing of data relating to environmental care and preservation; because it "creates a very specific visibility and pattern of organizational relevance" (Hopwood, 1987, p. 209). According to Negash (2012), accrual accounting-based earnings figures do not take sustainability into account. Similarly, the finance section of the balance sheet does not appropriately account for any liabilities arising from the firm's previous environmental initiatives. Even within the existing conceptual framework, international financial reporting standards (IFRS) have the unique advantage of bringing environmental accountability to the boardroom and financial markets, due to their legal backing in more than 100 nations.

The environment is a complicated and diverse subject. Contemporary accounting literature examines the environmental accounting problem from two perspectives: the conventional rationalist-efficient market-voluntary disclosure perspective; and the legitimization, image-building, and social contract perspective. Bewley and Li (2000) discovered that enterprises that receive more news coverage about their environmental exposure, have a greater pollution proclivity, and are more politically exposed are more likely to provide generic environmental information. As with Bewley and Li, Hughes, Anderson, and Golde (2001) concluded that common environmental reporting practices included sponsoring community-based projects and events, allocating budgets for health and safety and the occurrence of accidents, and submitting environmental plans to the appropriate environmental authority.

Factors that influence firms environmental accounting and reporting disclosures

According to Agyei and Yankey (2019), prior empirical studies show that firm’s decision to engage in EAR could be explained by firm size, profitability, industry classification, stakeholder factor, firm age, the existence of corporate social responsibility committee, country of the firm's origin, overseas listing and the perception of the media about the firm.

Firm size

According to Cormier and Gordon (2001), bigger enterprises are required to report more often than smaller ones because of the increased public scrutiny they face as a result of their operations and the need for public support they must seek via reporting. There is some evidence that the size of the company's board, the amount of leverage, and its degree of voluntary disclosure are all related to the level of voluntary disclosure. According to Hackston and Milne (1996), there are arguments for a size-disclosure link in both agency theory and legitimacy theory. In addition, the annual report serves as an effective medium for sharing information about the company's social programs since bigger organizations engage in more activities, have a higher influence on society, and have more shareholders interested in learning about such programs.

Profitability

The idea that social responsiveness necessitates the same management approach as profitability has been put out as a link between corporate social disclosure and bottom-line growth (Hackston & Milne, 1996). Environmental accounting disclosure has a positive correlation with business profit, according to Cormier and Magnan (2003). This positive correlation has an impact on the financial capacity of companies to engage in high-cost CSR initiatives. According to Cormier and Magnan (1999), large corporations can swiftly adapt to society's demands in order to resist stakeholders' pressures and assist in the resolution of social and environmental challenges. This is despite the fact that Neu, Warsame and Pedwell (1998) found no connection between the profitability of firms and the disclosure of environmental issues.

Industry classification

The industry in which a business operates has been recognized as a factor that might influence the way it discloses its social impact. Companies in the extractive sectors, according to Dierkes and Preston (1977), are more likely than others to publish information about their environmental consequences since their economic activities alter the environment. It is projected that consumer-oriented corporations would be more concerned with proving their social responsibility to society, since this is likely to boost their brand image and affect sales (Cowen et al., 1987). On the other hand, Patten (1991) says industry, like the size of the corporation, has an impact on political exposure and that transparency is necessary to fend off social activists' unwarranted pressure and criticism.

According to Cormier and Magnan (2003), the kind of industry in which a company works affects how much information it discloses about the company's environmental impact. The mining and oil sectors, for example, are very visible to the public, which may lead to more transparency in order to avoid the pressure and criticism of social activists. As a result of intense rivalry and consumer visibility in the banking industry, there is a strong demand for corporate social responsibility initiatives from the sector's participants. Whether or whether a company is in a carbon-intensive industry, according to Hrasky (2012), affects the amount of meaningful disclosures that are made. There is a correlation between the kind of auditing firm and industry and the degree of voluntary disclosure, according to Kamel and Awadallah (2017).

Stakeholder's factor

Stakeholder organizations have a significant impact on firms' willingness to publish environmental data (Deegan & Blomquist, 2006). Managers make resource allocation choices with the help of key stakeholders in every firm. Cormier and Magnan (2003) found that shareholders had a significant impact on companies' environmental disclosures in France. For the same reason, Deegan and Rankin (1997) discovered that shareholders were among the groups of annual report readers who viewed the inclusion of environmental data as crucial to their decision-making. As a result, many companies deemed it imperative to engage in socially responsible practices and to document those efforts.

Stakeholders have varying degrees of influence on environmental reporting. 'Attempts to publish environmental information in annual reports', say Wilmhurst and Frost (2000), are most influenced by shareholders. In order of precedence, the remainder of the factors were legal requirements (the government) and interest groups. When it comes to environmental disclosure, the government and creditors hold a tie for first place, according to Roberts (1992). Albertini (2014) found that environmental reporting in France improved as a result of improvements in rules. Government institutions may be able to affect environmental disclosure practices, according to Deegan and Blomquist (2006), but greater levels of media attention were linked to higher levels of environmental disclosure in annual reports.

Studying how French and Canadian companies reacted to new laws, Chelli, Durocher, and Fortin (2018) found that the French parliament's environmental accounting and reporting reforms were more successful than those implemented by the Canadian stock market. According to Chelli et al (2018), not only do stakeholders have an impact on the EAR, but the magnitude of that impact varies from country to country. It has been shown that the driving force behind corporate social responsibility disclosures goes beyond government rules to encompass the ambitions of the governing government and the personal initiatives of important persons in Bangladesh. Politics is at play in these politically driven CSR disclosures, according to Uddin and colleagues (2018). Due in part to the proper development of the legal and institutional frameworks, shareholders, governments, and the media are major players in environmental reporting (Khlif, Guidara & Souissi, 2015).

Theoretical Review

To make understanding of the relationships between the variables and ideas pertinent to the research, this theoretical overview is helpful. The political economy theory, stakeholder theory, and triple bottom line theory form the basis of this research. In order to better understand the relationship between EAR practices and organizations, some hypotheses have been put forward.

Political economy theory

Accordant to political economics theory, it is thought that accounting systems are utilized to generate, distribute, and mystify power in line with the theory. Government, politicians, and metropolitan assemblies may constitute a threat to businesses because they may be subjected to more government intrusion in the form of regulatory action, which results in increased political expenses for the businesses. Frost (2000) defined formalized formalized formalized formalized formalized (Frost, 2000). " Government lobbying and social responsibility disclosures have the potential to minimize political expenditures for corporations." The relationship between the social information content of the firm and external parties (community members, local community, government engagement as well as regulatory bodies) must thus be given more attention (Whittred, Zimmer & Taylor, 1996). Frost (2000) discovered that political economy theories provide a better explanation for why businesses seem to respond to government or public demands for more openness about their social implications than other economic theories.

