

**AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND
ENTREPRENEURIAL DEVELOPMENT**

**BOARDROOM FEMALE PARTICIPATION, INTELLECTUAL CAPITAL
EFFICIENCY AND BUSINESS PERFORMANCE OF SELECTED LISTED
FIRMS IN GHANA**

HOLLACK OBENG

MASTER OF PHILOSOPHY (ACCOUNTING)

2023

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**A Thesis in the Department of Accounting Studies Education, submitted to the
School of Graduate Studies in partial fulfillment of the requirements for the
award of the Degree of Master of Philosophy (Accounting)
in the Akenten Appiah-Menka University of Skills Training and
Entrepreneurial Development**

NOVEMBER, 2023

DECLARATION

CANDIDATE'S DECLARATION

I hereby declare that this thesis is the result of my original work and that no part of it has been presented for another degree at this university or elsewhere.

Candidate's Name: **HOLLACK OBENG**

Signature:

Date:

SUPERVISORS' DECLARATION

I hereby declare that the preparation and presentation of this dissertation were supervised in accordance with guidelines on supervision of dissertation laid down by the Akenten Appiah-Menka University of skills training and Entrepreneurial Development.

Supervisor's Name: **MR. ERIC EFFAH SARKODIE**

Signature:

Date:

DEDICATION

This work is dedicated to my wife and my supervisor for their support and encouragement throughout my life.

ACKNOWLEDGEMENTS

I wish to express my sincerest gratitude to the Almighty God for the abundant grace he showered on me from the beginning of this course to the end of it culminating in the writing of this thesis. I would also like to express my deep gratitude to my supervisor, Mr. Eric Effah Sarkodie whose high level of expectation inspired me to get above myself to produce this material. I will never forget all the advice, the queries, and the criticisms he made about the work without which I would not stay on track. I feel highly indebted to you Sir. I also thank my family for their love, understanding, support, and encouragement throughout this thesis. I am also grateful to Mr Saeed Musah Mohammed for his support throughout this thesis. Finally, I am equally thankful to the staff and management of some selected private and public universities for their cooperation throughout this exercise. May the Almighty God richly bless you All. Amen!!!

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ABSTRACT

This paper aims to investigate the influence of female representation on corporate boards in effectively managing intellectual capital and its impact on business performance, particularly in the context of the Ghana Stock Exchange. The study utilizes the resource dependence theory to explore the interconnection between board gender diversity, intellectual capital, and business performance. A longitudinal panel analysis was carried out on a dataset comprising 434 observations, using data from thirty-one (31) publicly listed companies on the Ghana Stock Exchange (GSE) covering the period from 2009-2022. The research utilized the RE estimate technique along with the Hausman test to analyze the collected data. The study reveals that intellectual capital efficiency significantly and positively affects business performance. However, it does not find any significant influence of female representation on corporate boards on business performance. To enhance their performance and fully leverage the benefits of intellectual capital, companies should strive for greater representation of women in their boardrooms. Policymakers may consider implementing specific tax incentives or providing competitive advantages to companies with diverse boards when competing for government contracts. This research contributes to clarifying the complex relationship between board gender diversity and intellectual capital, shedding light on how these factors interact to influence business performance.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter contains the Background of the Study, Statement of the Problem, Research Objectives, Research Questions, significance of the study, scope and delimitation of the study and organization of the study.

1.1 Background of the Study

The push for greater female representation on corporate boards has exerted significant pressure on companies to increase the proportion of women in their boardrooms. Some countries, such as Spain and Norway, have taken proactive measures by implementing gender quotas to ensure a specific percentage of female participation on corporate boards. This trend has inspired other nations to explore similar laws (Adams, 2016). Numerous authors have extensively discussed the involvement of women in boardrooms. Despite facing challenges related to bias and ethics, gender diversity has been recognized as a factor that can enhance business success (Joshua, 2020). Having female directors on boards of directors provides an opportunity for strategic decision-making that can give a company a competitive edge (Nadeem, Farooq & Ahmed, 2019). In today's knowledge-based economy, intellectual capital is crucial for companies aiming for growth, sustainability, and competitive advantage (Nadeem *et al.*, 2019). Advocates for corporate governance are increasingly prioritizing the inclusion of more women on company boards, and as a result, companies are experiencing mounting pressure to achieve this goal. For instance, Norway implemented a mandatory gender quota rule in 2004, mandating that 40% of board seats in publicly traded corporations be allocated to women (De Jonge, 2022). This pioneering move has inspired several European countries,

including Belgium (2011), Finland (2005), and Spain (2007), to follow suit. Consequently, countries such as Australia (2009), New Zealand (2012), and Singapore (2012) have witnessed a rise in board gender diversity through similar approaches. The resource dependency theory, initially developed by Pfeffer and Salancik in 1978, posits that a company's performance is directly influenced by its board members' ability to acquire and effectively utilize resources. To achieve better resource utilization, diversity in the board's composition plays a vital role, as indicated by Abdulkarem, M., Al-Musali, M. and Ismail, K.N. in 2015. Specifically, having a higher representation of female board members opens up more avenues for strategic decision-making, which can significantly enhance a company's competitive advantage (Ahmad, Rashid & Gow, 2018).

