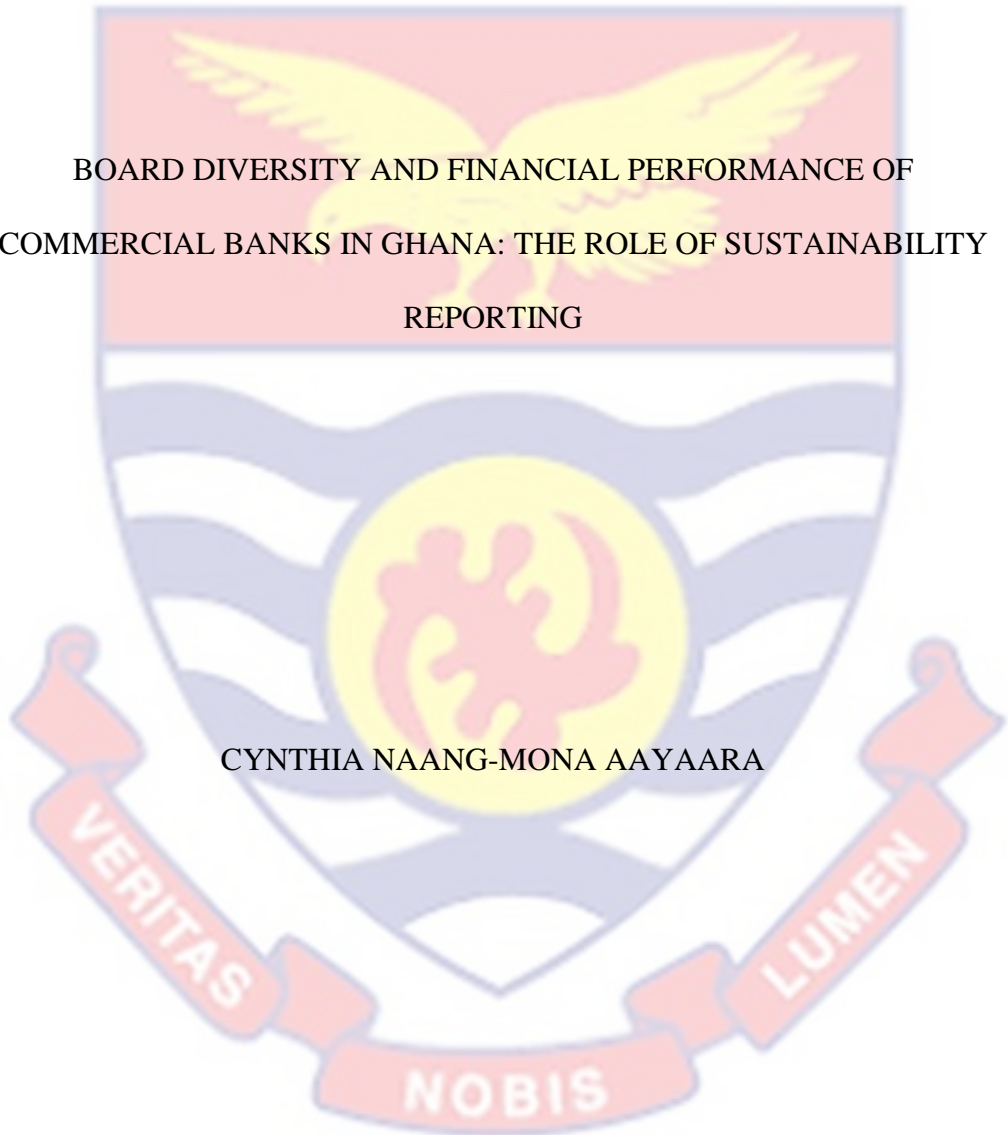


UNIVERSITY OF CAPE COAST

BOARD DIVERSITY AND FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN GHANA: THE ROLE OF SUSTAINABILITY
REPORTING

CYNTHIA NAANG-MONA AAYAARA



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COMMERCIAL BANKS IN GHANA: THE ROLE OF SUSTAINABILITY

REPORTING

BY

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This thesis submitted to the Department of Accounting of the School of Business,
College of Humanities and Legal Studies, University of Cape Coast, in partial
fulfilment of the requirements for the award of Master of Commerce degree in

Accounting

AUGUST 2021

DECLARATION

Candidate's Declaration

I hereby declare that this thesis 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.....

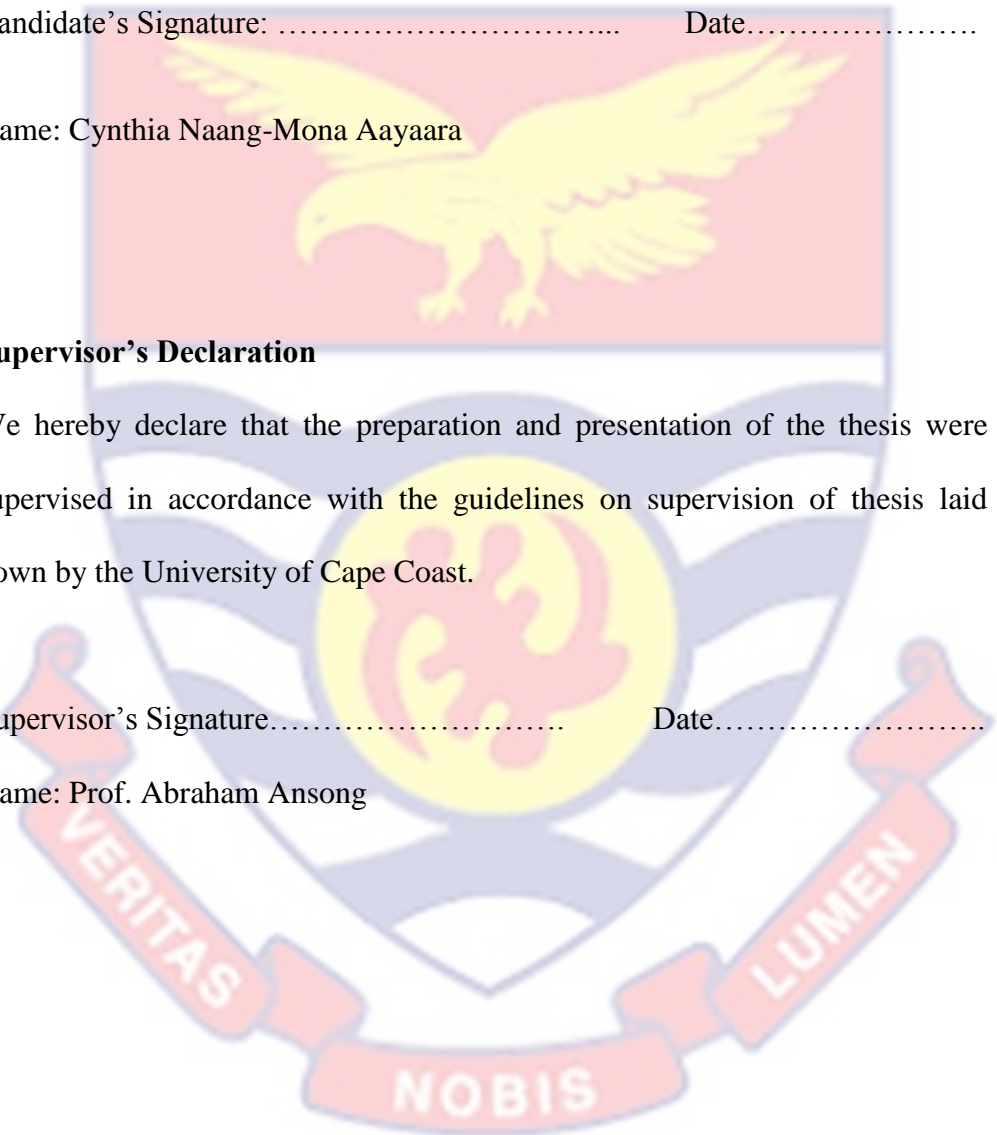
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Supervisor's Declaration

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

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

Name: Prof. Abraham Ansong



ABSTRACT

This study sought to examine the role of sustainability reporting on the link between board diversity and financial performance of commercial banks in Ghana. To serve this purpose, content analysis was conducted on annual reports of commercial banks between 2010 and 2019. The independent variable was proxied by educational background, qualification and tenure diversities whereas the dependent variable was measured by ROA. Furthermore, a sustainability disclosure index which comprises the economic, environmental and social dimensions was computed guided by Generation four (G4) Global Reporting Initiative Guidelines. The data was analyzed quantitatively through dynamic panel-data estimation, two-step system GMM using Stata. The findings of the study submit that board diversity has no significant effect on banks financial performance. The study also reveals that sustainability reporting has a significant positive effect on the financial performance of commercial banks. Finally, in relation to the moderation effect, the study concludes that sustainability reporting does not moderate the link between board diversity and banks financial performance. Therefore, the study recommends that banks embrace diversity on boards together with conflict control mechanisms to minimize disagreements that may arise and impede board performance in the course of duties. Again, the study recommends that proper measures to manage and enhance sustainability performance and disclosures be implemented to improve banks performance.

KEY WORDS

Board diversity

Firm performance

Global Reporting Initiative

Sustainability reporting



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DEDICATION

To my father, Mr. Augustine Anyarah



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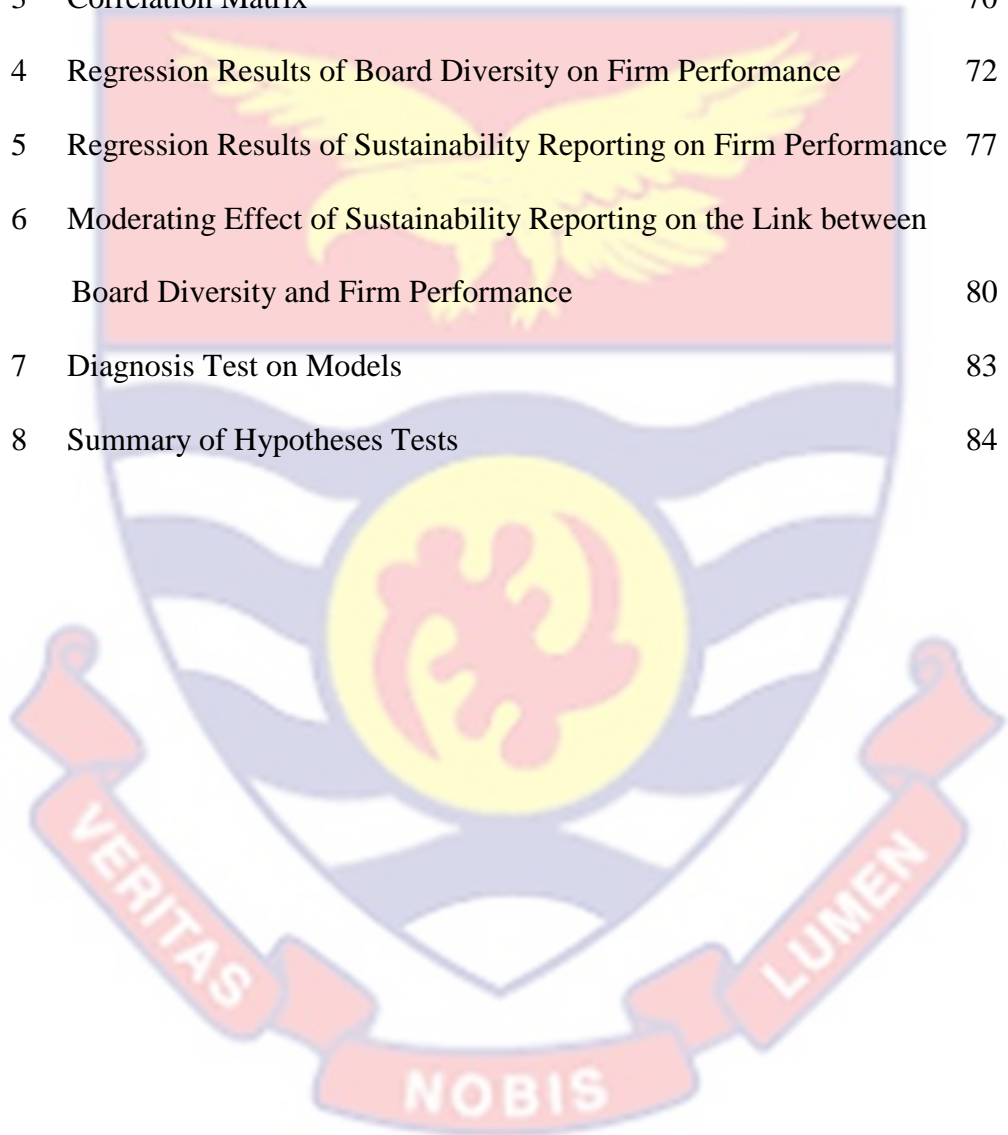
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LIST OF ACRONYMS



BAGE	Bank age
BSIZ	Bank size
CSR	Corporate Social Responsibility
Econ	Economic
EduDiv	Educational background diversity
Envt	environmental
G4	Generation 4
GRI	Global Reporting Initiative
GT	Growth in total assets
LEV	Leverage
LIQ	Liquidity
NXE	New Zealand Stock Exchange
PWC	PriceWaterhouseCoopers
QuaDiv	Qualification diversity
ROA	Return on Assets
Soc	Social
SR	Sustainability Reporting
TenDiv	Tenure diversity
BoG	Bank of Ghana
EES	Economic, Environmental and Social

CHAPTER ONE INTRODUCTION

The recent global recession coupled with the banking crisis in Ghana which resulted in the infamous banking sector clean-up has courted concern about the sustainability of the banking industry especially in developing nations such as Ghana. Infractions in the banking sector do not only affect the financial sector of economies but also have consequent ripple effects in every aspect of human endeavor. This underscores the crucial role banks play in the daily lives and development of communities and nations. To a large extent, the success or otherwise of these banks reflects the nature and abilities of the board of directors who exercise oversight responsibilities over these banks. This study examines the possible mediating and/or moderating role of sustainability reporting in the above relationship.

Background to the Study

Sustainability reporting is a great instrument through which management is able to account to various stakeholders (Chen & Wan, 2020). In recent times, business is more competitive where the fulfilment of stakeholder responsibility is an advance way to compete, making sustainability reporting a strategic issue (Jiang et al, 2020). Much more, for firms to maintain their medium or long-term investment, it is of essence to adhere to the values, norms and principles within the operative environment. Drawing from the stakeholder theory, there is the need for firms to devise strategies that incorporate a wide range of stakeholders needs in their operations (Lafuente, Viñuales, Pueyo, & Llaría, 2003).

Sustainability reporting ensures that firms are able to achieve the desires of both shareholders and stakeholders (Schreck, 2013), have a good standing with regulators and attain acceptance from the public which enhances the firm reputation on a whole. The initiative to create and maintain a significant connection with stakeholders through sustainability reports can create a competitive advantage for firms to increase their financial returns. In like manner, directors of such organizations will be empowered to make strategic decisions towards planning, risk management and governance (Hasan, Kobeissi, Liu & Wang, 2018). According to Dhaliwa, Radhakrishnan, Tsang and Yang (2012), sustainability reporting improves board's accuracy on projected future earnings of the firm. To this end, Pathan and Faff (2013) assert that directors in every banking sector have a significant role to play in stabilizing the economy and promoting sustainable banking.

Over the years researchers have come to a common consensus on the need for board of directors in enhancing compliance with corporate governance and better firm performance (Villalonga, Trujillo, Guzmán, & Cáceres, 2019; Burkart, Miglietta, & Ostergaard, 2018). However, it is worth noting that board of directors are costly governing bodies whose decisions have larger impact, hence, the need to have a better understanding of the features needed for optimum representation and effective performance (Magnanelli et al, 2021). For instance, directors through their governance role take decisions that induce non-financial firms such as mining firms whose activities in turn influence the economy and environment as a whole. In that regard, the board is expected to use more diversified opinions to better manage the firm and the economy as a whole (Magnanelli et al., 2021).