Environmental disclosures are considered as a reaction to stakeholder demands, but political economy theory, according to Deegan (2000), has significance since it views accounting reports as social, political, and financial records that should be disclosed. Theories of politics and economics, on the other hand, recognize the strategic significance of social and environmental disclosures in annual reports and the potential for them to influence public opinion. The current regulatory climate has an impact on the extent to which EAR disclosure is impacted, and this is the subject of this study.

Stakeholder theory

Freeman offered the stakeholder concept for the first time in 1984, emphasizing social responsibility as a guiding principle. When it comes to eliminating information asymmetry in business, the stakeholders and environmental accounting and reporting of a firm must be in balance for it to be successful. Because of this, companies should be able to use stakeholder theory to better manage their interactions with a variety of stakeholders. According to the idea, a company's performance is mainly defined by the relationships it has with its many stakeholders.

For a company to prosper, it must honor the agreements it has made with its many stakeholders, including but not limited to its shareholders (Elijido-Ten, 2004). Since stakeholders control the resources necessary for enterprises to achieve their objectives, businesses must obtain permission from them before conducting business. Businesses must also adapt their operations to meet the needs of stakeholders, who control the resources necessary for enterprises to achieve their objectives (Kassinis & Vafeas, 2006). In order to achieve an ideally balanced management of all stakeholders' interests, which at times may conflict with the interests of the shareholders, environmental reporting is thus seen as an integral component of the dialogue between a company and its stakeholders (Danastas & Gadenne, 2004). The purpose of this study is to examine practitioners' perceptions on which stakeholders should be considered for EAR disclosure, how stakeholders should be prioritized, and the perceived benefits of disclosures.

Triple bottom line (TBL) theory

The triple bottom line (TBL) idea was developed by John Elkington in 1997. Measuring social sustainability, economics, and financial environment are all part of the TBL theoretical accounting framework. The 3Ps, which stand for "people, planet, and profits," are at the heart of the TBL hypothesis. The TBL idea has been embraced by corporations during the last 30 years to become better citizens of the world. As a result, the TBL theory's fundamental goal is to promote sustainability by way of the value chain (Slaper & Hall, 2011). It has been stated that the TBL is sustainable when CSR is standardized because it addresses the significance and relevance of the well-being of both people and companies, Christofi, Christofi, and Sisaye (2012) said.

In accounting, scholars have advocated extending standards and developing corporate social performance since the introduction of the TBL theory. Sethi (1975) made a significant contribution to the accounting field's understanding of corporate social performance. As a response to the business sector and the high pace of globalization, Carroll (1999) took it a step further by expanding it. The TBL theory was crucial in overcoming corporate barriers in Australia's public sector and laying the foundation for long-term sustainability. The primary goal of the TBL theory is to encourage businesses to be more ethical and sustainable. The TBL theory has become more important in today's globalized financial reporting market because it promotes trustworthiness, accuracy, and openness (Mitchell, Curtis, & Davidson, 2012).

Empirical Review

Benefits of environmental reporting practices

Many studies have examined the relationship between environmental disclosure and corporate performance. Agyei and Yankey argue that environmental disclosure is helpful for business (2019). According to Khlif et al. (2015), the benefits of corporate social and environmental reporting on the bottom line cannot be understated. They say that reporting on social and environmental issues improves company success. Abdullah, Shukor, Mohamed, and Ahmad (2015) and Uyar and Klç (2012). Environmental disclosure, according to Brophy and Starkey (1996), Berry and Rondinelli (1998), and Prakash (2001), has financial and strategic benefits.

According to Berry and Rondinelli, a company's environmental performance is approved by its stakeholders (1998). Customers that care about the environment are more likely to buy from an eco-friendly company. Boyce (2000) claims that EAR has an internal impact on enterprises, with the main benefit being data collecting.

Management often values the reporting process's information enough to urge it ahead. EAR can increase a company's success by motivating employees. As a result, environmental reporting requires firms to track and disclose their environmental impacts. Cormier et al. (2005) studied data from print and web sources and representative samples from across Europe and the United States to pin down the factors that influence environmental disclosure. Risk, ownership, asset age, and corporate size all influenced the needed level of environmental disclosure.

Depending on the business's needs, environmental disclosures can be categorized as operational, investment, or financial (Agyei & Yankey, 2019). Rearranging the business's activity helps the environment. The first step, say Schaltegger and Burritt, is to produce eco-friendly goods (2010). These things will enhance sales, especially in locations with a high level of environmental consciousness. The impact of eco-friendly goods on sales is dependent on both customer and company awareness, according to Jones (2003). Receiving symbolic prizes helps the operational environment. A symbolic reward can boost a company's brand and consumer interactions despite its intangibility. Gaining a customer's confidence may lead to increased revenue and free visibility. Tax-exempt environmental operations may result in further cost savings (Schaltegger & Burritt, 2010).

Employer and asset-based investments provide a positive environmental return. These investments will boost the company's operations in the long run. Investment in an asset can boost shareholder value if the returns on investment exceed the expenses, according to Milne and Grubnic (2011b). According to Schaltegger and Burritt (2010), a company's social obligation includes guaranteeing employee health and safety. Reduced sick leave, workplace accidents, health care costs and improved performance all benefit organizations. Voluntary disclosure, according to Hassan et al (2011). Enviro promises may be broken if environmental duties increase. Sustainable firms and environmental stewardship are more likely to get loans from financial institutions with strong ethical convictions.

Similarly, companies that engage in EAR would attract environmentally sensitive investors. Adeniyi (2017) examined the impact of corporate social responsibility disclosure on the Nigerian cement industry's business substance. The study employed a case study approach, supplemented by secondary data derived from chosen firms' annual financial reports. The established hypotheses were statistically tested using the SPSS 20.0 program. According to the study, there is a strong correlation between corporate social responsibility and business sustainability.

De Villiers and Bernard (2000) analyzed the annual reports of publicly traded South African mining companies from 1994 to 1999 to assess how frequently certain environmental information is disclosed. The study discovered that a bigger proportion of mining corporations than other large enterprises publish environmental data, and that these firms' actions are relatively free of government influence. The primary themes covered in the report included money allocation for community development, sponsorship of community events, and the creation of an annual environmental protection strategy. Similarly, Abu-Baker and Naser (2000) stated that human resources and community involvement are the two most prevalent themes for corporate social disclosure in Jordan.