Gender equality in the boardroom leads to optimizing a company's unique and imitable resources because men and women bring diverse talents, perspectives, and experiences to the decision-making process (Abdelzaher & Abdelzaher, 2019). This study aims to explore the linkages between gender diversity on corporate boards, the effectiveness of intellectual capital, and commercial performance, with a particular focus on emerging economies.

My argument proposes that boards with increased female representation are more likely to embrace ethical codes of conduct, closely monitor plan execution, establish robust standards for strategy review, and adhere to conflict-of-interest guidelines. Moreover, they prioritize communication and non-financial success factors, such as diversity, corporate social responsibility, and customer and employee satisfaction.

According to the agency theory, diversity can enhance management monitoring through greater boardroom independence and a more comprehensive decision-making process. Additionally, companies with a higher proportion of women directors tend to foster a more ethical work environment and enjoy a better reputation (Carter, D'Souza, Simkins & Simpson, 2010). However, existing studies have not adequately explored the interplay between female representation on corporate boards, intellectual capital efficiency, and performance (Usman, Farooq, Zhang, Makki & Khan, 2019). This study aims to bridge this gap by focusing on the impact of female boardroom participation on the effectiveness of intellectual capital and business performance of selected firms in Ghana.

1.2 Statement of the Problem

"Why Ghana? This question arises as successive administrations have promised to promote equitable representation of women on all institutional boards ever since Ghana's ratification of the Beijing Affirmative Action Plan 26 years ago (Appiah, Asamoah, & Osei, 2016). Despite these commitments and agreements, Appiah *et al.*, (2016) found that between 2010 and 2012, female representation on Ghanaian boards was only 12.44%, 20.86%, and 26.95%, respectively. Additionally, according to Hojlund Madsen (2019), as of January 1, 2017, women constituted only 13% of the Ghanaian parliament, and 17% served as municipal and district chief executives, compared to 23% and 24% internationally and in Africa, respectively. According to the Global Gender Gap Report (2020), Ghana ranked 107th out of 153 countries, highlighting the gender disparity in the country. Despite having a 52% female population and the historical significance of Yaa Asantewaa, the Ghanaian Warrior Queen-mother, as well as its esteemed position as a torchbearer of African democracy, Ghana still faces significant underrepresentation of women on boards of directors, falling well short of target 5.5 of the United Nations

Women Agenda (2030). This underrepresentation is further corroborated by the findings from Hofstede's Ghana culture survey, which reveal remarkably high scores of 80% and 65% for power distance and uncertainty avoidance components, respectively, indicating inherent biases that contribute to the gender disparity.

Furthermore, Ghana's position on the 2020 Corruption Perceptions Index, ranking 75th out of 180 countries according to the Transparency International (2020) Report, raises concerns about the effectiveness of various government initiatives to address the problem, including those of the Special Prosecutor's Office. Ghana has made pledges and efforts to address the gender gap, but the current state of female representation on boards and in leadership positions remains inadequate, signaling the need for more comprehensive and effective measures to achieve gender equality in the country.

The observations regarding culture and corruption imply that board processes, including female representation on boards, might effectively monitor the CEO and management. However, the findings from previous studies on gender diversity, intellectual capital, and corporate performance cannot be universally applied to the specific economic context of Ghana. Therefore, it is important to encourage research on the financial implications of board gender diversity, as Ghana offers a valuable empirical setting to explore the reasons behind the need to break the glass ceiling that has long hindered women from attaining leadership positions in Sub-Saharan Africa's political, economic, and public realms (Kamil and Appiah, 2022; Appiah *et al.*, 2016b).

Also, many researchers Mensah, & Onumah, (2023), Isola *et al.*, (2020) and Mastella *et al.*, (2021) has researched on both board gender and intellectual capital efficiency but none of them considered the interplay between female board participation and

intellectual capital. In addition to it, all research on intellectual capital was done outside Sub-Saharan Africa.