Board diversity has been extensively defined as the variations that exist amongst board members pertaining to their individual features such as expertise, learning styles, managerial background, age amongst others (Williams & Nguyen, 2005). Board of directors spearhead the governance of the firm on behalf of owners, hence, the board influences various strategies the firm undertakes. As a result of the portfolio they occupy, board of directors are responsible for satisfying various stakeholders' interest such as promoting sustainability performance and disclosures, supervising managers, approving strategies in relation to the environment and forming special committees relevant to the strategy implementation (Jain & Jamali, 2016). The board also has the duty to ensure the company is operating in compliance with all underlying regulations. Hence, there is the need for diversity on the boards of firms to ensure all stakeholders needs are satisfied.

Sustainability Reporting is the disclosure of non-financial information to various stakeholders of the organization on a voluntary basis or in fulfilment of a mandate. In the broader sense, sustainability disclosures cover information on the economic, environment, social and governance. Issues of sustainability have amassed audience globally and as a result several frameworks or standards of measuring sustainability performance keep evolving overtime. Therefore, it is not a surprise that there is no single framework by which sustainability performance could be assessed. However, Global Reporting Initiative (GRI) amongst the other frameworks has gotten many subscribers across the globe who frequently refer to its framework in their sustainability reports. This is because, GRI is portrayed as an independent institution that seeks to enhance public and private companies

understanding of the impact of their activities on the environment, economy and society.

More so, GRI guidelines according to Novokmet, and Rogošić (2016) are amended on regular basis so as to reflect constant growing needs of society. At the moment, the Generation four (G4) standard of GRI is currently in use in measuring sustainability disclosures in the banking sector. Whetman (2017) reported that, of the 250 biggest firms in the world, 92% of them report on sustainability performance and amongst these entities, 74% of them report on sustainability using GRI standards. This clearly indicates the acceptance and affirmation of the GRI framework. It is against this background this study is employing the GRI G4 framework to measure sustainability reporting.

From the framework, sustainability reporting is also known as non-financial reporting, triple button line reporting or corporate social responsibility reporting. Sustainability reporting in this study is uniquely tailored towards the economic, environment, and social (EES) activities of firms. The economic as the first dimension emphasizes achieving economic sustainability through the efficient use of capital and resources so as to improve the living standards of the citizenry. Also, the environmental perspective constitutes but not limited to protecting the ecosystem from emissions, effluents and waste substances as well promoting the use of renewable energy resources amongst others. Finally, the social dimensions include occupational health and safety of workers, product and service labelling, equitable distribution of resources, equal opportunities and justice amongst others.

Iannou and Serafeim (2012) opined that sustainability reporting has attracted interest in the global front. To buttress their assertion, they further indicated that only 44 firms reported on sustainability in the year 2000 using the GRI reporting framework. However, ten years down the line, the number of firms that issued sustainability reports had risen to 1,973. This exponential growth they explained has been partly spurred by governmental agencies, regulatory bodies and increasing pressure from powerful stakeholders.

Aside the pressure from interest groups, Folkens and Schneider (2019) argued that sustainability reporting creates a reputational asset for the reporting firm, satisfies stakeholders demand for transparency, gives assurance of future existence to employees and other stakeholders of the firm and minimizes business risk. In essence, the presence of sustainability reporting can improve the relationship between board diversity and banks performance as create long-term value for the business to ensure continual operations. Also, as transparency is enhanced through disclosures, directors invariably realize the need to ensure compliance to avoid fines and charges on the organization and this lowers expenses. Moreso, sustainability disclosures enable diversified boards satisfy various stakeholders and attract potential investors and customers to the firm. Thereby, creating value and promoting the performance of the firm.

In response to the fiduciary need of directors to maximize value, Ghana sustainable banking principles (2015) admonished banks in the principle one (1) to engage with clients in order to identify, measure, mitigate and monitor environmental and social risk in their operations. This will ensure that firms minimize losses, regulatory fines and reputational damages. In

addition, the principle two (2) requires banks to promote good environmental, social and governance practices in their internal operations in order to promote better financial performance.

Financial performance is a generic term that describes the financial state of an institution at any given time. Traditionally, commercial banks motive of establishment is to make profit by providing financial services to the populace (Dufera, 2010). Banks evaluation on their financial performance is of great essence as it enables management to assess the general wellbeing of the bank, unique strengths and weaknesses on performance. In addition, management is able to recognize available opportunities to explore, secure the needs and goals of primary stakeholders, and gain competitive advantage to enhance bank's performance against competitors. In essence, good financial performance signifies the firm's ability to handle external pressure in the business environment (Dufera, 2010).

Management assesses bank's performance through financial performance evaluation. This involves reviewing and comparing achieved financial objectives at the end of the period against budgeted goals and objective at the beginning of the period. It is a systematic means of monitoring to ensure that the strategies that are being implemented are consistent with the set standards. These activities are geared towards measuring the contributions of individuals and units at various levels within the firm towards the strategic goal of the bank (Poster & Streib, 2005).

This means that banks must compare actual performance against planned performance with the help of some performance indicators which include return on assets (ROA), return on equity (ROE), Tobin's Q, earning

per share (EPS). This study specifically focuses on ROA which is an important financial measure in corporate governance studies. This ratio is preferred because it enables owners of firms to assess how efficiently management is putting to use, the firm's resources. For instance, ROA measures how management is using firm's resources to generate income. Thus, depending on the outcome of these measurements, performance evaluation will give a hint on the future existence of the firm.

Sustainable banking performance, one of the intriguing research areas in recent times has captured the interest of both developed and developing countries alike. Pathan and Faff (2013) explained that this phenomenon is however not surprising owing to the unprecedented contribution the banking sector makes to every economy. Amongst such tremendous contributions include channeling savings to producers and manufacturers who need money to ensure continuous operations. The decision to finance or otherwise a particular project or sector in the economy determines the growth in such economies. Sustainable banking therefore has courted global concern as one cannot think of development without considering how sustained its banking system is.

Sustainable banking is the new language which not solely require banks to maintain their financial strength but also pay special attention to the impact of their activities on the environment and society as a whole (Banerjee, 2003). Stauropoulou and Sardianou (2019) purported banks now have a growing need through legislation and regulative instruments such that aside offering their traditional products and services to customers, they are also required to adopt proactive measures that are capable of addressing future

developmental needs. Considering that the banking system either stabilizes or destabilizes an economy (Witiastuti et al., 2018), Ghana as a developing country must take issues of sustainable banking to heart as it is still trying to find its feet after the recent financial crises.

Moreover, banks in Ghana have migrated from the principal motive of maximizing shareholders value. This was in response to the 2016 United Nations Sustainable Development Goals Agenda (SDG) amongst other initiatives by various advocacy groups. This mandated banks to identify and block possible leakages in order to build healthy financial systems, transition to a green economy and pursue long-term sustainable development (Bank of Ghana, 2015). Bank of Ghana (BoG) as part of its regulatory and supervisory roles, has developed the sustainable banking principles in 2015 to ensure sustainable banking in the country.

Statement of the Problem

Banks play an intervening but decisive role in the advancement of every nation in that they mediate the transfer of funds from surplus holders to deficit holders to ensure continuous spending and production (Pathan & Faff 2013; Cull, Demirgüç-Kunt & Lin, 2013; Scholtens, 2017). As a result, their activities affect every sphere of life and thus influence the pace of development in every country (Galaz, Crona, Dauriach, Scholtens & Steffen, 2018). Stauropoulou and Sardianou (2019); and Burcu and Öztürk (2014) revealed that this influence may not be direct however, products banks offer to customers may have either a positive or a negative impact on the environment and society depending on the usage of these products.

Despite the vital role banks play, Cornett, Erhemjamts and Tehranian (2016) noted that banks over the years have experienced some challenges in the quest of discharging their roles which contributed to the global financial crises of 2007 to 2009. Generally, corporate worldwide scandals in the likes of Enron debacle, the collapsed of Lehman's brothers and British Petroleum (BP) oil spillage in the Gulf of Mexico are but some of the events that have questioned the integrity, accountability and transparency of board of directors of various corporations.

Similarly, the previous years were challenging and yet eventful in the history of the Ghanaian banking industry. This was evidenced as the sector went through rigorous transformation leading to the passing of two Acts: Banks and Specialist Deposit Taking Institution Act, 2016 (Act 930) and the Deposit Protection Act also in late 2016. Following this initiative, other "clean-up" exercises were implemented such as the revocation of banking licenses, minimum capital requirement, capital requirement directive, directive on cyber security and information amongst others. These major reforms were occasioned by lack of trust in the system as financial performance declined steadily.

It was evidenced that Total asset as a percentage of GDP, declined from 36.4% to 35.7% from 2017 to 2018 respectively. Adding to that, total credit to GDP within the same period of review declined from 14.7% to 14.2% (PWC, Ghana Banking Survey, 2018). With regards to profitability as a measure of financial soundness, the industry score on ROE after tax saw a decline from 20.2% to 14.4% from October, 2016 to October, 2017 respectively.

In the same light, the industry recorded a decline in a before-tax score on ROA from 4.3% to 3.0% for the same period. While the sector was undergoing the “clean up” exercise, the regulator BoG was also uncovering the cause of the financial turmoil. Of the findings identified, weak corporate governance was cited as a major cause of this phenomenon. It is however interesting to note that board of directors are responsible for ensuring effective compliance to corporate governance practices.

Therefore, to bring sanity into the banking and financial sector, BoG has given a directive on corporate governance which amongst others things seeks to incorporate diversity on boards since it promotes better performances (Duchin, Matsusaka & Ozbas, 2010). Also, emerging from the financial crisis highlights the need for the remaining banks to have the interest of various stakeholders at heart by increasing disclosure on their activities. This in effect will not only satisfy stakeholders, but also resuscitate the trust that has been considerably waned. The discourse surrounding board diversity is not new in scholarly domain. Shehata (2013) for instance explained that board diversity positively influences corporate disclosures. Additionally, Duchin et al. (2010), revealed that banks’ financial performances improve when there is board diversity. Further, board diversity enhances creativity, innovation, problem solving, board independence and new insights which contributes to profit (Carter, D’Souza, Simkins & Simpson, 2007). In Ghana, Agbo (2017) found that board gender and nationality diversity positively enhance financial and market performance. Similarly, Adeabah, Gyeke-Dako and Andoh (2018) also confirm that board gender diversity promotes bank efficiency.

On the other hand, Adams, de Haan, Terjesen and van Ees, (2015) noted that diversity in boards may endanger effective governance as a result of the bureaucracies in decision making, difficulties in communication and at worse interpersonal conflicts (Joshi, Liao & Jackson, 2006). Moreover, Bhagat and Black (2001); and Dalton, Daily, Ellstrand and Johnson (1998) posit that there exists no relationship between board diversity and firm performance. Again, a cross-country study in Africa by Shakil, Mahmood, Tasnia and Munim (2019) disclosed that there is no relationship between board diversity and bank performance.

With regards to sustainability reporting on the global front, Lee, (2016) and Velte (2017), observed that firms with higher sustainability performance ratings increases their profitability. Also, De Lucia, Pazienza, and Bartlett (2020) affirmed that higher sustainability reporting improves firm's profitability. This is not surprising on the account that modern day investors are attracted to firms who take into cognizance the impact of their activities on the environment. Additionally, sustainability reporting is found to have a positive impact on banks profitability in the developed countries such as USA, Canada, Japan among others (Buallay, 2018; Esteban-Sanchez, de la Cuesta-Gonzalez & Paredes-Gazquez, 2017; Wu & Shen, 2013). This could be attributed to the fact that sustainability reporting in some developed countries is compulsory for instance some countries in Europe. Owing to that, firms have no option but to disclose lest they lose customers to their competitors. The literature then suggest that sustainability reporting may have implications on firm profitability in Ghana.

The extant literature on board diversity and sustainability reporting therefore presents four main problems. First, available literature suggests there is mixed findings with regards to the relationship between board diversity and firm performance (Carter, D'Souza, Simkins & Simpson, 2007 versus Adams, de Haan, Terjesen & van Ees, 2015) and these inconsistencies do not foster effective decision making. Second, most of the studies on sustainability reporting were taken in developed countries and it will be inappropriate to liken findings in the developed economies to emerging economies.

For instance, emerging economies are represented by poor governance, inadequate institutions that advocate for shareholder rights, ineffective regulatory and supervisory polices and voluntary sustainability reporting policies (Kaymak & Bektas, 2008; Shakil, Mahmood, Tasnia & Munim, 2019). Third, studies carried out in Ghana in relation to board diversity focused on gender and nationality diversities however, board diversity encompasses other features such as age, educational background, experience, personality and ethnicity.

Therefore, it will be of merit to examine the impact of the other components of board diversity on firm profitability. Also, the inconsistencies resulting from the link between board diversity and performance findings may be as a result of the role of some intervening variables, hence, this study seeks to examine, among other things, if sustainability reporting is one of such variables.

It is against this background that there is the need to examine the effects of board diversity on the financial performance of commercial banks based on resourced based view theory. The study will further examine the

effect of sustainability performance on banks financial performance supported by the legitimacy theory and the intervening effects of sustainability reporting on the link between board diversity and firm performance which is a great innovation for this study.

Purpose of the Study

This study seeks to examine the nexus among board diversity, sustainability reporting and financial performance of commercial banks in Ghana.

Research Objectives

In order to achieve the overall purpose of the study, the study specifically seeks to:

1. examine the effects of board diversity on financial performance of commercial banks in Ghana.
2. assess the effects of sustainability reporting on financial performance of commercial banks in Ghana.
3. examine the moderating effect of sustainability reporting on the relationship between board diversity and financial performance of commercial banks in Ghana.

Research Hypotheses

H₁: There is a significant positive effect of board diversity on the financial performance of commercial banks in Ghana.

H₂: There is a significant positive effect of sustainability reporting on the financial performance of commercial banks in Ghana.

H₃: The significant positive effect of board diversity on financial performance of commercial banks in Ghana is moderated by sustainability reporting.

Significance of the Study

In addressing the above hypotheses for the study, this research hopes to introduce new contributions on the subject matter of board diversity, sustainability reporting and financial performance of commercial banks in Ghana.

The recent banking crisis in Ghana has revealed loopholes in the banking sector that needs fastening to control the systematic failings in the banking sector. This will require a better understanding of all the factors surrounding the crisis to better address them.

Also, in order to promote sustainable banking as proposed by the Bank of Ghana, there is the need to understand the dynamics of sustainable banking including the role of board diversity in sustainable banking. This study will generate evidence that will help policy makers such as BoG to devise effective regulatory strategies and principles in relation to the banks' operations on sustainability issues in order to clean up, fasten and tighten the banking sector in the Ghanaian economy. The effective implementation of such policies will help achieve the objective of sustainable banking.

Further, findings from this study will provide insights on other forms of diversities which influences bank profitability. It is becoming evident in other parts of the world that other forms of board diversity other than gender diversity could greatly influence firms' financial performance. The extent to which other forms of diversity influence and in which direction they influence the financial performance of the company remains a puzzle in our part of the world. This study will broaden the scope of shareholders understanding on board diversity issues beyond gender.

As a result, owners will be enabled to make informed decisions by including all other forms of diversities such as expertise and experience diversities in order to maintain a balanced board capable of maximizing profit and representing all other stakeholders in their disclosures. Again, the study will generate relevant knowledge to the extant body of scientific and empirical studies on board diversity, sustainability reporting and profitability of banks and as well, serve as the basis for future research in heightening the university's image as a research institution.

Additionally, previous studies relating to this topic were conducted in developed countries, hence this study seeks to bridge the gap as it contributes on board nascent dimension whether sustainability reporting mediates or moderates the relationship between board diversity and profitability of banks in the context of emerging economies such as Ghana. The findings of this study will provide scientific evidence on the role sustainability reporting plays on the relationship between board diversity and firm financial performance.

Delimitation of the Study

The population of the study comprises commercial banks in Ghana which have been in operation from 2010 to 2019. Jeucken, (2010) explained that commercial banks though not mandatory are expected to disclose more on social performance than their counterparts on the basis that, the former is extensively visible and as a result attracts more attention on the corridors of the media. Banks which satisfactorily captured the variables have equal chance of being selected to participate in the study. With the help of criteria-based sampling technique, a panel data will be obtained from secondary sources such as annual reports and data from Ghana Stock Exchange (GSE).