Additionally, the study discovered that CSR disclosure is extremely limited, implying that the majority of corporations are not sharing environmental and CSR information. Kurantin (2011) was concerned with integrating environmental accounting into Ghana's oil and gas industry through the use of the United Nations' and World Bank's System of Integrated Economic and Environmental Accounting (SEEA). Tackie, Agyenim-Boateng, and Arthur (2017) concluded from an examination of large-scale mining companies' environmental accounting and reporting (EAR) practices in Ghana that EAR practices are not uniform across firms, despite the fact that firms viewed EAR as critical strategies requiring maximum attention.

According to Adusei (2017), the level of social and environmental reporting has increased in recent years as a result of stakeholder pressure and the scope of rules. According to the report, two significant benefits of EAR are community support and cost savings. Despite their informative findings, none of this previous research focused on the Ghanaian wood sector or on the perspectives of key practitioners who enable the adoption and implementation of EAR. Brew, Junwu, and Addae-Boateng (2015) sought to elicit local populations' perspectives and concerns regarding mining corporations' CSR operations in Ghana's Ashanti, Eastern, and Western regions.

The sample was chosen from the catchment communities of gold mining enterprises that were members of the Ghana Chamber of Mines on a commercial level A. The research demonstrated that there were certainly some CSR activities in the communities relating to health, education, community help, and livelihoods. The research found that the majority of individuals, particularly in the Eastern and Western regions, were concerned about mining corporations' lack of frequent medical examination. However, it was found that mining corporations' operations have a detrimental influence on the surrounding community.

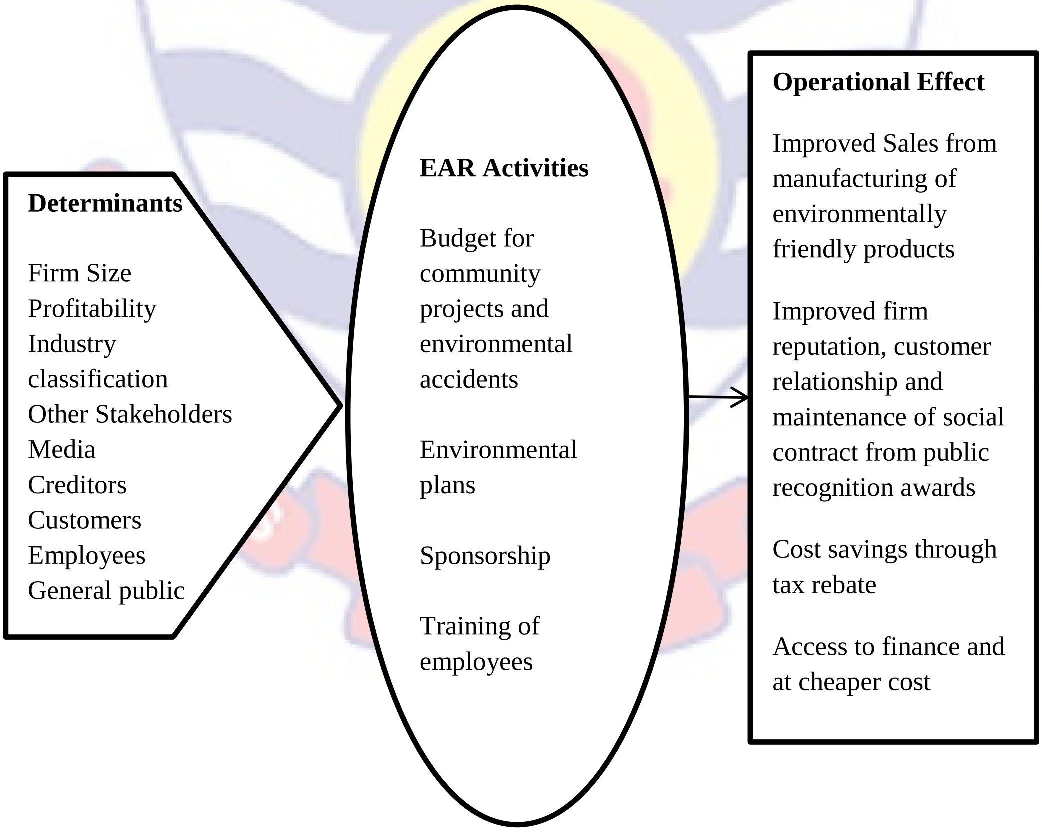
Aboagye-Otchere, Bedi, and Kwakye (2012) investigated the relationship between corporate governance (CG) and corporate disclosure (CD) of Ghana Stock Exchange-listed companies (GSE). Their study employs Aksu and Kosedag's trinary technique and Standard & Poor's T&D items in the construction disclosure index. The features of the audit committee (AC) were considered to be governance traits. The study employed a random effect panel regression analysis to determine the link between the CD and CG of twenty publicly traded companies between 2003 and 2007. The findings reveal that, while disclosure procedures have improved over time, the amount of disclosure in Ghana is still moderate.

Additionally, the analysis demonstrates a statistically significant positive correlation between the presence of accounting/finance experts on ACs and CD practices. Most recently, Agyei and Yankey (2019) examined the reasons for and perceived benefits of environmental accounting and reporting (EAR) by timber enterprises in Ghana. The study adopted a survey research method, utilizing primary data from a census of 13 timber enterprises in

Kumasi. The study indicated that EAR is prevalent among wood enterprises in Ghana, where pressure from the government, the media, shareholders, and the presence of an environmental committee or department inside the company are perceived to impact the level of environmental disclosure by timber firms. Finally, perceived benefits of EAR include the development of friendly relationships between timber enterprises and society, the avoidance of government fines, and the enhancement of firm reputation.

Conceptual Framework

The drivers of environmental disclosure can be explained by three primary theories: political economy, TBL, and stakeholder theory. These theories are not interconnected because elements that explain one theory may



explain another theory based on the researcher's perspective as well as the consequences of the findings, and hence are not related. Using Figure 1, we can see how the impact of environmental disclosure can be related to operational, investment, and finance sources, which include both financial and non-financial performance.

Figure 1: Conceptual Framework

Source: Agyei and Yankey (2019)

Research Gap

This chapter sought to examine empirically the impact of environmental reporting practices of minerals extraction companies in Ghana. The chapter looked at the theoretical underpinning's environmental disclosure studies. It is evident from the empirical studies that different researchers have come up with different results with regards to the impact environmental disclosure on the performance firms. The literature reviews clearly found a research gap in Ghana as fewer studies have been done the subject area (Agyei & Yankey, 2019; Adusei, 2017; Aboagye-Otchere et al, 2012). This study is to narrow the gap and extend empirical literature integrated environmental reporting of minerals extraction companies in Ghana.