Limitations of the Study

This study is plagued with some short-comings and chiefly amongst them is unavailability of data on board diversity and sustainability reports of some banks. This therefore limited the study to banks with the needed data. However, the number of banks with available data is significant enough to represent the situation in the Ghanaian banking sector.

In addition, the study is challenged with limited funds and time. This notwithstanding, the quality of findings from the study is not impeded.

Definition of Key Terms

Board diversity. This describes the differences in the composition of board of directors.

Performance: The ability of a firm to utilize its resources in such a way that can generate more revenue than what it must pay for expenses.

Economic: The impact on the firm's activities on the economy.

Social: The impact of the firm's operations on the society in which it operates within.

Commercial banks: A description of banks which accept deposits and give loans to individuals and corporations.

Environment: The impact of the firm's operations on the climate.

Sustainability reporting: The process of making disclosures of the firm's operations on the planet, people and profit.

Organization of the Study

The research is divided into five chapters. Chapter One introduces the study. It comprises the background to the study, statement of the problem, objectives of the study, the research hypotheses to the study, significance of

the study, limitations and delimitations of the study, definitions of keys terms and the organization of the study. Chapter Two deals with the theoretical framework and literature review whereas Chapter Three presents the methodology for the study. The fourth Chapter discusses the findings while the last Chapter covers the summary, conclusions and recommendations.



CHAPTER TWO

LITERATURE REVIEW

Introduction

This research examines the effect of sustainability reporting on the link between board diversity and financial performance of commercial banks in Ghana. The chapter presents reviewed related literature on the study area. The first section of the chapter is an overview of theories applicable to the study. Thereafter, these other thematic areas were looked at: board diversity and firm financial performance, sustainability and firm financial performance and the moderating effect of sustainability reporting on the relationship between board diversity and firm performance.

Theoretical Review

Theoretical framework describes the various theories that have been proposed and used to explain the individual components of the study. These theories namely the Resource-based view theory and the Stakeholder theory have served as underpinnings to several researches and have informed various leadership styles at various financial and non-financial organizations. These theories are reviewed below.

Resource-based view theory

Many scholars such as Khan and Subhan, (2019) and Witiastuti et al., (2018) have used the Resource - Base View (RBV) theory to support the need for diversity on boards. The proponent of RBV theory raised considerations for the importance of resources in the organization and their management thereof. This campaign was founded on two major premises: first, it assumes that the variations in firms returns is dependent on how heterogenous the

firms' resources are. Second, heterogeneity in firms' resources must not be transferable and as such should remain in the individual firm as strategies. Barney (1991) found out that organizations in possession of strategic resources have a golden opportunity to create a competitive advantage over their contemporaries. He postulated this competitive advantage could lead the organization to enjoy greater margins of profit overtime. Barney however, indicated that for these resources to create a competitive advantage, they must be rare, non-substitutable, and difficult to imitate.

Resource-based View theory has proven successful over the years in that firms which use this approach are able to identify and leverage valuable resources in order to maximize performance (Lin & Wu, 2014). In addition, they explain that companies could conduct analysis on their strengths, weaknesses, opportunities and threats (SWOT) to enable them identify idle resources and opportunities so as to improve performance. Further, Cooper, Gimeno-Gascon and Woo (1991) argue RBV operations could sensitize innovation to ensure sustainable performance in the organization.

Critics of the stated theory like Bhanugopan, Van der Heijden and Farrell (2017) argue it is not every resource that has the potential to create a competitive advantage. They however, attribute this ability to the type of resources and their mode of usage. Thus, the organizations may fail to identify what their strategic resources are so as to make efficient use of these resources. Also, Samaeizadeh (2017) intimate that RBV is a political theory such that firms with relevant resources could influence firms without. As a result, firms could be challenged with competition, threat of law and cultural disparities.

Furthermore, Resource Based-View theory clarifies that directors are resources of the firm and can affect the actions of the firm (Hillman, Canella & Paetzold, 2000; Johnson, Daily, & Ellstrand, 1996). Particularly, Board of directors are perceived as resources to the environment in that they provide information about the outside organization which minimizes the uncertainty associated with the firm's operations (Lynall, Golden, & Hillman, 2003).

This is because diverse boards are able to relate with different class of peoples beyond the confines of the organization, hence, are in a better position to provide information concerning the happenings in the external environment to aid decision making. Additionally, directors are considered as external resources in that they provide skills, knowledge, experiences and as well, link the firm to prominent external players in the industry (Hillman et al., 2000). Such people provide key resources necessary for the survival of the company. Mizruchi and Stearns (1988) assert that directors are financial resources in that, they are able to create doorways for future partnerships to maximize firm performance.

Depending on the composition of boards, firms can create a competitive advantage over competitors in building a long-term value for the firm. As a result, Katmon and Al Farooque (2017) contend that diversity in boards play a pivotal role in relation to sustainability disclosures and as such, diverse views should be treated as valuable resources to enhance the firm's disclosures. However, Fordham and Robinson (2018) document that unlike financial information, sustainability disclosures have no one way of doing it, and may be complex since they aim to satisfy multiple needs. This will therefore require a formidable team with the requisite knowledge and skills to

be able to prepare an all-encompassing sustainability report. Additionally, directors from different backgrounds are able to contribute on varied perspectives which enhances the board's ability to acknowledge varying stakeholders needs, thereby, ensuring quality strategic decision making (Adams, et al, 2015: De Cabo et al, 2012). Gleaning from literature, the RBV theory forms the foundation of the first objective and hypothesis which proposes that diversified boards have the requisite knowledge, skills and potentials to enhance firm performance.

Stakeholder theory

The stakeholder theory as propositioned by Freeman (1984) argues that corporations owe a responsibility to a wider range of individuals who have an interest in the firm's activities. As such, the firm owes it a duty to satisfy their needs regardless of the stake they hold (Deegan, Rankin & Voght, 2000).

Consequently, corporations should make sustainability disclosures on a broader scope so as to meet the requirements of all stakeholders (Arthur et al., 2017), especially, those who cannot advocate their rights. Proponents of stakeholder theory upholds that corporations have varied group of people with different preferences however, it is the obligation of the firm to treat these people equally needful of their power (Deegan et al, 2000).

The stakeholder theory is of the view that, satisfying the needs of varied stakeholders will boost the performance of the firm (Freeman, 2010). Stakeholders are a group of individuals who can affect and be affected by the firm's achievements (Freeman, 2004). Businesses exist in an internal and external environment and as such, the environment becomes a stakeholder.

Nevertheless, an organization that fails to identify with its external environment may be treading on dangerous grounds. Thus, a pretense that these groups are not in existence can hinder the performance of the firm (Freeman, 2010).

Manyaga and Ammar (2020) in support of the stakeholder theory reveal that it is necessary for a firm to invest in its relationship with these groups such that they can freely contribute their quota to the firm's performance. It is only logical that, people who have a good relationship with the firm will be willing to transact business with the firm.

To buttress this assertion, Allen, Carletti, and Marquez (2015) assert that stakeholders' duties and status are created only when corporations voluntarily accept contributions from these individuals or groups. More so, stakeholder obligations are created with regards to the utility they receive from dealing with the firm (Harrison & Wicks, 2013). As a result, they can either promote or endanger the progress of the firm. Again, Phillips, Freeman, and Wicks (2004) opine that firm's inability to separate risk-bearers and decision makers may result in quarrels amongst major stakeholders. These conflicts can impede the firm's performances. In essence, stakeholder theory creates an atmosphere to enhance the social wealth of everyone.

However, major critic against this theory indicate directors may be bias toward shareholders interest just so to satisfy the needs of stakeholders. Thus, shareholder primacy argues directors have no responsibility towards stakeholders, implying that directors are employed to oversee the needs of shareholders exclusively. There is therefore a need for directors to equitably

balance their roles between these two groups in that, contributions from both groups are necessary for the growth of the firm and sustainable performance.

Corporations in recent times are getting more concerned about operating into the foreseeable future (sustainability performance). This has resulted in a search for measures to ensure flexibility with various stakeholders (Manyaga & Ammar, 2020). Thus, achieving a balance between the social, economic and environmental goals of the firm depends on the existing connection between the organization and stakeholders (Diego, 2018). Similarly, Stephen (2017), shared that BMW managers discovered that an organization can operate sustainably by engaging stakeholders in an open discussion to understand their needs and thereafter, make informed decisions. This has the ability to minimize conflicts of interest and enhance quality decision making.

The stakeholder theory forms the foundation for hypotheses two and three which proposed that sustainability disclosures promote better firm performance. For instance, through the social dimension of sustainability reporting, banks can give back to society by building schools amongst other projects. Also, banks can use sustainability disclosures to demonstrate to society what kind of sector receives funding and what policies are kept in place to regulate client's activities. Making disclosures on these activities therefore create the awareness, endorsement and patronage of the firm's activities which later translate to value. In other words, sustainability activities could be a form of investment for firms to create a competitive advantage and maximize value. Hence, it is expected that sustainability disclosures will enhance firm performance. Furthermore, in relation to objective three, the

theory provides the basis on which a diversified board can enhance its sustainability activities and disclosures to subsequently improve performance.

Conceptual Review

Board diversity

Board diversity is referred to as the differences in composition of board of directors, which can be grouped into direct observable aspects also known as the demographic factors (eg., age, gender, nationality, ethnicity) and non-observable aspects (eg., education, values, personality) (Katmon et al, 2019; Galia & Zenou, 2013; Erhardt, Werbel & Shrader, 2003). Several researchers have examined how board diversity relates with various output variables in the finance industry. For example, Harjato et al. (2015) assessed the impact of board diversity (gender, tenure, race, age, expertise, outside directorship and power) on corporate social responsibility using 1,489 US firms between 1999 to 2011. The diversity index was computed using Blau's index of heterogeneity.

Educational background diversity looks at the various disciplines of study represented on the board such as science, law, arts, business and engineering. Specifically, in this study, it is a heterogeneous variable with four categories: science, legal, business and arts. This perspective of diversity is important as it sensitizes various ideas and skills worth evaluating social interest and the well-being of the firm (Khan & Subhan, 2019). Studies done by Clark and Maggitti (2012) report that the inclusion of board members from varying disciplines speeds up strategic decision process, and enhances board effectiveness. Coming from different educational backgrounds makes it possible for the board to have a holistic view of stakeholders thereby, bridging

the gap of ignorance and less representation of some group of stakeholders. Being well informed of the needs of various stakeholders enables directors to render appropriate disclosures on the environment and society.

Qualification diversity is an index heterogeneity of four categories: diploma, first degree, post graduate and PhD. According to Hsu, Chen and Cheng (2013) is a contributor to the success of an organization in that, board members are equipped and well positioned to comprehend novel insights, and digest information. Also, board members are well versed to view situations at all levels, and tackle them in a refined manner (Khan & Subhan, 2019). Disparities in the level of education of board members unveils abstractions and unfamiliar dealings of various stakeholders, hence, effective decisions are made to meet the requirements of stakeholders (Nielsen, 2010). Harjoto et al. (2015) and Katmon et al. (2017) reported that there is positive association between educational level diversity and sustainability disclosures.

Hoang, Abeysekera and Ma (2018) explain diversity in the educational level of board members create an opportunity for board members to sustain the legitimacy of the firm and as well, recognize the needs of multiple stakeholders. In contrast, Subramanian, Choi, Lee and Hang (2016) document that there is no relationship between educational level diversity and sustainability disclosures. Outside directorship diversity is an index of heterogeneity of a director's experience drawn from other directorship positions being held currently. The study made use of eight categories ranging from 0-7 and 7>.

Tenure refers to the number of years a director has being on the board. It is an index of heterogeneity of four categories; 0-3years, 3-6years, 6-9yrs

and more than 9years. It is worthy to know that directors' experience and knowledge of the firm gets better the longer they stay on the board. Kosnik (1990) associates longer tenure to better firm performance in that directors would have studied and familiarized themselves with the firm strategies. This places them on a higher pedestal to make significant contributions towards the achievement of the firm's objectives in the long-run.

Directors longer stay on the board gives them ample time to build ties with various stakeholders and as a result they are able to communicate effectively and advance the needs of these stakeholders. However, longer stay on the board too may have a negative impact on performance. It is common that people tend to pay less attention to what may appear as routine. Hence, directors who have been on the board for long may relax on disclosures on the assumption that, they have already obtained the legitimacy to operate and stakeholders know the firm too well (Bonini, Deng, Ferrarri, John, Ross, 2017)

Sustainability reporting

Sustainability reporting has several dimensions such as the social, economic, environment, ethical and corporate governance. Literature is replete with studies of the several dimensions of sustainability reporting. For example, Sy (2016) examined the impact of sustainability practices (social, economic, environment, ethical and corporate governance) on firm performance of Cebu's export processing firms. Despite there exist so many dimensions of sustainability reporting, this study will mainly dwell on the economic, environmental and social dimensions measured in accordance with the G4 GRI framework. The economic dimension according to Doluca, Wagner and

Block (2018) is centered on the business strategy to create long term value for shareholders by managing risk and taking up opportunities arising from the business environment.

Global war against destruction of the Earth's ecosystem has spurred business leaders and industries to implement possible ways of responding to environmental crises proactively. According to Beckerman (1994), the need for environmental sustainability is on the rise as a result of the projected consequences waste and inequitable patterns of development poses to the future. However, it is possible within the context of environmental sustainability that growth trends and economic development can be stabilized for future generations. An environmentally sustainable business is one that operates on the tenets of sustainable development (Sy, 2016). This implies that the firm will minimize or eliminate pollution through proper disposal of waste substances and adopt clean technology so as to preserve the environment.

Businesses have adjusted their strategic goals from profit creation to maximizing wealth for shareholders while honoring social responsibilities at the same time. This is partly traceable to the fact that investors are being enlightened by day to diversify their investment into portfolios which are committed to sustainable development (Sy, 2016). The social dimension of sustainability is centered on interacting with the various stakeholders in the society, identifying and addressing their basic needs so as to secure the license to operate in the long run (Knoepfel, 2001). Sustainability reporting anchored on the social dimension evaluates how banks have been able to integrate societal values and norms in their normal dealings. It examines how well a bank has translated its social strategies into practice. Also, it entails realizing

the social mission of the bank, consistent with the interest of the community by achieving social responsibility (Brockett & Rezaee, 2012).

Firm performance

There are various means of measuring firm performance but the focus of this study is tailored to financial performance. Financial performance basically points to the financial aspects of a firm such as profit, economic value added (EVA), residual income, ROA, ROE, with the last two as the focus of the study. Although financial performance is the mostly widely used method of evaluating firm performance, there are other means of measuring performance be it financial or non-financial performance indicators. For instance, measuring performance base on the triple button line approach. With reference to the performance indicators ROA, figures were obtained from the Ghana banking Survey from 2015 to 2019. The choice of ROA as a measure of performance was premised on the fact, ROA is widely used in corporate governance research. ROA basically measures the effectiveness of directors and management on the use of the company's resources to generate profit at a given time. For instance, an ROA score of 5% or more represents a better firm performance whereas ROA score of 20% is considered more efficient.

Empirical Review

Every research is conducted in the context of current known things to resolve the unknown. As such this research cannot be completely independent of researches that have gone beforehand. This section of the review considers the various scientific empirical evidences that have been gathered through sound researches. This included literature on the relationships between board diversity and firm performance, sustainability reporting and firm performance,

board diversity and firm performance, and the mediating and moderating effect of sustainability reporting on the association between board diversity and firm performance.

Studies on board diversity have emerged over forty (40) years ago (Lynn, 2009). However, previous research on the impact of board diversity on firm performance have generated inconclusive findings (Stephanie, 2019). This could partly be attributed to the differences in context, cultural settings and sectors in which these studies were conducted. While many perceive diversity to be harmful, others have embraced the concept and are determined to retain it (Manyaga & Ammar, 2020). Furthermore, Manyaga and Ammar, (2020) argue that board diversity is a strategy for firm success. For instance, the business case on diversity believes that diversity enhances corporate governance by tapping from a bigger pool of knowledge and rich experiences (Fondas & Sassalos, 2000). As a result, corporations are able to make effective decisions to improve performance. According to Larcker and Tayan (2013), board of directors mainly perform two functions. First is that they furnish management with strategic and operational directions.

The second function is that they monitor and supervise management's application of the various strategies in order to minimize agency cost. As firm's knowledge is growing on the need to manage stakeholders' interest so as to maximize shareholders values, directors perform critical role in providing directions on sustainability issues and ensuring that such strategies are well implemented by management (Harjoto et al., 2015). To achieve this essential goal of satisfying various stakeholders, there is the need for a more diversified board

Board diversity introduces different breed of knowledge, talents and skills that fosters effective decision taking. For example, Westphal and Milton (2000) suggest that members on board could make very important but unique contributions that is capable challenging the status quo and conventional wisdom of domineering directors. Additionally, diverse boards are able to represent different perspectives of stakeholders thereby serving them better.

Magnanelli, Paolucci and Pirolo (2021), conducted a study to explore the relationship between diversity in boardrooms and firm performance, particularly the role of tenure and educational level diversity of board members. Using a sample size of 187 listed firms within the European area, the authors retrieve financial and non-financial data from Orbis and Datastream and annual report between 2010-2018. To perform the analysis, an index was constructed for the two indicators of diversity whereas firm performance was measured by ROA and Tobin's Q. The findings of the study highlighted a significant and positive relationship between tenure diversity on corporate boards and firm performance. However, the impact of educational diversity on firm performance was negligible. Notably, this study is a multisectoral one and highly focused on listed firms which makes it somewhat different from the current study whose focus is on the banking sector. Again, although the methods of constructing the diversity index varies, both studies alike had four categories under educational level diversity.

Educational background diversity and firm performance

Educational background diversity of board members and its effect on firm performance has received less attention in Ghana unlike other diversity indicators such as gender. In spite of the paucity of empirical evidence in this

area, prior research disclosed educational background diversity influences firm performance (Nwaorgu & Iormbagah, 2021). Educational background diversity is therefore an important trait of corporate board diversity, which must be explored in the modern business settings.

Educational background diversity refers to the various disciplines or area of study of members on the board. Specifically, this study concentrated on four areas which includes; Arts, Sciences, Business and Legal. Mishra and Jhunjhunwala (2013) observed that a board of multidisciplinary and cross-functional teams are better equipped to resolve problems quickly and amicably because issues are viewed and discussed on broader perspective. For instance, Chiang and He (2010) asserted that a pool of valuable knowledge and skills is created when the board is heterogenous. As such, expenses on hiring people with expertise is minimized especially when every educational discipline is represented on the board. For example, having a legal person on the board minimizes expenses on getting an external lawyer when the need arises. Consequently, cost is minimized and funds are channeled to investment which could increase performance.

Furthermore, educational background diversity enhances openness, creativity, innovativeness and business expansion. On the contrary, a homogenous board in terms of educational background implies the same area or field of studies for all members on the board, thus, their mindsets and scope of thinking will be pretty much alike. This fact could hinder progress as decisions will be narrow based thereby militating against open discussions on problems and alternative solutions. Hence, the study hypothesized that

Ujunwa (2012) analyzed the link between board characteristics and financial performance of Nigerian quoted firms. Board characteristics in relation to this study included board size, board skill, board nationality, board gender, board ethnicity and CEO duality. Of 122 panel data of quoted Nigerian firms between 1991 and 2008, results showed that board nationality, board ethnicity, and number of qualified PhD holders on the board influenced firm performance positively.

Thomas and Ely (1996) argued that diversity enhances the firm's ability to relate with customers on a broader scope thereby creating a competitive advantage in the global market. According to Powell (1999), diversity in relation to decision-making on boards results in innovation and creativity, and thus create value for the firm.

On the other hand, it is appropriate to acknowledge that board diversity can create very varying opinions, disagreements and prolong decision making processes. Among other things, such instances can delay the board from reaching consensus and thus, inefficient decision making and poor supervision on management performance. Robinson and Dechant (1997) as well as Tajfel (1978) inclined people may perceive others differently and tend to create sub-groups on the board which they can easily align with. It is capable of straining relations and weakening board cohesion and if not managed properly, members will not be able to communicate freely on issues that matters to the growth of the business.

On a whole, literature on board diversity and firm performance have yielded inconclusive findings although most studies reported a positive relationship. However, literature from the work group diversity proposed there

are two pillars of diversity, deep level diversity and surface level diversity. The latter refers to observable behaviors or attributes such as age, ethnicity, gender amongst others. Harrison, Price and Bell (1998) opined those negative implications from surface level diversities could be mitigated overtime. They explained that team members over a considerable frame of time turn to acknowledge and bypass one another's differences.

In essence, it can be deduced that the positive benefits of board diversities outweigh the negative implications. If perhaps there are negative impacts of board diversity, it will only weaken the positive impacts but unlikely to result in negative repercussions. As a result, a positive association is anticipated between board diversity and firm performance. Therefore, the hypothesis pertaining board diversity and firm performance can be captured as follows:

Qualification level diversity and firm performance

Educational qualifications are the degrees, diplomas, certificates, professional titles and so forth that an individual has acquired whether by full-time study, part-time study or private study, whether conferred in the home country or abroad and whether conferred by educational authorities, special examining bodies or professional bodies (OECD, 2003). Qualification level diversity refers to the level of education of members of the same board. In other words, it points to the degree of studies attained by each member of the board. Generally, this study considered four categories which includes: Diploma, First degree, Master's degree and PhD. This dimension of diversity is of importance because, the education level of board members affects the way they think, act and connect with others.

For instance, Magnanelli et al. (2021) assert that understanding, knowledge and skills derived from various level of studies enhances the board's ability to process information, take decision and translate into action, thus, increasing performance. For example, Darmadi (2013) examined the influence of educational qualifications of both the CEOs and board members on financial performance of listed firms on the Indonesia Stock Exchange. His findings revealed board members and CEOs of high qualification has a positive impact on firm performance.

In like manner, Mahadeo, Soobaroyen and Hanuman (2012) reveal that prompt and detailed evaluation of strategic decisions, as well as addressing the possible information asymmetry issues between the board and senior management are identified and mitigated by a board with differing levels of qualifications, thereby enhancing firm performance. To buttress this assertion, Kuo, Wang, and Yeh (2018) document that directors with higher qualification level tends to invest more in Research and Development, when they investigated the nexus between directors' level of qualification and Research and Development investment, using 437 sampled companies listed in Taiwan.

A board of varying levels of qualification is better exposed to trends. As such, members of the board are able base on their unique skills and experiences, undertake valuable research, create a competitive advantage and are able to address complex issues within the boardroom. In fact, some scholars have shown that diversity in levels of qualification and cognitive skills among directors may lead to effective corporate governance, better strategy formulation and benchmarking.

On the contrary, Bernile, Bhagwat, and Yonker (2017) in evaluating the effect of board diversity on volatility considered qualification diversity alongside age, gender and ethnicity diversity. The authors found a negative association between heterogenous boards and volatility. They associated this finding to the fact the heterogenous boards are open and innovative, hence, are prone to adopting less risky financial policies. However, the authors were quick to highlight that greater disparity in the levels of qualification could be an underlying cause of conflicts, disagreements, slow decision making and lower firm performance (Kagzi & Guha, 2018).

Based on the findings of reviewed literature, the current study upholds that qualification level of diversity can actually improve firm performance by allowing members to view issues from various perspectives, broader discussions and enhance better decision making.

Tenure diversity and firm performance

The study also examines the effectiveness of long tenured boards as compared to short tenured boards and their influence on firm performance. For instance, Kosnik (1990) associated longer tenure to better firm performance in that directors would have studied and familiarized themselves with the firm strategies thereby creating a wealth of skills and experiences. Based on the rich experiences gathered over the years, directors are better placed on a higher pedestal to make significant contributions such as effective corporate governance, effective monitoring towards the achievement of the firm's objectives in the long-run (Bonini et al., 2017).

Furthermore, directors longer stay on the board gives them ample time to build ties with various stakeholders and as a result they are able to

communicate effectively, identify and advance the needs of different stakeholders thereby, creating value. On the hand, longer stay on the board could have a negative impact on performance. It is common that people tend to pay less attention to what may appear routine, hence, directors who have been on the board for long may relax on value creation and disclosures on the assumption that, they have already obtained the legitimacy to operate and stakeholders know the firm too well.

On the contrary, other studies in the field reported less tenured directors are more motivated to create value, earn good reputation and promotion and to secure their stay in the company. As a result, their thoughts are innovative and value creation oriented than the established ones. For instance, Jia (2019) in exploring the relationship between directors' tenure and innovation, disclosed that boards with extended tenure experience difficulty in refreshing and keeping abreast with technological innovation. Thus, attachment to existing policies and firm history could enhance performance to a certain extent after which longer tenure could hinder innovative strategies, ineffectiveness leading to reduced firm performance (Huang & Hillary, 2018; Clements, Jessup, Neill, & Wertheim, 2018).

From the argument on directors' tenure on the board, neither long or short tenure seemed to be sufficient in itself. This therefore makes the discussion on tenure diversity increasingly worthwhile for engagement. Li and Wahid (2018), found tenure heterogeneity correlates with superior firm performance, when they investigated whether tenure heterogeneity enhances performance. Their findings highlighted that board diversity, in terms of director tenure and rank, results in increased CEO performance-turnover

sensitivity. These findings further highlighted that tenure diversity on boards lead to fewer instances of overcompensation. The study also pointed out that director heterogeneity improves board effectiveness in firms that have embraced diversity at their onset and not in those where diversity has been imposed by regulatory acts. Similarly, Clegg and Cooper (2009) showed that diversity in tenure may create an avenue for more engaging debates among board members and that tenure-diverse boards are welcoming to change and innovation.

Following the discussion, this study supports the idea that tenure diversity is capable of balancing off the negative and positive effect of long tenure of board members. Suffice it to say, a diversified board of both long and short tenured board members will provide a pool of knowledge and rich experiences as well as creativity and innovativeness.

H₁: Board Diversity has a significant positive effect on bank financial performance

Sustainability reporting and firm performance

Neoclassical economists and several managerial theories argued that corporations' main objective for business is to maximize profit (Eccles, Ioannou, & Serafeim, 2014). Of that, firms deal with different groups of people (internal and external) such as employees, customers, suppliers amongst others, who have the ability to affect and be affected by the operations of the firm. These people are known as stakeholders. However, shareholders or owners of the business becomes the priority amongst all other stakeholders. In view of that, resources are allocated in their favor (Shakil et al., 2019), at the expense of all other stakeholders. Brown and Caylor (2006)

indicated an attempt to satisfy these other stakeholders will affect the performance of the firm negatively in those resources meant for the running of the business will be channeled in addressing the needs of stakeholders.

Despite this claim, Friedman and Miles (2002) and Deegan (2002) stated that not all organizations place shareholders on the same radar. As against the norm, some firms believe that treating the secondary stakeholders right will tighten their financial nuts to satisfy shareholders (Samuel, 2017). This is not far-fetched in that, for instance, individuals and groups will tend to patronize the firm's activities should they see the firm's act of benevolence to the society. This could partly account why firms have included sustainability issues in their business strategy and have willingly increase sustainability disclosures in their operations (Eccles et al., 2014). Firms' main objective is to maximize profit for shareholders. However, proponents of legitimacy theory assert that businesses operate within a society hence, must operate in alignment with the values of the society. In that regard, corporations have a responsibility such as protecting the environment and providing basic facilities, amongst other things to the society within which they conduct their business. Firms can obtain legitimacy to operate by disclosing to the society the impact of their operations and as well, services being provided to the society.

Similarly, Orazalin and Mahmood (2019) conducted research on the determinants of the use of GRI framework in an emerging economy, Kazakhstan. The authors analyzed data of 53 companies on the Kazakhstani Stock Exchange from 2013 – 2015. Their results indicated that economic reporting has a significant impact on firm value and that companies in

Kazakhstan report more on the economic dimension of sustainability. Moreover, their results are in sync with the findings of Yadava & Sinha, (2016) who reported that economic reporting amongst Indian firms is comprehensive as compared to reporting's on the other dimensions of sustainability.

Nonetheless, Orazalin and Mahmood (2019) research was limited to public listed firms whereas there are other key players in the capital market development such as financial institutions and insurance companies. Moreover, the study evaluated firm specific determinants of sustainability disclosures other than political, legal and historical structures that could impede sustainable disclosures. Finally, the study employed GRI 3 framework to assess the nature and extent of sustainability disclosures although the updated standard, GRI4 was in place.

Burhan and Rahmanti (2012) approves those economic disclosures anchored on the sustainability reporting has a significant positive influence on firm performance. It can be inferred from the above literature that firms can only maximize profit depending on their output in the market. Their ability to satisfy stakeholders in the market largely informs the performance of the company. The economic dimension of sustainability reporting comprises various activities the firm has to engage in order to remain efficient and profitable in the market for a long while. Of such activities are embracing innovation, knowledge management and technological advancement which keeps the organization's products and services abreast with stakeholders' taste and preferences.

Sy (2016) averred that corporations who integrate economic reporting into their financial statements are not only able to maximize financial success but also economic success in the long-run. The author emphasized that pursuance of economic reporting activities enables the firm to efficiently allocate resources and produce varied products through knowledge management to satisfy customers. As a result, profit is maximized as sales turnover is increased overtime. Thus, economic reporting positively correlates with firm financial performance.

Research in the developed countries such as Japan, and some European countries have found a positive relationship between social performance and banks financial performance (Buallay, 2019; Esteban-Sanchez et al., 2017; Shen et al., 2016; Wu and Shen, 2013). Also, stakeholder theory is of the view that, firm's ability to satisfy the requirement of distinct stakeholders will enhance their financial performance (Freeman, 2010). A study by Velte (2017) showed that firms are skewed towards social performances and as a result, improved social performances can boost firms' finances.

Generally, Reddy and Gordon (2010) conducted a study on the effect of sustainability reporting on financial performance amongst listed firms in Australia and New Zealand. The authors employed the event study technique in order to project the abnormal returns based on a 31-day event widow using a sample of 68 firms. Thus, 17 firms from New Zealand Stock Exchange (NSX) and 51 firms from the Australian Stock Exchange (ASX). The results of their analysis showed that sustainability reporting is significantly positively correlated to abnormal returns amongst Australian firms. Further, findings from the aggregate data of the two countries explained that contextual

differences and industry types greatly influence the abnormal returns of the firms.

Ameer and Othman (2012) also analyzed the impact of sustainability practices on the corporate financial performance of the top 100 global sustainable firms declared in 2008. These firms were selected from a population of 3,000 firms from developed and developing countries. The results highlighted a significant growth in sales, ROA, profit before tax and cash flows operations in some areas of the sampled firms as proxies for financial performance. Additionally, their findings indicate the increase in financial performance as a result of sustainable practices has been sustained for longer periods. Despite the fact that the study considered the top 100 globally sustainable firms, most of these firms were from the developed world where sustainability issues are at the apex. This implies that the determinants of sustainability reporting in developing economies is in oblivion. Furthermore, this study like other studies concentrated on profit making firms whose performance measures are easily determined. However, not for profit making organizations were not included in the sample.

Uwuigbe et al. (2018) evaluated the association between sustainability reporting and firm performance amongst Nigerian Deposit Money Banks (DMBs). The judgmental sampling technique was employed to obtain a sample from the Nigerian Stock Exchange. Data was organized from annual reports and stand-alone reports between 2014 and 2016 using content analysis. Using panel regression technique, their findings affirmed the assertions of legitimacy theory in that, sustainability reporting positively influence cash generation ability of sampled firms. The study employed the GRI framework

which is reliable and robust. Nevertheless, the study was tailored towards only DMBs whose findings may not be applicable to non-DMBs.

However, some other studies on the relationship between sustainability reporting and firm performance however, found no relationship at all. For instance, A study by Liu et al. (2017) on UK firms discovered that carbon emissions are adversely associated with firm economic performance. Carbon emissions are dangerous to the health of humans, animals and the entire atmosphere and will by no means be welcomed, hence firms known for emitting such harmful substances could be fined, restrained or even lose potential investors and customers. Thus, a financial loss to the firm. Utz (2018) discovered that social performance is negatively related to firm performance. It is possible that firms may be pumping their resources to social performance practices to the neglect of all other performances, this may result in unfavorable financial outcome.