Chapter Summary

This chapter reviewed concepts, theories and past empirical studies conducted on environmental reporting practices of firms. First, it presented and described the concept of environmental reporting practices and also the factors that influence the practice of environmental reporting. Second, it reviewed some major theories associated with environmental reporting practices. Third, it surveyed past empirical studies related to the benefits of environmental reporting practices, which overall, depicted a trend of mixed and inconclusive results. The conceptual framework of the study was presented after the empirical review. The chapter concludes that in as much as some previous empirical studies have focused on the importance of environmental reporting practices in organizations there is more room for additional studies in the area.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter of the research deals with the ways, procedures or steps followed in carrying out the study. This chapter presents the research design, population of the study, sample size and sampling techniques, data collection instruments, data collection procedures, and the description of the data analysis procedures. Also, the model for the empirical study was specified in the study.

Research Approach

To obtain more valid statistical result, selecting an appropriate methodology is highly important (Silverman, 2011). Research methodology can be quantitative or qualitative. This study seeks to examine environmental accounting and reporting practices of minerals extraction companies in Ghana using a cross-sectional study. Therefore, a quantitative approach was deemed the most appropriate within the context. The quantitative method entails systematic empirical studies which involve quantifying through the assistance of mathematics and statistics (Bryman & Bell, 2007).

In addition, quantitative approaches take the guesswork to a more concrete conclusion. This is because the results are usually based on quantitative measures rather than mere interpretation and therefore enables future application and comparison with other works. Again, quantitative approach offers a broader coverage of a series of events where statistics are combined from a larger sample (Amaratunga, Baldry, Sarshar & Newton, 2002). In addition, quantitative approach enhances the use of statistical data analysis methods, thus, making it easier to generalize the findings from the study.

It should however be noted that, this approach to research approach lacks flexibility and, thus, makes it very challenging to apply same in assessing or gauging human behavior (Crotty, 1998). According to Silverman (2011), the choice of research approach should be based on the researcher's discretion, depending on the nature of a particular study. Therefore, given the purpose and nature of this study where most of the analyses are quantitative in nature, quantitative research approach is deemed the most appropriate hence adopted.

Research Design

A research design refers to the arrangement of conditions for gathering and analysis of data in a manner so as to combine relevance to the research purpose with economy in procedure (Kothari, 2004). Similar to the study of Chelli et al (2018), a descriptive research design was appropriate for the study. This method helps in explaining the perceptions of practitioners with respect to the level and nature of environmental accounting and reporting (EAR), ascertaining factors that explain EAR as well as its perceived benefits.

Profile of the Company

Shaanxi Mining Company Limited is a Chinese mining company that operates mined minerals businesses. The company mines, smelts, and sells molybdenum ore, associated sulfur, antimony, and other minerals. Shaanxi Mining conducts business in China. However, the company started operations in Ghana in the year 2012 in the Gbane area in Tongo in the Talensi District in the Upper East region of Ghana. Recently, the company has been hit with bad media because of its operations and it has since ceased operation temporarily. Upper Quarry Ltd is a company registered in Ghana. The company is headquartered in Accra with one of its extraction sites in Pwalugu along the Bolgatanga-Tamale Road. Quarry started operations at the site since 1990 in the year 2012 producing chippings to feed the construction industry.

Population

According to Yount (2006), a population of a study is defined as the total number of units from which data can be collected. Again, Burns and Grove (2003) describe population as all the elements that meet the criteria for inclusion in a study. The population of the study consist of 24 management and accounts staff in the two extractive minerals companies (Shaanxi Mining Company Limited and Upper Quarry Limited) in Upper East region.

Sampling Procedure

To achieve validity, optimization, and statistical regularity, the study used all the population since it is relatively small. This makes this sampling procedure a census one. Again, these persons were settled on because they either make strategic decisions that inform the EAR implementation or are those charged with implementing EAR. Again, the use of the two companies; Shaanxi Mining Company Limited and Upper Quarry Limited is because they are the only two mining companies located in the Upper East Region.

Table 1: Population and sample size of respondents

Category	SMCL	UQL	Population	Sample
Management	9	10	19	19
Accounts staff	2	3	5	5
Total	11	13	24	24

Source: Field Study (2019)

Data Collection Instrument

A questionnaire was employed in the collection of data from the respondents. Questionnaires was used to gather respondents' views on the nature of environmental reporting practices that they do, what motivates their firms' environmental accountability practices and the perceived benefits form such reporting. The questionnaires were self-administered to management and accounts staff of the two firms to fill the questionnaires.

The questionnaires for the study was grouped into four sections A, B, C, and D. Section "A" was designed to collect the demographic data of the respondents while section "B" to "D" contained questions relating to the main objectives of the study: ascertaining the level of environmental reporting practices, explaining the factors that influence environmental reporting practices; and determining whether environmental reporting practices is beneficial to mineral extraction firms in Ghana, respectively. The sections "B" to "D" utilize mainly five-point Likert scale on which the respondents were required to indicate their opinions.

Data Collections Procedures

The researcher sought the permission of participants before distributing the questionnaire. This was done to make sure that the research followed ethical acceptability procedures. Respondents were assured of secrecy of information that they provide. An introductory letter from University of Cape Coast was presented to the general managers of the two mineral extraction companies to seek approval to conduct the study. Approval was granted and the researcher administered the questionnaire to the respondents in their various offices. After two weeks, the researcher went back and collected the completed questionnaire. This enabled the respondents to disclose some facts because they have enough time to answer the questions. The data collection process started from 15th May 2019 and ended on 15th June 2019.

Data Processing and Analysis

In assessing the data, the researcher was led by the study's aims and questions. Also, the questionnaire was designed to capture quantitative replies from respondents. The data was then imputed into SPSS to obtain the study's descriptive statistics. The data were analyzed using tables, basic percentages, and other descriptive methods. The study employed mean and standard deviation to analyze data. The mean is adequate because the Likert scale is five points and outliers are rare. Determinant variables of environmental reporting disclosures and respondents' agreement or disagreement on those determinants were also ranked using mean values.

Chapter Summary

This chapter sought to provide an overview of how the study was carried out. First, it discussed the research approach, research type and research strategy adopted in the study. Second, it presented a description of the sample of the study, and sources of data. The study further looks at data collection instruments, data collection procedures, data validity and reliability, and data analysis method. The study finally looked at the profile of the various companies.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

Using the questionnaire's results as a starting point, this chapter provides statistics, analysis, and discussion of the findings. Mining businesses in Ghana's environmental reporting methods have been examined in this study. All 24 respondents completed and returned the surveys, resulting in a response rate of 100% from a sample size of 24. Following the presentation of the demographic characteristics, the discussion of the findings was organized in accordance with the study goals.