In like manner, Murray, Sinclair, Power and Gray (2006) analyzed data obtained from top 10 UK companies spanning from 1988 to 1997 and failed to establish a relationship between sustainability practices and firm performance. Lopez et al. (2007) evaluated the relationship between sustainability performance and firm performance of firms quoted in Dow Jones Sustainability index, they however, discovered no relationship among the variables.

Recently, Buys, Oberholzer and Andrikopoulos (2011) using data from McGregor FBA database spanning 2002 to 2006 examined the economic benefits on sustainability reporting. Their study affirmed there is no relationship between sustainability practices and firm performance. These

findings could be explained in the sense that in some jurisdictions, sustainability practices and disclosures is voluntary. As a result, firms which are not directly involve in pollution may see sustainability practices and disclosures as a cost either than an investment, thereby avoiding it altogether. In the same vein, customers knowing these reports are not a true reflection of the firm's sustainability practices may never rely on the disclosures in making investment decisions. It is evident that studies on the relationship between sustainability reporting and firm performance has mixed results, hence, this study proposes this hypothesis to further study the topic.

H₂: There is a significant positive relationship between sustainability reporting and financial performance of commercial banks in Ghana.

The moderation effect of sustainability reporting on the link between board diversity and firm financial performance

The empirical findings show inconsistent results in the relationship between board diversity and firm financial performance and this highlighted the need some variables to be included as moderating. Studies that considered the relationship between board diversity and firms' financial performance looked at the moderating effect of CSR. The authors confirmed that CSR positively moderates this relationship (Jiang, Cherian, Sial, Wan, Antonio & Mata, 2020). In this study, sustainability reporting is used as the moderating variable.

Sustainability reporting has become a topical concern in the financial industry since the past few decades. This is because it does not only hold a great key to increasing firms' financial performance but also has a positive impact on society in general. For example, Kuzey and Uyar (2017) reported

that firms that undertook and reported on sustainability policies and interventions had more chance of increasing their financial performance as against firms that did not.

Sustainability practices demonstrate the need for achieving long term environmental, social and economic value which in turn will promote the continual acceptance and existence of the business (Esa & Ghazali, 2012). Furthermore, sustainable practices and transparency in disclosures ensures better corporate governance and long-term value creation in that, board of directors effectively monitor to ensure compliance, invest in social projects and engage in carving a good reputation for the firm (Shavit & Adam, 2011). As a result, compliance minimizes expenses on fines and charges whereas investing in social projects such as schools and hospitals translate into acceptance and patronage in the long run. Thus, a diversified board which undertake and make sustainable disclosures could attract potential investors and customers to enhance firm profitability. Hence the study hypothesized H₃: The link between board diversity and banks financial performance is moderated by sustainability reporting.

Control variables

Control variables are other factors that have potential influence on the dependent variable (bank performance), aside the independent variables (Educational background diversity, qualification diversity and tenure diversity). Pertaining to this study, bank size, bank age, leverage, liquidity and growth prospect constitute control variables.

The size of a firm is determined by a scale usually by the company's total assets and total sales. Largely, big companies get more attention from

the public than smaller ones. The greater the size of the company the richer its resources. According to a report issued by Indonesian stock exchange (2019), firm size is a major determinant of firm performance because of the concept, economies of scale. The concept explains that as the quantities of goods produce increases, it reduces the cost of production. Impliedly, larger firms are able to produce goods and services at a lower cost than their counterparts. To advance the argument, Devi, Khairunnisa and Budiono (2017) disclosed a key factor influencing company performance (return on assets) using panel data. Their findings suggested that larger companies capitalize on their size to negotiate the value of their inputs and then reduce their average costs, resulting in firm profitability.

Furthermore, based on the resource based-view theory, the size of the bank invariably signifies the firm's resources. In that regard, larger banks have richer resources such as employees, customers amongst others. Adding to that, larger banks have the advantage to access credit from organizations unlike smaller banks. For instance, larger companies send a signal to the general public that they are effective and efficient and therefore can better manage resources entrusted in their care. As a result, bigger firms easily access capital and credit from investors at a minimum cost to continually expand in operation. Therefore, the study in agreement with prior studies expects bank size to contribute significantly to performance by minimizing cost on inputs, and promoting easy access to credit amongst others.

Another influential variable on bank performance is leverage. Generally, leverage refers to the ratio between a bank's debt and equity. It signals the presence of debt in the bank's capital structure. According to

Brigham and Houston (2005), bank leverage is significant and positively associated with bank performance. This assertion was supported by Alzoubi (2016), who also documented positive evidence amid the relationship between leverage and firm profitability.

On the contrary, Majumdar (2021) found a negative correlation between bank's leverage and profitability. The author reasoned that, excessive use of debt creates agency problems between shareholders and creditors which further translate into high agency cost, dwindling profitability and bank performance. Also, Hammes (2003) reported similar results but with an insightful explanation that, the level of debt is what really affect performance and not the type of debt. Meanwhile, according to Mesquita and Lara (2003), the association between leverage and bank performance for long standing debt is negative in the long run whereas positive for short term debt financing.

Liquidity is considered another determinant of bank's performance, hence, controlled in this study. Contextually, liquidity in this study refers to how easy banks can obtain funding to trade a security. Scholars in the likes of Olagunju, David and Samuel (2012) found a significant positive link between liquidity risk and bank profitability. They further reported that the relationship between liquidity and commercial banks performance is bi-directional such that both variables significantly influence each other. Similarly, Kosmidou (2008) employed unbalanced time series data of 23 banks in an attempt to investigate the determinants of bank profitability during EU financial integration (1990-2002). Evidence from his findings highlights that more liquid banks have high ROA whilst less liquid banks scored less ROA.

However, Shen, Chen, Kao and Yeh (2010) reported a negative association between liquidity and bank performance. They explained that, banks with high illiquid assets incur huge funding cost as they are pressed to raise monies for impending expenses. Likewise, Marouzva (2015) disclosed a negative link between liquidity and the performance of South Africa's based banks, using net interest margin as a proxy for performance.

Empirical literature on firm age and its performance generated inconclusive findings. For instance, Pollet (2009) observed that firms after establishment begin to grow in experience as they encounter challenges, fulfil social obligations such as CSR and become famous within the passage of time. At that, the author suggest that long-lived firms characterized by greater pool of resources, rich experiences and high market shares are better off to overcome challenges, adopt cost minimization mechanisms in order to enhance profitability. On the other hand, Al-Nawaiseh (2020) document that new firms are more productive and profitable in that they acquire an efficient workforce who are innovative highly motivated to achieve local growth and expansion. Ammar et al. (2003) found firm's age positively correlates with better performance.

Al-Nawaiseh (2020) observe that one obligation of management of firms is to achieve high growth, increase in firm size so as to enhance profitability. They added that increase in growth is a sign of profitability. According to Malik (2011), firm grows by reinvesting undistributed profits for example, acquisition of associates, investment in R&D, increase in sales and employees amongst others. In the same vein, Jang and Park (2011) argue profitable banks could withhold some profits in order to capture growth

opportunities in the market for additional profits. Serrasqueiro and Nunes (2008) found a statistically significant positive association between firm growth and profitability. Nakano and Kim (2011) observed firms' profitability is a precedent to future growth, however, current excessive growth prospects could negatively impede firm performance and growth.

Conceptual Framework

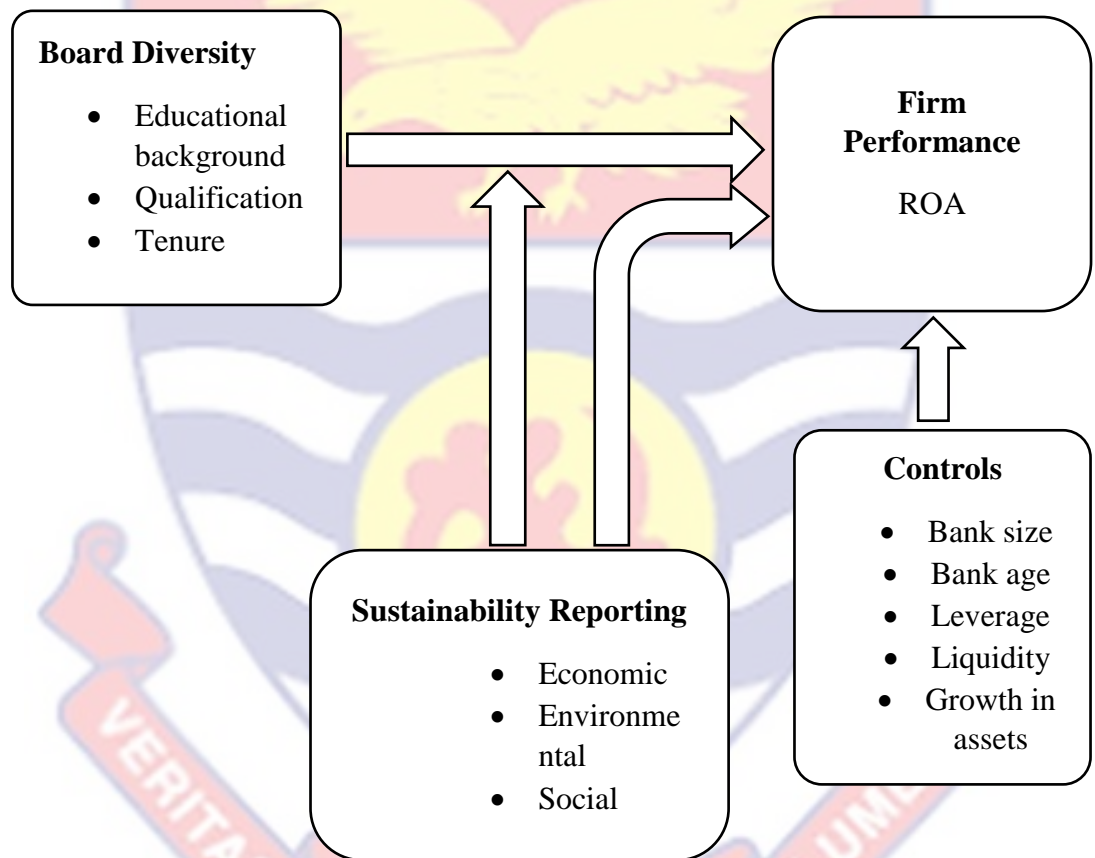


Figure 1: Conceptual framework
Source: Author's Construct (2021)

Figure 1 is a pictorial representation of the objectives of the study. educational background diversity, qualification diversity and tenure diversity which is measured against firm performance proxied by Return on Asset and Return on Equity. In the same vein, the study assesses the effect of sustainability reporting against firm performance (ROA and ROE). Finally,

the study assesses the moderating effect of sustainability reporting against the link between board diversity and firm performance.

Chapter Summary

Sustainability reporting and firm's financial performance in recent times has heated up a discussion in both academia and the corporate world. Previous studies addressed those directors of the various companies greatly influence sustainability reporting and firm financial performance. However, it is worth knowing that the peculiar directors' traits that cause this influence remains still a mystery. Many theories have been used by several scholars since the inception of this discussion. Of those, this study finds Resource-Based View theory and Stakeholder theory useful for the purposes of the study.

The next session of this chapter reviewed studies on the effect of board diversity on firm performance, sustainability performance influence on bank performance, and the possible moderating effect of sustainability reporting on the link between board diversity and firm performance. Previous findings on board diversity and firm performance highlighted these gaps. First, available literature suggests there is mixed findings with regards to the relationship between board diversity and firm performance. Second, most of the studies on sustainability performance were undertaken in developed countries. It therefore makes it inappropriate to liken findings in the developed world to developing countries because of differences in jurisdictions and regulatory frameworks. Third, studies carried out in Ghana in relation to board diversity focused on gender and nationality diversities, however, board diversity encompasses other features such as age, educational background, experience,

qualification amongst others. The Last item discussed in the chapter is the conceptual framework for the study. Following this chapter is a discussion on how the study was conducted.



CHAPTER THREE

RESEARCH METHODS

Introduction

This study investigates how board diversity influences firm financial performance through sustainability reporting of banks in Ghana. This chapter therefore elaborates the methodology applicable to conducting the study. It covers the research design, information about the study area, population, sampling procedures and sample size, data collection instruments, data collection procedures, data processing and analysis. The chapter will conclude with discussion on ethical issues pertaining to the study and a summary of the chapter thereof.

Research Philosophy

The study employed a positivism paradigm. Saunders, Lewis and Thornhill (2009) posit that research that seeks to work with observable social phenomenon and at the end give generalizations reflects positivism philosophy. The choice of this paradigm is considered appropriate since the topic under study is an observable social reality in the Ghanaian banking industry. More so, because variables are observable, data collected are not impressions but are facts organized in a value – free manner which are credible and can be verified. Additionally, a positivism paradigm was adopted for this study because it developed hypotheses from existing theories. The formulated hypotheses will be tested, either confirmed or not, which further contributes to the better development of the theories considered under the study.

Research Design

An explanatory research design was deemed appropriate for the effectiveness of this study. An explanatory design, also known as a causal design, is a research design that seeks to investigate a problem or a situation by establishing a cause-and-effect relationship amongst variables of concern. Explanatory research designs enhance the understanding of the researcher on the issue at hand though it does not provide conclusive outcome (DeVault, 2019). Additionally, explanatory research commonly makes use of secondary data which in essence minimizes cost and time spent on the work. It also set precedence for future research to advance the usefulness of findings.

Thus, explanatory research allows the researcher to elicit deep insights on a particular subject. Nonetheless, explanatory research design has been challenged with misleading conclusions and unrepresentative samples. For example, perceived cause and effects obtain from explanatory studies may be coincidence other than an established truth. Mindful of these limitations, however, the study will still be proceeded with an explanatory design so as to make room for the creation and testing of theories, and to set a foundation for future research on such a novel phenomenon.

Research Approach

The researcher also employed quantitative approach in organizing the data for the study. Zikmund, Babin, Carr and Griffin (2013) explained quantitative research methods as research techniques that address research objectives through empirical examination that involves numerical measurement and analytic approaches. Thus, quantitative researchers engage in channelling their efforts toward measuring concepts with scales which

directly or indirectly generate some values. Also, quantitative methods subject research objectives to numerical analysis and generalization of findings thereafter (Crowther & Lancaster, 2008).

Additionally, quantitative research data can be verified and tested to enhance its credibility and reliability. It is also worth knowing that quantitative research provides straight forward results such that one can easily determine which statistical tools and techniques are appropriate for the analysis. This has over the years created some reputation for quantitative researchers, considering that very few people are knowledgeable in the usage of these statistical packages. It is against this background that researchers who employ the quantitative method are considered, genius.

However, DeVault (2019) suggest that quantitative research results could be misleading. The author argued that policymakers and other decision-makers may be swayed by figures, and that instead of focusing on the nuanced issues, decisions made will only revolve around the figures which could be misleading. Again, he refuted the assumption that since quantitative research is based on statistics, it is free from error. This signifies that, both quantitative and qualitative research are subjected to error and bias; hence the researcher must take measures to curb these occurrences.

Quantitative research requires carefully formulated hypotheses so as to develop a model to suitably collect and analyse data. This is to avoid a ripple effect in that, an error in one stage can ruin the results of the research. A complex model may also be difficult to develop. Despite the flaws in quantitative research design, its outputs are verifiable; hence credible, reliable and could be inferred. Pallant (2007) observed quantitative methodology helps

deepen the understanding of the study, enable comparisons and make room for replication of the study in the future (Nutassey, 2018). Consequently, the study adopted a pure quantitative methodology in testing the hypotheses so as to achieve the objectives of the study.

Population

The target population covered all commercial banks in Ghana in operation from 2010 to 2019. A population is a complete set of entities that exhibit common characteristics. Thus, it refers to the total accessible units in reference to a particular phenomenon, available to be interrogated by a researcher. Dozens of banks and financial institutions operate in the Ghanaian banking industry. Almost all of these banks are privately owned with a few having the government of Ghana as majority shareholder. All of these banks as financial institutions are regulated and certified by regulatory bodies such as the Bank of Ghana, the Securities and Exchange Commission (SEC) and others. The banking environment in Ghana was relatively quiet and calm until the recent financial crisis. However, the banking sector clean-up by BoG saw a lot of banks and financial institutions losing their operational license due to peculiar concerns the regulator deems irreparable. As a result, some of these banks that have been in operation in or after 2010 but folded up operations in the clean-up in 2017/2018, did not form part of the target population for this study. Subsequently, twenty-three (23) commercial banks which met the inclusion criteria were considered part of the population. The study singled commercial banks as a result of recent financial crisis. Although there are many players in the financial sector, commercial banks largely hold the front of the sector and they perform major functions such as lending, accepting

deposits amongst others. Due to the role commercial banks play, they largely influence the stability of the financial sector to an extent. Because of the degree of influence and time challenges, the study focused on just commercial banks.

Sampling Procedure

The sample size for this study was 15 commercial banks obtained through Criterion based sampling. This is because the study needed banks which have been in operation from 2015 to 2019 and have consistently included sustainability reports in their annual financial reports. A sample is a subset of a universe chosen for measurement, observation or investigating such that the statistical evidence obtained could be generalised for the entire universe.

Data Collection Instrument

Research data was drawn from annual reports of commercial banks for the study. Also, Ghana banking surveys conducted by PWC were used. These documents were obtained via a computer and an internet source. The annual reports were found on the individual bank's websites, BoG website and others on the Ghana Stock Exchange website. Annual reports are reliable because they have been audited by independent audit companies which expresses that the information provided is the true reflection of the bank's affairs over the period of consideration.

Data Collection Procedure

The researcher employed documentary review, specifically content analysis methodology, in retrieving data from the annual financial reports for each of the banks in the sample. Areas of focused were board profile,

sustainability reports and financial performance indicators. Content analysis is a frequent used technique in research. It involves quantifying the presence or absence of the required information from a text using a method that is familiar and can be replicated by other researchers (Krippendorff, 2004). As a result, annual reports were systematically examined in order to sieve relevant data for the study.

Data

Generally, the study mainly used secondary data in order to ensure the credibility and validity of the study results. Scholars in the likes of Ghauri and Grønhaug (2005) observed that research could be less expensive and time saving especially where the data is readily available. Additionally, the use of secondary data minimizes obstructions in the research process by reason that, the data would have been fine-tuned over considerable usage hence, improves on data quality and reliability (Stewart & Kamins, 1993). Further, secondary data fosters longitudinal studies for comparative purposes as in the case of this research.

Model Specification

Model 1- The impact of Board Diversity on Bank Financial Performance

The first model in this study seeks to test board diversity effect on the various dimensions of the firm financial performance proxied as ROA. Board diversity in this context constitute educational background, level of qualification, and tenure diversities

$$ROA_{it} = \beta_0 ROA + \beta_1 EduDiv_{it} + \beta_2 QuaDiv_{it} + \beta_3 TenDiv_{it} + \beta_4 BSIZ_{it} + \beta_5 BAGE_{it} + \beta_6 LEV_{it} + \beta_7 LIQ_{it} + \beta_8 GT_{it} + \mu_{it} \dots\dots (1)$$

where

- EduDiv represents Educational background diversity
- QuaDiv represents Qualification diversity
- TenDiv represents Tenure diversity
- *BSIZ* denotes Bank size
- BAGE represents Bank age
- LEV represents Leverage
- LIQ denotes Liquidity
- GT represents Growth
- β represents the coefficients
- μ depicts the error term

Model 2 – The effect of Sustainability Reporting on Firm Performance

The second model depicts the effect of sustainability reporting on bank performance (ROA). Sustainability reporting in relation to this study is measured on the economic, environment and social dimensions.

$$ROA_{it} = \beta_0 ROA_{it} + \beta_1 Econ_{it} + \beta_2 Envt_{it} + \beta_3 Soc_{it} + \beta_4 BSIZ_{it} + \beta_5 BAGE_{it} + \beta_6 LEV_{it} + \beta_7 LIQ_{it} + \beta_8 GT_{it} + \mu_{it} \dots\dots (2)$$

where

- Envt represents Environment dimension of sustainability reporting
- Econ represents Economic dimension of sustainability reporting
- Soc represents Social dimension of sustainability reporting
- *BSIZ* denotes Bank size
- BAGE represents Bank age
- LEV represents Leverage

- LIQ denotes Liquidity
- GT represents Growth
- β represents the coefficients
- μ depicts the error term

Model 3 –The Moderating effect of Sustainability Reporting on the link between Board Diversity and Financial Performance

The third model reflects the moderating role of sustainability reporting on the link between board diversity and bank financial performance denoted by ROA.

$$ROA_{i\ it} = \beta_0 ROA_{i\ it-1} + \beta_1 EduDiv_{it} + \beta_2 QuaDiv_{it} + \beta_3 TenDiv_{it} + \beta_4 BSIZ_{it} + \beta_5 BAGE_{it} + \beta_6 LEV_{it} + \beta_7 LIQ_{it} + \beta_8 GT_{it} + \beta_7 EduDiv_{it} * Econ_{it} + QuaDiv_{it} * Econ_{it} + \beta_9 TenDiv_{it} * Econ_{it} + \beta_{10} EduDiv_{it} * Env_{it} + \beta_{11} QuaDiv_{it} * Env_{it} + \beta_{12} TenDiv_{it} * Env_{it} + \beta_{13} EduDiv_{it} * Soc_{it} + \beta_{14} QuaDiv_{it} * Soc_{it} + \beta_3 TenDiv_{it} * Soc_{it} + \mu_{it} \dots\dots (3)$$

Where;

- EduDiv represents Educational background diversity
- QuaDiv represents Qualification diversity
- TenDiv represents Tenure diversity
- *BSIZ* denotes Bank size
- BAGE represents Bank age
- LEV represents Leverage
- LIQ denotes Liquidity
- GT represents Growth

- EduDiv * Econ represents the interacting term for Educational diversity and Economic dimension of SR
- QuaDiv* Econ represents the interacting term for Qualification diversity and Economic dimension of SR
- TenDiv * Econ represents the interacting term for Tenure diversity and Economic dimension of SR.
- EduDiv * Envt represents the interacting term for Educational diversity and Environmental dimension of SR.
- QuaDiv * Envt represents the interacting term for Qualification diversity and Environmental dimension of SR.
- TenDiv * Envt represents the interacting term for Tenure diversity and Environmental dimension of SR.
- EduDiv * Soc represents the interacting term for Educational diversity and Social dimension of SR.
- QuaDiv * Soc represents the interacting term for Qualification diversity and Social dimension of SR.
- TenDiv * Soc represents the interacting term for Tenure diversity and Social dimension of SR.
- β represents the coefficients
- μ depicts the error term

Data Processing and Analysis

The study employed panel data analysis, which is a mix of both time series and cross-sectional. The panel data analysis examined the effect of

board diversity on bank performance and the impact of sustainability reporting on firm performance. Since the study's made use of panel data, using panel estimates provides more reliable and convincing results as compared to standard time and cross-sectional estimates. For instance, Alvarez and Arellano (2003) observed cross-sectional series concentrates and observe a sample within a specified or defined time. Contra wise, the time series focuses on the variables and their fluctuations over time. Moreover, panel data analysis is considered suitable for this study as it has the ability to account for omitted indicators, bank-specific features, and handle long-run and short-run consequences, solving cross-sectional and time-series estimations (Surroca, Prior, & Tribo Gine).

Furthermore, panel data analysis reduces and removes the weakness and errors associated with time series and cross-sections. More so, it is easier to track individual variable's history with panel analysis which is more revealing than primary aggregate time series. with panel data, the researcher has more datapoints, which improves the degree of freedom and reduces collinearity amongst independent variables (Hsiao, Steve, Ching, & Ki Wan, 2012). Consequentially, panels are more informative than cross-sectionals, reflect variable dynamics and Granger causality and efficiently improves econometric estimates.

To test the moderating effect of SR, the dynamic General Method of Moment (GMM) estimator was employed with the help of Stata software. Blundell and Bond (1998) provided insightful reasons for the introduction of this particular estimator used in the study. For instance, Ordinary Least Square (OLS) is deficient with panel data structure (Aslam et al., 2019).

Subsequently, GMM is suitable for this study as it controls for endogeneity of lagged dependent variable, omissions, unobserved panel heterogeneity, autocorrelation problems (differences among the panels like widely dissimilar elements, more degrees of freedom and variability in data) and control of measurement error (Mollah, Hassan, Al Farooque, & Mobarek 2017; Nomran, Haron, & Hassan, 2018). Thus, GMM makes the estimates robust and reliable. In addition, Arellano and Bond model (dynamic) model was used in analyzing the data.

Furthermore, the choice of the GMM estimator is premised on the fact that it mitigates the influence of external factors on the research, regulates endogeneity as it includes the lagged value of regressors, and addresses heteroscedasticity (Nomran et al., 2018). Another feature of GMM which makes it appropriate for this study is that, the Hansen test and first and second-order serial correlation allows for the instrument's validity to be tested. For instance, the null hypothesis for the Hansen test confirms that the instrument is valid, with no correlation between indicators, and that the error terms for all models are unique. Additionally, a significant p-value for AR (2) in the models signifies that the error terms are serially unrelated. Also, by using instruments obtained from orthogonality conditions from the lagged dependent variables, GMM estimator promotes data consistency (fixed and random effect).

Measurement of Variables

Table 1: Description of Variables, Measurement, Source of Data and Empirical Justification

Variable	Measurement	Data Source	Empirical Justification
Moderator Sustainability Disclosures (SR)	Ratio of the number of disclosures by the firm to the total number of disclosures in the framework	Annual reports	Arthur, Wu, Yago and Zhang (2017); Masud, Seong and Jong (2017); Laskar and Maji (2017); and Kumar and Prakesh (2019).
Dependent Return on Assets (ROA)	Profit before tax divided by average total assets.	PWC Annual Banking Sector Survey, 2010 - 2019	Zyadat (2016); Jan et. al. (2019); and Buallay (2019)
Return on Equity (ROE)	Profit after tax divided by shareholders equity	PWC Annual Banking Sector Survey, 2010 - 2019	Zyadat (2016); Jan et.al. (2019); and Buallay (2019)
Independent Board Diversity (EduDiv, QuaDiv, TenDiv)	Blau Index $(1 - \sum Pi^2)$	Banks annual report	Harjoto, Laksmana and Lee (2014)
Controls Bank Size (BSIZE)	Natural log of the total asset	Banks annual report	World Bank (2019).
Bank Age (BAGE)	Natural log of bank's years from inception	Banks annual report	Abdel et al. (2020).
Leverage (LEV)	The share of total debt on equity	Banks annual report	Teshome, Debela, and Sultan (2017).
Liquidity (LIQ)	The share of current assets on current liabilities	Banks annual report	Teshome et al. (2017).
Growth (GT)	Annual growth rate of total assets	Banks annual report	Fitzsimmons, J., Steffens and Douglas, (2005)

Ethical Issues

Ethical issues were given relevance in this study. For instance, the researcher based on honesty and diligence retrieved data from annual reports of banks through thorough scrutiny. Also, empirical works of other researchers which were used in the study were duly recognized and made references to owners. Again, no private information on the banks was obtained except the information the banks published for public consumption.

Chapter Summary

Issues discussed in this chapter relates to an examination on the study area, population, sampling procedures and sample size, data collection instruments, data analytical tools as well as ethical considerations. The study adopted an explanatory research design and a quantitative research approach to enable the testing of hypotheses. Also, out of the 23 commercial banks, 17 banks were considered qualified for the purpose of this study premised by availability of data. Data was obtained through content analyses from annual reports of the various banks. Likewise, the GMM estimator was considered useful for the study. Subsequent chapter presents the results and discussion.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This section presents the results from the analysis of the study. It first gave an exposition by describing the variables employed in the study which entails board diversity, sustainability reporting and bank financial performance. The chapter also presents the correlation matrix for the variables employed for the analysis. Also, the chapter analyses and discusses the results of the study's objectives. The chapter covers diagnostics analysis on the effect of board diversity on firm performance, the impact of sustainability reporting on firm performance and the diagnostics on the moderating effect of sustainability reporting on the link between board diversity and firm performance. Each finding is presented and discussed concurrently.

Descriptive Statistics

This section presents descriptive statistics on a sample of 15 commercial banks out of 23 existing commercial banks. The choice of the 15 banks was premise on data availability. In Appendix A, a list of the sampled commercial banks in Ghana is depicted there. The section highlights the descriptive statistics of the study such as the mean, which measures average scores, the standard deviation, which represents the extent of variability, the minimum and maximum values for each variable.

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Code	150	11.4	7.587	1	26
years	150	2014.5	2.882	2010	2019
LEVERAGE	141	.835	.092	.088	.991
ROA	141	.04	.027	-.047	.094
ETR	140	25	18.285	-13.909	158.422
BA	145	1.426	.385	.301	2.398
Growth	137	.404	.705	-.352	5.062
ROE	141	.208	.472	-4.399	2.217
NED	124	.67	.103	.444	.857
BoardSize	137	9.394	2.088	4	15
LBS	137	2.214	.237	1.386	2.708
ListD	144	.396	.491	0	1
LIQ	140	.373	.123	0	.694
GT	137	.292	.262	-.171	1.847
Economic	150	58.253	13.691	39	85
Environmental	150	23.207	10.563	9	61
Social	150	36.5	12.971	19	65
EduDiv	150	.567	.198	.14	.99
QuaDiv	150	.606	.197	.1	.91
TenureDiv	150	.61	.192	.1	.9
banks	150	8.687	4.686	1	16

Source: Banks Annual Report (2010 -2019)

Reference to Table 2 is the descriptive statistics of the sampled variables for the study: independent variables (educational background, qualification and tenure diversities), moderating variables (Economic, Environment and Social) and dependent variables (ROA). The descriptive statistics output displays the number of observations, the mean, standard deviation, minimum and maximum values.

“EduDiv” represents educational diversity which has four categories and is measured by Blau’s index. “TDiv” represents tenure diversity measured by Blau’s heterogeneity index with four categories. “QuaDiv” represents qualification diversity measured by Blau’s heterogeneity index which has four categories.

“Economic” represents the economic dimension of SR which is a percentage measure of the ratio of the number of disclosures made by a firm to the total number of disclosures in the GRI framework. The “Environment” refers to the environment dimension of sustainability reporting measured as a percentage ratio of the number of disclosures made by the firm to the total number of disclosures provided by the GRI framework. “Social” represents the social dimension of sustainability reporting also measured as a percentage ratio of the number of disclosures made by the firm to the total number of disclosures provided by the GRI framework. ROA (refers to Returns on Assets) is computed as profit before tax against average total assets for the period.

The descriptive statistics on board diversity displayed the results from educational, qualification and tenure heterogeneity indices. For example, educational background diversity averagely scored 0.567 within a minimum heterogeneity range of 0.140 and a maximum heterogeneity range of 0.990, with 0.197 degree of variability. Furthermore, qualification diversity had an average index of 0.610 with 0.197 degree of variability within a minimum of 0.910 and a maximum of 0.910. Whereas, tenure diversity scored on an average of 0.610 with a 0.192 degree of variability ranging from a minimum index of 0.100 and a maximum index of 0.900. It can be observed from the board diversity descriptive statistics that commercial banks boards are highly diversified in terms of levels of qualification. Thus, there is greater representation of directors with varying levels of qualification on the boards of various commercial banks.

Also, it is evidenced that aside qualification diversity on boards, most boards are having a mix of both short lived and long-lived directors. In the past, banks had no regulations in place with regards to how many years a person should be on the board. As a result, they had no pressure to regularly replace existing board members because they consider it costly and time consuming (PWC Ghana Banking Survey, 2019). However, global good corporate governance practices such as the Sarbanes Oxley (SOX, 2002) requires that a member stays on the board not exceeding 5 years. This explains the variations in relation to the number of years one stays on the board. Meanwhile, educational background diversity scored the lowest which implies that most board members of commercial banks are either of a business or a legal discipline.