Demographic Data of Respondents

Respondents' gender orientation, educational qualification, and working experience of the respondents were considered necessary for the study. The demographic physiognomies of the respondents that took part in the research are presented in Table 2.

Gender of respondents

For the purpose of determining the number of male and female employees in Ghana's mineral extraction industry, a question concerning gender was put out. Males comprised 79.2 percent of the respondents in Table 2, while females comprised 20.8 percent. The enormous number of male participants reflects the gender imbalance in Ghana's official work system, where males outnumber women by a wide margin (Ghana Statistical Service, 2014). According to national labor rules, all employees must be treated equally, regardless of their sexual orientation, even if there are more men than women working in the mineral extraction industry. As a result, the preponderance of men among the survey participants may have been an accident, rather than the result of bias motivated by race, religion, or sexual orientation in any way.

Table 2: Demographic Data of Respondents

Gender	Frequency	Percent
Male	19	79.2
Female	5	20.8
Educational qualification		
SHS certificate	0	0.0
Diploma	10	41.7
Bachelor’s degree	11	45.8
Master’s degree	3	12.5
Doctorate degree	0	0.0
Working experience		
< 1 year	0	0.0
1-5 years	7	29.2
6-10 years	9	37.5
11-15 years	5	20.8
over 15 years	3	12.5
Total	24	100.0

Source: Field Survey (2019)

Respondents educational qualification

The educational backgrounds of the participants in the research were deemed essential. Those with a bachelor's degree accounted for 45.8% of those in Table 2, with 11 respondents, while those with a diploma certificate accounted for 40.7% of those in Table 2, with three respondents representing 12.5%. No one in the survey had a high school diploma or a PhD degree. Firms involved in this research had well-educated personnel, which allowed them to better comprehend the study's objectives and deliver accurate replies.

Working experience of respondents

Results show that those who have worked in the minerals extraction industry for six to ten years comprise the majority of those who have worked in the industry, with nine respondents representing 37.5 percent, followed by those who have worked for one to five years, with seven respondents representing 29.2 percent, and five (5) respondents representing 20.8 percent. Those with more than 15 years of experience accounted for 12.5 percent of respondents. All respondents had at least one year of job experience. Most of the respondents (70.8 percent) had over five years of work experience, therefore their answers were assessed to be close to reality about the environmental effect of the mineral extraction business.

Level of Knowledge on Environmental Accounting and Reporting Practices

Respondents' level of knowledge in EAR practices was considered necessary characteristics for the study. The result is presented in Table 3.

From Table 3, 11 respondents representing 45.8 percent of the respondents rated their EAR knowledge to be high, nine respondents representing 37.5 percent as moderate, two respondents representing 8.3 percent as low and another two respondents representing 8.3 percent have very high knowledge on environmental disclosure issues. Having an appreciable level (very high and high) of knowledge in EAR practices is an indication that their companies have environmental accounting practices as one of their companies' objectives.

Table 3: Level of Knowledge on EAR Practices

Level of knowledge	Frequency	Percent
Very low	0	0.0
Low	2	8.3
Moderate	9	37.5
High	11	45.8
Very high	2	8.3
Total	24	100.0

Source: Field Survey (2019)

Level of Environmental Accounting and Reportingpractices by Mineral Extraction Companies

Participants were asked to rate their agreement or disagreement with mineral extraction companies' EAR practices using a Likert scale with a maximum of five points (1 representing strongly disagrees and 5 representing strongly agrees). Their replies were ranked based on their mean values, which were calculated by the researchers. Therefore, the higher the mean value, the higher the amount of agreement that respondents have with the environmental responsibility procedures of corporations. Table 4 shows the findings of the investigation.

Each year, environmental protection plans are prepared and submitted to the Environmental Protection Agency (EPA), and the firm's environmental performance is reported to shareholders. Health & safety training for employees is offered on a regular basis, and budgets are set aside for the implementation of projects that benefit the host communities. Due to the fact that these average values are close to 5, it is safe to say that the companies are in agreement on the need to disclose their environmental accounting efforts. Standard deviation scores of 0.50, 0.62, 0.64, and 0.6 reveal that there is some degree of variation in their replies.

Additionally, environmental reporting practices include the organization sponsoring social, regional, and/or national activity (4.40), budgets for the occurrence of environmental accidents (4.27), investment in environmental sustainability programs (4.19), and budgets for monitoring the impact of the firm's activities on the environment (4.05) These statements elicited a standard deviation of 0.66, 0.68, 0.70, and 0.78, respectively, in their replies.

Table 4: Level of EAR Practices by Mineral Extraction Companies

Level of EAR Practices	Mean	Std Dev.	Rank
Environmental protection plans are submitted to EPA annually	4.5484	0.50172	1st
Environmental performance of the firm is	4.5323	0.56446	2nd

disclosed to shareholders			
Health and safety training is periodically offered for the employees	4.5000	0.53562	3rd
Budgets are allocated for the undertaking of host community projects	4.4194	0.61533	4th
The organization sponsors societal, regional and or national activity	4.4032	0.66430	5th
Budget is allocated for the occurrences of environmental accidents	4.2742	0.68159	6th
Investment is made in environmental sustainability programs	4.1935	0.69751	7th
Budget is allocated for monitoring the impact of the firm's activities on the environment	4.0484	0.77729	8th

Source: Field Survey (2019)

Factors that Influence Mineral Extraction Companies Environmental Accounting and Reporting Practices

Second, we were interested in learning more about the characteristics that influence the EAR practices of mineral extraction companies. To establish how much respondents agreed with the aspects that influence EAR practices in the organizations, likert-style measures (where 1 represents strongly disagree and 5 represents strongly agree) were employed. We utilized the arithmetic mean of their responses to arrange them in a logical order. The conclusions of the research are shown in Table 5. Respondents' responses reveal a broad agreement that the kind of operation carried out by mineral extraction businesses, legislative demands, and corporate environmental committees all have an influence on environmental accounting disclosures. This is shown by the low standard deviations of their mean values of 4.26 and 4.53, as well as the low standard deviations of their standard deviations of 0.56 and 0.68, respectively. In addition to profitability (4.19), increased media scrutiny (4.47), shareholder influence (4.42), and the size of the business in terms of capital, assets, and output, other factors that influence environmental accounting disclosure include: the company's profitability (4.19), increased media scrutiny (4.47), shareholder influence (4.42), and the size of the business in terms of capital, assets, and output (3.63) On these criteria, it was shown that there were disparities of 0.70, 0.62, 0.59, and 1.01 points.

On the other hand, the respondents speak out that the nationality of mineral extraction firms does not influence EAR practices. The statements on Ghanaian and foreign timber firms recorded mean values of 2.50 and 2.15, respectively, with standard deviation of 1.00 and 0.92, respectively.

Table 5: Factors that influence Mineral Extraction Companies EAR Practices

Factors	Mean	Std Dev.	Rank
The size of the firm	3.6290	1.01196	7th
The nature of mineral extraction firm activities	4.2581	0.67594	5th
Legal requirement	4.5323	0.56446	1st
The existence of environmental committee in the company	4.3710	0.68314	4th
The level of the company’s profit	4.1935	0.69751	6th
Due to being a Ghanaian mineral extraction firm	2.5000	1.0041	8th
Due to being a foreign mineral extraction firm	2.1452	0.92056	9th
Increased pressure from the media	4.4677	0.61983	2nd
Shareholder’s influence	4.4194	0.58809	3rd

Source: Field Survey (2019)

Benefits of Environmental Accounting and Reporting to Mineral Extraction Companies

With respect to the perceived benefits of environmental reporting disclosures to mineral extraction companies, the respondents were required to state their level of agreement or disagreement with the following statements where 1 represents strongly disagree and 5 signifies strongly agree. The result of the study is presented in Table 6.

The respondents agreed to the following statements as perceived benefits of EAR to mineral extraction firms in Ghana: it has led to cordial relationship between the firm and the society; it has brought about lower level of risk; escape from government fines; and it has reduced operational accidents within the organization, as revealed with mean values of 4.48, 4.52, 4.55, and 4.19, respectively. The differences in their responses were represented with standard deviation values of 0.50, 0.50, 0.50 and 0.70, respectively. However, the respondents were indifferent on whether the following factors are benefits associated with EAR practices: reduction in labour turnover (3.22), with a standard deviation value of 1.01.

Obviously, the respondents asserted that EAR practices has not brought about lower level of taxes charge and financial subsidies are not enjoyed by the organization, reduction in cost of production; and it does not make the companies win environmental reporting awards based on mean values of 1.06, 2.15, 2.39 and 2.29, respectively to these statements. The differences in their responses were represented with standard deviation values of 0.90, 0.92, 1.20 and 2.29, respectively.

Table 6: Benefits of environmental reporting disclosures

Benefits	Mean	Std Dev.	Rank
It has brought cordial relationship between the firm and the society	4.4839	0.50382	3rd
It has brought about lower level of risk	4.5161	0.50382	2nd
Escape from government fines	4.5484	0.50172	1st
It makes the company win environmental reporting awards	2.2903	0.87567	7th
It reduces operational accidents	4.1935	0.69751	4th
Reduced cost of production (free advertising, tax free)	2.3871	1.20593	6th
Financial subsidies are enjoyed by the organization	2.1452	0.92056	8th
It has brought about lower level of taxes charge	1.0645	0.90302	9th
It reduced labour turnover	3.2258	1.01496	5th

Source: Field Survey (2019)

Discussion of Study Results

In recent years, EAR practices have attracted some worldwide attention in the context of business and academic investigations. A company's total performance is expected to increase because of acceptable environmental disclosures, according to some experts (Loew et al., 2004; Agyei & Yankey, 2019). Furthermore, the unique characteristics of mineral extraction companies have spurred the need to evaluate their financial performance. Therefore, an empirical investigation of the influence of environmental reporting procedures on company performance is conducted in this research. According to the results, mineral extraction businesses in Ghana may also greatly increase their performance by taking environmental responsibility into consideration throughout their operations.

Environmental Accounting and Reporting Practices by Mineral Extraction Companies in Ghana

Following are some of the most significant practices identified by the study: budget allocation to host community projects, design and submission of annual environmental protection plans to the Environmental Protection Agency, disclosure of firms' environmental performance to shareholders on an annual basis, provision of periodic health and safety training for employees, sponsorship of societal, regional and/or national activities, and budget allocation to cover the costs of environmental accidents. The study also discovered that some firms were donating to environmental charities.

Previously published results by Abu-Baker and Naser (2000), as well as De Villiers and Bernard (2004), support the provision of funding for community development and the sponsorship of society and national events (2000). Using the political economy theory and the stakeholder theory, we were able to come to some conclusions about drafting and submitting an environmental plan to the EPA. Frost (2000) interprets the state and its agencies, such as the EPA, as a danger to firms, which forces them to participate in EAR activities as a result of the political economic theory. Compliance is compelled by the prospect of penalties and, in certain cases, closure. Interestingly, this finding corroborates the findings of Hughes, Anderson, and Golde (2001), who discovered that reporting to environmental authorities is a significant practice of US industrial enterprises.

It is in accordance with studies such as Abu-Baker and Naser (2000), Cormier and Magnan (2003), Agyei and Yankey (2007) that budgets are allocated for health and safety training of personnel as well as for the prevention and response to environmental mishaps (2019). Results in Table 4 demonstrate that mining and quarry companies have a strong commitment to the health and safety of their employees, and that they are willing to accept financial responsibility for environmental mishaps. The purpose of this paper is to reinforce the social contract that exists between mineral extraction companies and the communities in which they operate, in support of the legitimacy thesis. At the same time, disclosure of a company's environmental performance to shareholders is consistent with the stakeholder theory, according to which shareholders are regarded to be significant stakeholders who have an impact on the amount of CSR accountability measures implemented by the company. Cormier and Magnan's studies, for example, provide evidence in favor of this conclusion (2003). Even though the findings are broadly consistent with previously published empirical studies, the study deviates from standard EAR methods.

Factors that Influence Environmental Accounting and Reporting Practices

Political economics theory and stakeholder theory are both supported by the findings on government or law's ability to affect behaviour. Because of this, governments have an even greater responsibility to play in seeing that EAR standards are followed, as seen by growing laws and punishments from regulatory agencies. The cost of compliance may rise as a result of increased law, while punishments may be costly to mineral extraction companies in terms of diminished profit margins and reputational damage, both of which are seen to be catalysts for EAR practices in resource extraction companies. Stakeholder theory also acknowledges the importance of the media, shareholders, and the government in influencing decisions. These are the important stakeholders that have an impact on the environmental impact assessment (EIA) processes of mining companies in Ghana. This might be accomplished by the development of rules that would encourage businesses to reveal their financial performance.

These results are consistent with those of Khlif et al. (2015) and Frost (2015). (2000). Another factor that influences EAR practices is regular media coverage, which was previously mentioned by Deegan and colleagues (2002). Shareholder impact on the degree of a firm's EAR practices is consistent with research like as those conducted by Cormier and Magnan (2003) and Deegan and Rankin (2006). (1997). Firm sustainability, and ultimately shareholder wealth, is becoming more apparent to shareholders as they pursue other stakeholder goals. Shareholders are becoming increasingly conscious of this connection.