The descriptive statistics on sustainability reporting practices of the banks emerged from the economic, environmental and social dimensions of disclosures. Economic disclosures gave an average of 58.253 from a maximum of 39 and minimum of 85 with a degree of variation from the mean of 13.691 Environmental dimension of disclosures scored lowest with a mean score of 23.207 within a minimum of 9 and a maximum of 61 at 10.563 variation from the central tendency. Finally, social disclosures scored an average of 36.5 and a standard deviation of 12.971 from a minimum of 19 to a maximum of 65. With reference to the descriptive statistics, it is evidenced that commercial banks in Ghana disclose more on the Economic dimension of sustainability reporting in line with the GRI framework, followed by social dimension, and with the environmental dimension as the least reported on. Suffice it to say that, Ghanaian commercial banks report more information on

the economic and social activities other than the environmental activities in their operations.

The findings of the present study are in tandem with Zyadat (2016). In studying the disclosure level of banks in Jordan, the author found out that bank's disclosures on the Economic, environmental and social dimensions scored 81.55, 34.61 and 73.72 respectively which indicated a higher disclosure on the economic dimensions, followed by social and environmental. Furthermore, the results affirm the findings of Silva (2019) who reported the social and economic dimensions of disclosures have a greater mean than environmental disclosures in Sri Lanka. Jan et al. (2020) findings also confirm the economic and social disclosures in Jordan scored relatively higher means than environmental disclosures.

On the contrary, Quick (2008) found results that are averse to the current study and other studies. Using GRI as a benchmark among listed firms in Germany, the study recorded an average score of 40% for both social and environmental disclosures which was far greater than economic disclosures of 13.83%. This reveals that German firms disclosed more on the social and environmental dimensions than economic dimension. This is however satisfactory in that regulatory requirements regarding firms impact on the society and the environment are more enforceable in developed countries like Germany which is sensitive to climate, environmental and social issues. This explains the variations in findings.

Arthur et al. (2017) conducted an indebt study on Ghanaian mining firm's sustainability disclosures. Their findings revealed that, although firms are increasingly reporting on sustainability performance in alignment with

GRI standards, disclosures on environmental dimensions exceeds that of the social dimensions even though economic disclosures scored the highest. However, it is worth knowing that the sector under study, activities directly have an impact on the environment. This is attributable to the highest scores in environmental disclosures as compared to the non-mining sectors (banking sector). Return on Assets averaged 0.40 with a minimum of -0.047 and a maximum of 0.094.

The descriptive statistics in relation to this study and in comparison, with previous related literature highlights three issues of concern. First is that, boards of commercial banks in Ghana are highly diversified by directors with varying levels of qualifications. However, they scored low on educational background diversity. Second, firms in the banking sector sustainability reports are heavily concentrated on economic and social disclosures other than environmental disclosures whereas firms found within the mining and lumbering industry whose activities have a direct effect on the environment score highly in economic and environmental dimensions of disclosures.

Thirdly, developed nations sustainability disclosures are skewed towards economic and environmental dimensions of disclosures unlike nations within emerging economies who focus more on economic and social disclosures.

Correlation Analysis

The study conducted a correlation test in order to ensure the regression model results are unbiased. This is necessary because the variables should not correlate with each other. Hence, the correlation test highlights any sign of multicollinearity amongst variables of the study.

Table 3: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) ROA	1.000											
(2) EduDiv	-0.152	1.000										
(3) QuaDiv	-0.085	0.619	1.000									
(4) TenureDiv	0.115	0.505	0.685	1.000								
(5) Economic	0.408	-0.234	-0.281	-0.123	1.000							
(6) Environmental	0.355	-0.133	-0.149	-0.010	0.906	1.000						
(7) Social	0.423	-0.216	-0.297	-0.160	0.922	0.874	1.000					
(8) LBS	-0.105	-0.296	-0.511	-0.492	0.218	0.173	0.274	1.000				
(9) BA	0.079	-0.061	-0.159	-0.117	0.112	0.280	0.212	0.276	1.000			
(10) LIQ	-0.085	-0.065	-0.096	0.043	-0.295	-0.291	-0.277	0.078	-0.016	1.000		
(11) LEVERAGE	-0.158	-0.227	-0.204	-0.107	-0.006	0.032	0.030	0.117	0.102	0.200	1.000	
(12) GT	0.157	-0.078	0.021	0.084	0.017	-0.068	0.017	-0.240	-0.307	-0.066	-0.124	1.000

Source: Banks Annual Report (2010 -2019)

Table 3 displays the correlation matrix for the study. From the table, there is a shred of evidence that there is less multicollinearity amongst the variables. Thus, following the Pearson's threshold of correlation, it is obvious that most of the variables have values ranging from 0.1 to 0.7 which is suitable for the models. That notwithstanding, there seem to be high correlation amongst the sustainability indicators. Ordinarily, some of the indicators ought to have been withdrawn, however, the GRI G4 standard of framework for measuring sustainability reporting requires that all the three dimensions be considered. Moreover, the effect of this correlation amongst the three indicators is less significant to affect the overall results of the study. Hence, all the indicators are maintained.

Board Diversity Effect on Firm Performance of Commercial Banks in Ghana

This section presents and discusses results aided by empirical findings in relation to the first objective. The first objective aimed at assessing the impact of board diversity of Ghanaian commercial banks. Specifically, objective 1 examined the effect of educational, qualification and tenure diversity on banks financial performance. Final results were obtained through GMM panel regression analysis.

Table 4: Regression Results of Board Diversity on Firm Performance

VARIABLES	(1) lnroa	(2) lnroa	(3) Lnroa
L.Inroa	0.186** (0.0703)	0.291*** (0.0751)	0.152** (0.0567)
EduDiv	0.148 (1.312)		
QuaDiv		-3.341*** (1.034)	
TenDiv			0.645 (0.545)
LEV	-1.156*** (0.284)	0.296 (1.633)	-1.094** (0.388)
BSIZ	0.170** (0.0652)	0.0922 (0.0885)	0.229*** (0.0752)
BAGE	-0.282 (0.352)	-0.392 (0.410)	-0.224 (0.495)
GT	0.362 (0.298)	0.334 (0.258)	0.398 (0.248)
lnbs	0.685 (1.307)	0.282 (1.371)	0.670 (0.897)
LIQ	3.131*** (0.875)	2.044* (0.977)	3.469*** (0.811)
Constant	-6.554*** (2.065)	-2.826 (2.656)	-8.058*** (2.233)
Observations	107	107	107
Number of code	15	15	15

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

Note: L.Inroa (1) is the first lag of the log of bank performance, EduDiv is Educational background diversity, QuaDiv represents Qualification diversity, TenDiv reflects Tenure diversity, GT represents growth in total assets, BSIZ is bank size, lnbs is natural log of bank size, BAGE is bank age, LIQ is liquidity risk of the bank, LEV is leverage risk. All values in brackets are the standard errors of the coefficient values. All numbers outside of brackets are coefficient values; ** signifies significance at 1%, * represents significance at 5%, and *** represents significance at 10%.

Source: Banks Annual Report (2010-2019)

Outcome from the analysis as shown in Table 4 shows that, board educational background diversity has an insignificant positive impact on firm performance proxied by ROA ($\beta = 0.148$, $P = 0.912$). It further indicated a coefficient of 0.148, which means that a percentage change in educational background diversity will result in a 14.8 percentage increase in bank financial performance, however, this relationship is insignificant.

Fast forward, the results of the study has demonstrated that educational background diversity has no effect on bank performance. However, the results are not surprising. Directors from different educational disciplines view and analyze things from different perspectives. As such their believe systems, values and ideologies also differ. For instance, Hamilton, Nickerson and Owan (2012) argue that the effect of diversity will be significantly felt when board members embrace mutual learning and collaborative decisioning.

Notably, Lazear (1999) submits that board members from varying disciplines can positively influence performance on the grounds that they are able to communicate and understand one another from different angles, to effectively reach consensus on a discussion. In the absence of these, a highly educational diversified board is limited in enhancing performance irrespective of the skills and experiences of directors. This is because, inability to communicate and understand one another hinders effective decision making. Thus, strategic decisions to promote the performance of banks are neglected due to poor decisioning.

The results of the current study are in tandem with Magnanelli and Pirolo (2021). Using a sample size of 187 European listed firms, the authors investigated the role of educational board diversity on firm performance. Their findings highlight educational background diversity has no influence on firm performance. Similar studies confirm there is no linkage between educational diversity and firm performance (Bruton, Ahlstrom & Li, 2010; Rose, 2007).

However, the current study failed to agree with prior empirical literature on the subject. For example, scholarly works argue educational background diversity on boards creates a pool of resources, skills, experiences

which are beneficial in creating value for the firm (Nwargu & Iormbagah, 2021; Mishra & Jhunjhunwala, 2013).

Furthermore, control variables such as bank size and liquidity were found to have a significant positive effect on bank performance, whilst growth in total assets exert a positive impact although insignificant. Meanwhile, results in Table 4 depicts leverage risk and bank age have a significant adverse effect on bank performance, albeit, the effect of bank age is unnoticeable.

In relation to the second indicator of board diversity of the study, qualification diversity, the study records a significant negative effect on firm performance ($\beta = -3.341$, $P = 0.006$). A qualification diversified board means that the composition of the board is of different levels of qualification such as a diploma, first degree, Master's degree, PhD amongst others. Of a fact, qualification diversity has the potential to enhance performance as the board is able to uncover all abstractions and minimize the risk of ignorance. From Table 4, the results highlight that a 1% significance level, qualification diversity adversely influence banks performance. The study recorded a coefficient of -3.341, which implies that a percentage change in the levels of qualification present on the board will reduce financial performance of banks 334.1%.

Qualification diversity equips board members to identify unfamiliar dealings withing the business environment and as such, satisfy the needs of customers to create value. In the light of the current study's findings, however, improved financial performance may be short lived if members with high qualifications begin to dominate on the board, creating room for superiority

(Phan, 2016). This is because, such behaviors impede collaborative efforts and decision making which is a threat to enhance financial performance.

In support of current findings is the study by Gantebein and Volonte (2011). They examined how educational level diversity and business experience affects the performance of using 1,574 directors from 224 firms in Switzerland. The authors found that graduates from minor Swiss university are negatively associated with performance. In a similar study, Bathula (2008) investigated the relationship between key board characteristics and performance of firms listed on the New Zealand Stock Exchange. The findings confirms that directors with PhD qualification retards firm performance.

Conversely, prior studies recorded a positive association between qualification diversity and firm performance (Khan & Subhan, 2019; Hoang et al., 2018; Katmon et al., 2017; Hsu et al., 2013; Nielson, 2010). A highlight on the control variables in table 6 show that leverage, bank size, bank age and growth in total assets had no effect of bank performance. However, the score on liquidity evidenced liquid banks improves performance.

The third measure of board diversity pertaining to this study is tenure diversity. In reference to Table 4, the regression analysis show that tenure diversity does not affect bank performance ($\beta = 0.645$, $P = 0.256$). Thus, a percentage change in tenure diversity will cause a 64.5% change in bank performance. However, this effect is insignificant. Present findings confirm that disparity in number of years on board could be detrimental to bank performance. For instance, traits of superiority, familiarity, insubordination, divisions, conflicts, discrimination, communication failure amongst others are likely attributes of boards with a mix of short lived and long-lived directors

(Yi, Ndofor, He & Wei, 2018). The combine effect of these attitudes may not be significant enough to deteriorate performance but it can stagnate performance. Thus, neither a positive or a negative effect is realized.

Consistent with the study's results are the findings of Simons, Pelled and Smith (1999), Webber and Donahue (2001). These scholars observed that tenure diversity does not foster team performance, instead, it creates intra-group conflicts within the board which is harmful to firm performance. Nonetheless, prior studies reported tenure diversity promotes effect debates, innovation and creativity which translates to enhance firm performance (Magnanelli and Pirolo., 2021, Li & Wahid, 2018; Barling, Clegg & Cooper, 2009).

Results on other influential variables which were controlled for the purposes of this study show that, bank size and liquidity significantly enhance banks financial performance. On the contrary, the study found that excessive debt reduces bank performance. Meanwhile, bank age and growth in total assets were found to have no significant effect on banks performance.

Largely, the study fails to agree with the resource-based view theory which proposed that diversity improves the resources, skills and knowledge base of banks to increase performance. Further, the study rejects hypothesis 1 in that board diversity (EduDiv, QuaDiv and TenDiv) has no significant impact on bank performance in Ghana.

Effect of Sustainability Reporting on Financial Performance of Commercial Banks in Ghana

Table 5 presents the analysis for the second objective which evaluated the impact of sustainability reporting on financial performance of commercial

banks in Ghana. The focus of this objective is to examine the impact of the components of sustainability reports on performance and this was achieved through GMM panel regression analysis. Sustainability data was computed using GRI reporting framework for banks based on information obtained from annual reports, through content analysis.

Table 5: Regression Results of Sustainability Reporting on Firm Performance

VARIABLES	(1) lnroa	(2) lnroa	(3) lnroa
L.lnroa	0.450** (0.192)	0.369** (0.164)	0.448* (0.223)
LnEco	0.833** (0.381)		
LnEnvt		0.511** (0.222)	
LnSoc			0.789* (0.420)
LEV	-1.169*** (0.285)	-1.464*** (0.247)	-1.450*** (0.356)
BSIZ	-0.0285 (0.0597)	-0.0111 (0.111)	-0.0823 (0.0890)
BAGE	0.167 (0.272)	0.0922 (0.112)	-0.117 (0.269)
GT	0.430 (0.657)	0.505 (0.359)	-0.0396 (0.543)
Lnbs	0.156 (1.706)	0.475 (1.297)	-0.691 (1.472)
LIQ	2.380 (1.729)	3.969*** (1.304)	1.365 (1.450)
Constant	-5.323 (6.291)	-5.027 (3.830)	-0.935 (5.227)
Observations	107	107	107
Number of code	15	15	15

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

Note: L.lnroa (1) is the first lag of the log of bank performance, LnEco is logged of economic dimension of SR, LnEnvt represents environmental dimension of SR, LnSoc reflects Social dimension of SR, GT represents growth in total assets, BSIZ is bank size, Lnbs is natural log of bank size, BAGE is bank age, LIQ is liquidity risk of the bank, LEV is leverage risk. All values in brackets are the standard errors of the coefficient values. All numbers outside of brackets are coefficient values; ** signifies significance at 1%, * represents significance at 5%, and *** represents significance at 10%.

Source: Banks Annual Report (2010-2019)

Results after the analysis revealed at a 5% significant level, the economic dimension of sustainability reporting has a significant positive impact on the financial performance of commercial banks in Ghana performance ($\beta = 0.833$, $P = 0.046$). Furthermore, the results imply that a 100-percentage increase in sustainability reporting will lead to 0.833 percentage improvement in financial performance. Similarly, Table 5 highlights that at a 5% level of significance, environmental wing of sustainability reporting positively increase banks performance. For instance, the results display a $\beta = 0.511$ and a P-Value of 0.038. The outcome of the results implies that a percentage enhancement in environmental performance and disclosures leads to a 0.511 % rise in banks financial performance. Still in reference to Table 5, at a 1% significance level, the social dimension of sustainability reporting is seen to have a positive effect on bank performance. For example, the results suggest that a percentage change in the social performance and disclosures of banks will increase performance by 0.789%.

The breakdown from table 5 indicates that all the dimensions of sustainability reporting have a significant positive effect on bank financial performance. However, the economic dimension makes the highest contribution to this effect. The findings therefore support the stakeholder theory. The stakeholder theory is founded on the premise that corporations have varied groups of people with varied interest which can be satisfied through disclosures.

Seemingly, proponents of the stakeholder theory believe that when these groups of people are satisfied, the firm will be given the mandate to operate by providing resources and patronizing the firm's products and

services which in turn create value for the firm. Hence, this study based on stakeholder theory fail to reject the hypotheses that sustainability disclosures enhance firm financial performance, significantly.