Furthermore, the shareholders are also harmed (directly and indirectly) by the detrimental impacts of mining companies' operations on the environment, both directly and indirectly. Shareholders will be more motivated to press their companies to report on the environmental impact of their operations as a result of these developments. Overall, respondents agreed that the nature of the mineral extraction industry is clearly accessible to the general public, and that the environmental operations of mining companies are also readily visible to the general public. As a result, failing to disclose environmental actions and information will arouse widespread public concern. As a result, mining and quarry companies are now included in the list of visible firms (along with mining and oil companies) identified by Cormier and

Magnan (2003), whose activities are politically visible and which are coerced to disclose in order to avoid undue pressure and criticism from social activists (Kamel & Awadallah, 2017).

Benefits of Environmental Accounting and Reporting to Mineral Extraction Companies

The final purpose of this research was to determine if mining and quarry companies in Ghana perceive any advantages from environmental reporting disclosure standards. Some of the most significant benefits discovered in the study included the absence of government intervention, the establishment of cordial relationships between businesses and the community, the avoidance of government fines, the enhancement of a company's reputation through the receipt of an environmental award, a lower level of risk, and a reduction in operational accidents. Some prior research, such as Schaltegger and Wagner (2006), Schaltegger and Burritt (2010), and Khlif et al. (2013), have also discovered the advantages of EAR practices (2015).

According to the results of the survey, respondents agreed with Prakash (2001) that enterprises who participate in environmental disclosure are exempt from government involvement and do not have to pay penalties connected with environmental activities that do not disclose their activities. A further validation of the works of Jones (2003) and Agyei and Yankey (2019), who determined that such activities result in operational environmental gain, is respondents' opinion that obtaining prizes from different agencies might be connected to sharing of environmental information.

Although they are intangible, symbolic awards may enhance the reputation of a business or the connection between it and its consumers and the general public, allowing them to preserve their social contract in accordance with the legitimacy theory. The week surrounding the award ceremony also provides the firm with the chance to get free exposure in both the print and electronic media. The outcome of this process may be an increased degree of confidence in the firm, which may in turn can increase sales. The conclusions of Schaltegger and Burritt in terms of a lower level of risk and a decrease in the number of operational incidents are validated by their respective research (2010). According to Schaltegger and Burritt (2010), the most significant advantage of environmental disclosure is the decrease of operational accidents, which is achieved via the provision of training and health and safety measures to the workers.

Chapter Summary

This chapter present the results of the study as well as a discussion. The chapter started with the demographic data of respondents and then the objective. With respect to the first objectives, the chapter determine the level of environmental reporting practices by mineral extraction companies, then identify the factors that influence mineral extraction companies environmental accounting practices and finally, to assess the benefits of environmental accounting disclosure to minerals extraction companies.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter is a synthesis of the whole study. It is presented into three sections. In the first section, the summary of findings is presented relating to the research objectives. This is followed by the conclusion drawn from the study findings. The recommendations to the study are presented in the third section.

Summary of Findings

As a typical study of inquiry, the research looked at the environmental reporting procedures and performance of minerals extraction firms in Ghana, with the Shaanxi Mining Company and Upper Quarry Ghana Limited serving as the subject of investigation. Three specific goals were established in order to achieve this. The initial goal was to establish the degree of environmental reporting methods used by mineral extraction businesses in relation to their operations. The second goal was to determine the elements that impact the environmental accounting practices of mineral extraction firms, and the third goal was to analyze the advantages of environmental accounting disclosure to mineral extraction companies. The data in the study was collected using a descriptive research approach. The information for the research was gathered via the use of a standardized questionnaire. The study population consisted of all of the employees of Shaanxi Mining Company and Upper Quarry Ghana Limited who worked in the Upper East area of Ghana.

The study was conducted on a sample of 24 respondents, and all of the questionnaires were returned. The results were generated using the SPSS statistical software tool. The information was analyzed using a descriptive study approach, which was applied to each individual. The replies received from the respondents were shown using frequencies and percentages, which were calculated from the responses. The following is a synopsis of the results.

In the study, majority of respondents strongly agreed that the level of EAR practices by mineral extraction companies included the following elements: environmental protection plans are created and submitted to the Environmental Protection Agency (EPA) every twelve months; environmental performance of the firm is disclosed to shareholders each year; health and safety training is periodically offered to employees of the firm; and budgets are allotted for the project. This is due to the fact that these assertions produced the highest mean values of 4.55, 4.53, 4.50, and 4.42, respectively, for the data set. Aside from sponsorship of societal, regional, and/or national activities, the study identified budget allocations for the occurrence of environmental accidents, investment in environmental sustainability programs, and allocation of funds for monitoring the impact of the firm's operations on the environment. Specifically, it was discovered that the respondents agreed that the following factors influence mineral extraction companies' environmental accounting disclosure: the nature of their business, legal requirements, the existence of environmental committees within companies, the level of their profits, media pressures, shareholder influence, and the size of the firms are all factors that influence mineral extraction companies' environmental accounting disclosure.

The responses point out that the nationality of mineral extraction companies has little impact on EAR practices in the United States. EAR practices of mineral extraction firms in Ghana are perceived to be beneficial in the following ways, according to the respondents, according to the study: they foster a cordial relationship between the firm and the community; they lower the level of risk; they allow firms to avoid government fines; and they also reduce operational accidents within organizations, according to the study. Respondents, on the other hand, claimed that EAR practices do not result in a lower level of taxes being charged; financial subsidies are not received by the organization; there is no reduction in the cost of production; and the companies do not win environmental reporting awards as a result of their efforts.

Conclusions

With the goal of contributing to the global dialogue on environmental reporting, this research was set out with the goal of measuring the perception of staff expertise in EAR practices of mining and quarry enterprises in Ghana in order to make a contribution to that discussion. The following research questions guides the study; What is the level of environmental reporting practices by mineral extraction companies? What factors influence mineral extraction company's environmental reporting practices? What are the benefits of environmental accounting disclosure to minerals extraction companies?

Also, the theories that were reviewed include the political economy theory, stakeholder theory, and triple bottom line theory. The findings of the study, which were based primarily on primary data collected from all employees of Shaanxi Mining Company and Upper Quarry Ghana Limited in the Upper East region and analyzed using descriptive statistics, were largely consistent with existing empirical and theoretical frameworks such as political economy theory, legitimacy theory, and stakeholder theory, among other things. According to the findings of the research, mineral extraction companies in Ghana are engaged in EAR activities. Following the same pattern as other empirical studies, the reports covered budgets allocated for the implementation of projects in host communities, annual environmental protection plans for the Environmental Protection Agency, annual disclosure of environmental performance to shareholders, periodic health and safety training offered to employees of the firm, sponsorship of societal, regional or national activities, and budget allocations for environmental accidents and spills. Second, the study concludes that among the most important factors that influenced the level of EAR practices in mining and quarry firms were pressure from government agencies/legal requirements, media pressure, shareholder influence, the existence of an environmental committee in the companies, and the nature of the mining and quarry firms' business. In conclusion, some of the most often cited advantages of EAR activities are independence from government involvement, the establishment of friendly relationships between mineral extraction companies and the general public, and the avoidance of government penalties.

Recommendations

From the findings of the research, the following recommendations were made;

i. The Mineral Commission should reiterate the need for standard setting to move environmental reporting from voluntary to mandatory for all industries in order to standardize the reporting; future tax reforms in Ghana should consider the introduction of green tax policy.

ii. Also, the media and opinion leaders in the society should continue their active role in giving equal reportage on both good and bad environmental practices as a means of coercing firms to stick to their obligations in the social contract.

iii. Furthermore, the ministry of lands and natural resource and the mineral commission should organize training programmes for key companies to prioritize environmental sustainability which has a link with ensuring no poverty, zero hunger, good health and wellbeing, clean water and sanitation, sustainable cities and communities affordable and clean energy, climate action, life below water and life on land which are key initiatives of UNDP sustainable development goals.

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APPENDIX

QUESTIONNAIRE

UNIVERSITY OF CAPE COAST

Dear respondent,

The questionnaire is intended to collect data that will help the researcher to study "Environmental Accounting and Reporting Practices of Minerals Extraction Companies in Ghana: A Case Study of Shaanxi Mining Company and Upper Quarry Ghana Limited". The exercise is for academic purpose only. Whatever information you give will be kept confidential. It is in partial fulfilment of the requirement of the Masters of Business Administration

(MBA) in Accounting. Please, complete this questionnaire with appropriate answers with brief reasons or tick where necessary.

Section A: Demographic Data of Respondents

1. What is your gender? Male [ ] Female [ ]
2. What is your highest academic qualification? SHS certificate [ ] Diploma [ ] Bachelor's degree [ ] Master's degree [ ] Doctorate degree [ ]
3. How many years of working experience do you have in the company? Less than 1 year [ ] 1-5 years [ ] 6-10 years [ ] 11-15 years [ ] over 15 years [ ]
4. What is your level of knowledge in environmental accounting practices? Very low [ ] Low [ ] Moderate [ ] High [ ] Very high [ ]

Section B: Level of EAR Practices by Mineral Extraction Companies

What is the level of EAR Practices by mineral extraction companies? State your level of agreement or disagreement with the following statements about the EAR practices. Use the Five-Likert scale below;

5-Strongly Agree; 4-Agree; 3-Neutral; 2-Disagree; 1-Strongly Disagree

S/N	Statements	SA	A	N	D	SD
5.	Environmental protection plans are submitted to EPA annually	[ ]	[ ]	[ ]	[ ]	[ ]
6.	Environmental performance of the firm is disclosed to shareholders	[ ]	[ ]	[ ]	[ ]	[ ]
7.	Health and safety training is periodically offered for the employees	[ ]	[ ]	[ ]	[ ]	[ ]
8.	Budgets are allocated for the undertaking of host community projects	[ ]	[ ]	[ ]	[ ]	[ ]
9.	The organization sponsors societal, regional and or national activity	[ ]	[ ]	[ ]	[ ]	[ ]
10.	Budget is allocated for the occurrences of environmental accidents	[ ]	[ ]	[ ]	[ ]	[ ]
11.	Investment is made in environmental sustainability programs	[ ]	[ ]	[ ]	[ ]	[ ]

12.	Budget is allocated for monitoring the impact of the firm's activities on the environment	[ ]	[ ]	[ ]	[ ]	[ ]

Section C: Factors that influence Mineral Extraction Companies EAR Practices

What factors that influence mineral extraction companies EAR Practices? State your level of agreement or disagreement with the following statements. Use the Five-Likert scale below; *5-Strongly Agree; 4-Agree; 3-Neutral; 2-Disagree; 1-Strongly Disagree*

S/N	Statements	SA	A	N	D	SD
13.	The size of the firm	[ ]	[ ]	[ ]	[ ]	[ ]
14.	The nature of mineral extraction firm activities	[ ]	[ ]	[ ]	[ ]	[ ]
15.	Legal requirement	[ ]	[ ]	[ ]	[ ]	[ ]
16.	The existence of environmental committee in the company	[ ]	[ ]	[ ]	[ ]	[ ]
17.	The level of the company's profit	[ ]	[ ]	[ ]	[ ]	[ ]
18.	Due to being a Ghanaian mineral extraction firm	[ ]	[ ]	[ ]	[ ]	[ ]
19.	Due to being a foreign mineral extraction firm	[ ]	[ ]	[ ]	[ ]	[ ]
20.	Increased pressure from the media	[ ]	[ ]	[ ]	[ ]	[ ]
21.	Shareholder's influence	[ ]	[ ]	[ ]	[ ]	[ ]

Section D: Benefits of EAR Practices to Mineral Extraction Companies

What are the perceived benefits of EAR Practices to mineral extraction companies? State your level of agreement or disagreement with the following statements. Use the Five-Likert scale below; *5-Strongly Agree; 4-Agree; 3-Neutral; 2-Disagree; 1-Strongly Disagree*

S/N	Statements	SA	A	N	D	SD
22.	It has brought cordial relationship between the firm and the society	[ ]	[ ]	[ ]	[ ]	[ ]
23.	It has brought about lower level of risk	[ ]	[ ]	[ ]	[ ]	[ ]
24.	Escape from government fines	[ ]	[ ]	[ ]	[ ]	[ ]
25.	It makes the company win environmental reporting awards	[ ]	[ ]	[ ]	[ ]	[ ]
26.	It reduces operational accidents	[ ]	[ ]	[ ]	[ ]	[ ]
27.	Reduced cost of production (free advertising,	[ ]	[ ]	[ ]	[ ]	[ ]

	tax free)					
28.	Financial subsidies are enjoyed by the organization	[ ]	[ ]	[ ]	[ ]	[ ]
29.	It has brought about lower level of taxes charge	[ ]	[ ]	[ ]	[ ]	[ ]
30.	It reduced labour turnover	[ ]	[ ]	[ ]	[ ]	[ ]

Thank You for Your Cooperation