Generally, Sy (2016) evaluated the impact of sustainability reporting on 5 Cebu's multinational export processing companies through survey data. The results of the study reported that sustainability practices have a significant influence on the aggregate performance of firms. Additionally, the author suggested that the traditional objective of firms to maximize profit should be integrated with improvement in sustainability reports so as to sustain the economic performance of the firm in the long run.

Furthermore, Ameer and Othman (2012) also analyzed the impact of sustainability practices on the corporate financial performance of the top 100 global sustainable firms. The results documented a significant growth in sales, ROA, profit before tax and cash flows operations as proxies for financial performance. Additionally, their findings indicate the increase in financial performance as a result of sustainable practices has been sustained for longer periods.

Specifically, prior empirical studies have reported evidences that the economic dimension of sustainability reporting increase firm performance (Yadava & Sinha, 2016; Burhan & Rahmanti, 2012; Orazalin & Mahmood, 2009). Also, some scholarly works have found that the social disclosures enhance firm reputation and create value for the firm (Buallay, 2019; Esteban-Sanchez et al., 2017; Shen et al., 2016; Wu and Shen, 2013). On the contrary, Utz (2018) discovered that social performance is negatively related to firm performance. The author explained that firms who spent all their resources

into social performance practices to the neglect of all other performances, may record unfavorable financial outcomes.

Control variables employed for the study results show that, amongst the variables, only leverage has a significant adverse effect on firm performance in all the dimensions of sustainability disclosures whereas the other bank size, bank age, liquidity and growth in total assets were found to have no effect on performance.

Regression Analysis on the Moderation Effect of Sustainability Reporting on the Relationship Between Board Diversity and Financial Performance

This section presents analysis and empirical evidence on the third objective which examines the moderating effect of sustainability reporting on the relationship between board diversity and financial performance of commercial banks in Ghana.

Table 6: Moderating Effect of Sustainability Reporting on the Link between Board Diversity and Firm Performance

VARIABLES	(1) Lnroa	(2) lnroa	(3) lnroa
L.lnroa	0.661*** (0.204)	0.823*** (0.242)	0.708** (0.288)
EduDiv_SR	0.0264 (0.0218)		
QuaDiv_SR		0.0504 (0.0384)	
TenDiv_SR			0.00860 (0.0341)
LEV	-0.737* (0.358)	-0.852** (0.357)	-0.734** (0.342)
BSIZ	0.0543 (0.137)	0.00355 (0.163)	0.109 (0.221)
BAGE	0.583* (0.282)	0.610** (0.281)	0.487* (0.274)
GT	-0.238 (0.337)	-0.548 (0.377)	-0.367 (0.332)
lnbs	-3.054*** (0.930)	-3.383*** (0.989)	-2.781*** (0.858)

LIQ	0.663 (0.833)	1.121 (0.868)	0.923 (0.892)
Constant	3.692 (2.177)	5.641 (3.203)	3.320 (4.720)
Observations	107	107	107
Number of code	15	15	15

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

Note: $L.lnroa$ (1) is the first lag of the log of bank performance, $EduDiv_SR$ represents the interacting term for Educational diversity and SR, $QuaDiv_SR$ represents the interacting term for Qualification diversity and SR, $TenDiv_SR$ represents the interacting term for Tenure diversity and SR, GT represents growth in total assets, $BSIZ$ is bank size, $lnbs$ is natural log of bank size, $BAGE$ is bank age, LIQ is liquidity risk of the bank, LEV is leverage risk. All values in brackets are the standard errors of the coefficient values. All numbers outside of brackets are coefficient values; ** signifies significance at 1%, * represents significance at 5%, and *** represents significance at 10%.

Source: Banks Annual Report (2010-2019)

It is important to recall from the results presented in Table 4, board diversity is positively related to firm performance, although insignificant. On average, a unit change in board diversity points to no improvement in firm performance. Sustainability reporting, on the other hand, is positively related to firm performance as shown in Table 5; firm performance tends to improve with increase in sustainability reporting activities. Also, in reference to Table 6, the interaction variables ($EduDiv_SR$, $QuaDiv_SR$ and $TenDiv_SR$) produced positive co-efficient, albeit insignificant. For instance, the interaction predictor, board diversity and sustainability reporting, indicates that the effect of board diversity becomes unnoticed, with increasing activities of sustainability reporting.

Now, for any effect to bear any relevance, it must be statistically significant and have a reasonable effect size nevertheless, the effect of the moderation factor on firm performance is insignificant. Simply put, the study's result implies that sustainability reporting enhances the positive influence of board diversity on firm performance. However, this enhancement power isn't significant. As a result, the study fails to agree with supporting theory of this objective, the stakeholder theory. On the same note, the study rejects the

hypothesis which argues that sustainability reporting significantly moderates the relationship between board diversity and banks financial performance.

Among other things, market price which is closely tied to the stock prices of the firm can enhance firm performance (Talamati & Pangemanan, 2015; Ragab & Omran, 2006). This implies that banks can maximize the owner's wealth if the stock prices climb higher. Simply put, the higher the stock price, the better the firm's value. Hence, in order to enhance firm financial performance, the board can ultimately focus on factors that cause stock prices to increase to inversely improve financial performance. Therefore, the board of directors can influence a firm's financial performance without having to engage in sustainability reporting.

Besides, sustainability reporting is not mandatory in an emerging economy as Ghana especially for the banking sector. As a result, its awareness and usefulness are barely known especially in the banking industry (Garba & Abubakar, 2014). To this end, shareholders are unwilling to pump money into preparing quality reports which are likely not to generate any income. More so, directors on the other hand have the mandate to generate value for the business in order to secure their positions or even agitate for pay rise. Hence, both directors and shareholders are most likely to endorse income generating ventures while avoiding or seeking to minimize expenses on ventures that are less profitable, yet not mandatory. By and large, directors will focus on activities that generate value, signal firm profitability and attract customers and potential investors other than preparing sustainability reports which do not inform investors or customers decisions.

Further, prior research in the field documented there is no standardized framework of reporting sustainability (Naudé, 2008; Gray, 2006). Due to this, directors, based on their discretion, decide the framework favorable to use. As a result, some reports are very long, incomparable and non-disclosing of the firm earning potentials. This makes it difficult for customers and potential investors to read and distill the right information from the lot. Therefore, investment decisions are made based on other performance indicators. Hence, any expenses on sustainability reporting rather diminishes the firm performance.

Contrary to the findings of this objective is Jiang et al., (2020). They found that CSR positively moderates the relationship between board diversity and firm performance. Although this study is empirical evidence from an emerging economy, it only focused on gender diversity which is not a comprehensive measure of board diversity (Agbo, 2017). Also, sustainability reporting is synonymous to CSR in some instances; however, each has a different framework of measurement. Hence, this could also account for the variation in results as compared with prior studies.

Table 7: Diagnosis Test on Models

Model	AR(1)	AR(2)	OIR	H (ex)	Null H	Fisher	No of Obs.	Groups
EduDiv	-1.99**	0.07*	2.04	0.730	0.930	168.21***	107	15
QuaDiv	-2.15**	-1.09**	2.89	2.80	0.09	1681.69***	107	15
TenDiv	-1.91	0.17	3.71	3.69	0.01	382.26***	107	15
Econ	-1.92*	0.97**	8.57	7.59	0.98	7982.07***	107	15
Env't	-1.78*	0.50*	9.03	5.21	3.81	8848.56***	107	15
Social	-1.82*	1.23**	5.08	3.54	1.54	2125.12***	107	15
EduDiv_SR	-1.61**	1.03	7.11	3.25	3.86	61.54**	107	15
QuaDiv_SR	-1.84*	1.31	4.79	3.78	1.01	10291.6***	107	15
TenDiv_SR	-1.74*	1.26	6.55	6.04	0.56	9320.56***	107	15

Note: EduDiv is Educational background diversity, QuaDiv represents Qualification diversity, TenDiv reflects Tenure diversity, EduDiv_SR represents the interacting term for Educational diversity and SR, QuaDiv_SR represents the interacting term for Qualification diversity and SR, TenDiv_SR represents the interacting term for Tenure diversity and SR. All numbers outside of brackets are coefficient values; ** signifies significance at 1%, * represents significance at 5%, and *** represents significance at 10%.

Source: Banks Annual Report (2010-2019)

Several diagnosis tests were engaged in the research to ensure the results' reliability, efficiency, and correctness. First, the study screened for extreme values to ensure that the data is normal. Second, possible factors that influence performance were controlled to guarantee findings' dependability and correctness. Third, the two-step GMM technique was used in the analysis to mitigate potential autocorrelation, heteroscedasticity, and endogeneity issues in the panel data. The Hansen OIR and Arellano–Bond serial correlation tests (2) derived from the GMM estimations show that the models are resilient. More so, the signs of the variables are widely uniform across the estimated models, indicating that the results are robust, dependable, and can be generalized.

Table 8: Summary of Hypotheses Tests

Hypotheses	Significant /Insignificant	Decision
1	insignificant	Reject
2	Significant	Fail to reject
3	Insignificant	Reject

Source: Banks Annual Reports (2010-2019)

Table 8 summarizes the tested hypotheses for the study. The first hypothesis found board diversity has no significant effect on firm performance. The test results show otherwise, thus, a positive but insignificant result. At that, the study rejects the first hypothesis. The second hypothesis proposed sustainability reporting had a significant positive effect on the financial performance of commercial banks in Ghana. The test results affirm this proposition and as such, fail to reject Hypothesis 2.

Lastly, the study found contradictory results to hypothesis three which suggested sustainability has a significant positive moderating effect on the link

between board diversity and bank performance. Findings showed a positive but insignificant effect. Hence, hypothesis 3 is rejected.

Chapter Summary

First presented in this chapter was the descriptive statistics. This revealed that commercial banks based in Ghana disclosed more on economic dimension of sustainability reporting, followed by social and environmental dimensions. On the assessment of objective one, board diversity had an insignificant positive impact on firm financial performance. On the board diversity, it can be observed that commercial banks boards are highly diversified in terms of the levels of qualification. Thus, there is greater representation of directors with varying levels of qualification on the boards of various commercial banks.

Findings on the second objective presented a significant positive effect of sustainability reporting on financial performance of commercial banks in Ghana. The third objective recorded an insignificant positive moderating effect of sustainability reporting on the link between board diversity and financial performance of commercial banks in Ghana. The chapter climax with diagnosis test on the models and a summary of the study's results.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

In this chapter, which forms the concluding chapter of this thesis, summarizes, concludes and make recommendations for the entire study. It summarizes the theoretical context in which the study was established and the subsequent findings of the study based on the study objectives raised. It also makes conclusions based on the findings of the study. Based on the conclusions of this study, this chapter also presents feasible recommendations for future research and action by various stakeholders in the banking sector of Ghana. This format allows for a logical finality to be drawn on the current study.

Summary of the Study

Several corporate business failures which led to the emergence of competition in the business environment has stimulated stakeholder responsibilities for firms who seek to succeed in the medium or long term. As a result, management of various corporations have incorporated board diversity and sustainability reporting as strategic measures to fulfil the interest of varied stakeholders through disclosures on their activities. Scholars over the years have examined the impact of board diversity on firm performance, the impact of board diversity on sustainability reporting and the impact of sustainability reporting on firm performance.

The introductory chapter gave an exposition on board diversity, sustainability reporting and Global Reporting Initiative framework, firm performance, and an overview of the Ghana banking industry in recent times.

The second chapter presented scholarly reviewed literature on theories which are the bedrock of the study: resource-based view theory and stakeholder theory.

Further, the chapter discussed major concepts in the study followed by an empirical review on the three objectives: the impact of board diversity on firm performance, the effect of sustainability reporting on firm performance and the moderating effect of sustainability reporting on the link between board diversity and firm performance. Evidence from reviewed literature yielded inconclusive findings on the first three objectives which may be as a result of differences in regulatory requirements, business climates, methodologies and variables employed for the various studies.

The study employed a positivism research paradigm and a quantitative approach. A descriptive and an explanatory research design were also useful in explaining the various constructs and estimating the models, respectively. Further, the study through criteria-based sampling technique drew a sample of 15 commercial banks out of the 23 commercial banks in Ghana. Three models in all were developed based on empirical evidence. First model specified sought to evaluate the impact of board diversity on firm performance.

The second model specified focused on evaluating the effect of sustainability reporting on firm performance. The third model specification sought to assess the moderating effect of sustainability reporting on firm performance of commercial banks in Ghana respectively. Dynamic panel-data, two-step system GMM estimation technique was used to analyze the data.

Summary of Findings

The study generated useful findings that are relevant to literature and governance. The descriptive statistics indicated that boards of commercial banks in Ghana are highly diversified by qualification levels and tenure diversities. Results also highlighted commercial banks disclosed more on the economic dimension of sustainability reporting, followed by the social and environmental dimensions. The findings of the study with regards to the objectives showed interesting results.

The first objective which sought to evaluate the effect of board diversity and financial performance of banks revealed that, board diversity (educational background diversity, qualification diversity and tenure diversity) has an insignificant positive effect on financial performance (ROA) of Ghanaian commercial banks.

The second objective assessed the effect of sustainability reporting (economic, environment and social dimensions) on financial performance (ROA) of commercial banks in Ghana. Findings after the analysis showed that sustainability reporting significantly positively affect financial performance of commercial banks in Ghana.

The third objective, however, after evaluating the moderating effect of sustainability reporting on the link between board diversity and financial performance of commercial, found a no moderation effect on the association.

Conclusions

Based on the findings of this study, it is concluded with regards to objective one that board diversity has no significant influence on commercial banks in Ghana. The study draws the conclusion in relation to objective two

that banks which engage in sustainability reporting improve on their financial performance. Lastly, the study concludes that sustainability reporting does not enhance board diversity contributions towards improve bank performance.

Recommendations

With reference to objective one, the study recommends that commercial banks in Ghana should not only diversify their boards but also put in measures to mitigate possible conflicts, disagreement, discrimination and divisions that may arise. In line with prior studies, this current study supports the reasoning that diversified boards when managed well will lead to improved firm performances. This will go a long way not only to increase the financial standing of the banks but to improve the total ripple effect of these improvement in the socio-economic benefit of the communities and the nation as a whole.

On the second objective the study suggests that banks should device and implement strategies at the board level that will advance their disclosures to stakeholders. Disclosures have been shown to have a positive impact on firm financial performance. Firms with higher disclosures tend to be more opened, hence, attract investors. It is thus imperative that banks increase sustainable practices and disclosures in order to attract investors and customers for improved financial performance.

The study recommends based on the third objective that commercial banks should engage more on sustainability issues as a significant driver of firm performance only when the board is diversified and conflict control mechanisms are in place. This study has established that sustainability reporting is gaining momentum in Ghana albeit, comparatively slowly.

Aspects of sustainability reporting such as economic and social reporting which scored higher indices seem to be of interest to most banks. Therefore, diverse boards should manage disclosures on sustainability so as create value for the firm.

Suggestions for Further Research

Future studies can evaluate other forms of board diversity such as racial, ethnicity, age and nationality diversities, their effect on performance of commercial banks. These other forms of diversity were not captured in this study. It is possible that they may also be significantly related to board diversity.

Research on board diversity, sustainability reporting and firm performance can also be organized in other industries other than the banking sector using different measurements apart from Blau index for diversity, GRI framework, content analysis for sustainability reporting and Tobin's Q for financial performance.

The same study could be replicated but using a different methodology altogether other than GMM. Also, primary data could be considered by engaging management and preparers of annual reports other than relying on secondary data.

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APPENDIX

Banks Included in the Study

1. Absa Bank Ghana Limited
2. Access Bank (Ghana) Limited
3. Agricultural Development Bank (ADB)
4. Bank Of Africa (Ghana) Limited
5. CalBank Plc
6. Ecobank Ghana Limited
7. Fidelity Bank Ghana Limited
8. Ghana Commercial Bank
9. Guaranty Trust Bank (GTB) Ghana Limited
10. Republic Bank Ghana Limited
11. Prudential Bank Limited (PBL)
12. Societe Generale (SG) Ghana Limited
13. Standard Chartered Bank Limited (SCB)
14. Zenith Bank Limited
15. First National Bank