To address this research gap, this study investigates the influence of female representation on corporate boards in effectively managing intellectual capital and its impact on business performance using data from 31 listed companies on the Ghanaian Stock Exchange (GSE) spanning the years 2009-2022. Due to the scarcity of available research materials, it becomes crucial to investigate how the involvement of women on boards, particularly concerning intellectual capital efficiency, affects a company's performance in Ghana. This exploration may shed light on the potential benefits of gender equality within the context of intellectual capital in the Ghanaian economic environment.

1.3 Research Objectives

1.3.1 Purpose of the Study

The general objective of the study seeks to determine the effect of female representation in boardrooms and the efficiency of intellectual capital on the business performance of selected listed firms in Ghana.

1.3.2 Specific Objectives

The study will be guided by the following research objectives:

1. To evaluate the influence of female board representation on the business performance of selected firms in Ghana.
2. To examine the impact of intellectual capital efficiency on the business performance of selected firms in Ghana.

3. To investigate how the interaction between female board representation and intellectual capital efficiency affects the business performance of selected listed firms in Ghana.

1.4 Research Questions

1. What is the impact of female board representation on the business performance of selected firms in Ghana?
2. What is the impact of the intellectual capital efficiency on the business performance of selected firms in Ghana?
3. In what ways does the interplay between female board representation and intellectual capital efficiency contribute to the business performance of selected listed firms in Ghana?

1.5 Significance of the Study

The objective of this study is to assess the impact of female representation in boardrooms and the efficacy of intellectual capital on the business performance of publicly listed firms in Ghana. The rationale for selecting listed companies lies in their active involvement in the private sector, making them suitable proxies for broader industries. Additionally, these companies employ a substantial number of women across diverse roles, justifying their inclusion in the study. Ghana's corporate landscape provides an opportune setting to explore the consequences of female board involvement in optimizing the utilization of intellectual capital for enhancing a company's financial outcomes. The study addresses the unique considerations of industries dealing with intangible goods and services, emphasizing the need to scrutinize how effectively intellectual capital is deployed. Beyond merely investigating whether corporate boards

should continually revise their compositions to include more women, the study underscores the positive impact that increased female representation can have on business performance in Ghana. Notably, prior studies, such as Adusei, Akomea, and Poku, (2017), laid the groundwork for research on board and management diversity in Ghana, but this study surpasses them by examining performance rather than mere representation.

The research contributes to the existing body of knowledge on gender diversity by deepening the understanding of the variables influencing the connection between women in boardrooms, the efficiency of intellectual capital, and corporate performance. It offers valuable management insights, particularly from the perspective of developing nations, an aspect often overlooked in existing literature but crucial for advancing UN Sustainable Development Goal 5 related to gender diversity.

Moreover, the study aims to draw attention to gender bias and inequality in the business sector, emphasizing the imperative of granting women a proportional voice in boardroom decision-making. It further enriches the understanding of corporate governance, intellectual capital efficiency, and business performance on a global scale. The findings hold significance for diverse stakeholders, including academia, corporations, shareholders, and government policymakers.

1.6 Scope and Delimitation of the Study

While the discourse on the participation of women in boardrooms and its impact on intellectual capital efficiency is gaining momentum in policy discussions, there remains a scarcity of research on this subject, especially when comparing manufacturing and non-manufacturing firms in developing nations like Ghana. The focus on gender and

intellectual capital stems from this gap. The study's sample is derived from companies listed on the Ghana Stock Exchange, and it's important to note that the findings may not be universally applicable to all companies in Ghana. The research's concentration on listed companies in the country implies that the conclusions drawn may not be pertinent to other sectors of the Ghanaian economy. However, this specific focus opens the door for further exploration of intellectual capital and gender involvement across industries and countries by other researchers.

1.7 Organization of the Study

The study is organized into five interconnected chapters, each serving a distinct purpose in presenting the research. The initial chapter not only introduces the study but also illuminates the problem that spurred the investigation. It encompasses details about the study's objectives, questions, relevance, scope, and limitations. Moving to the second chapter, a comprehensive literature review unfolds. Beginning with a conceptual overview, this section provides a detailed explanation of key terms related to the research issue. Subsequently, a theoretical framework is established, outlining relevant theories supporting the ongoing investigation. The researcher synthesizes various arguments found in the existing literature, incorporating insights from both the conceptual and theoretical frameworks. Chapter three delineates the research methods employed, offering insight into the strategies and techniques for data collection and analysis. The researcher systematically outlines the study's plan, including the types of research tools to be utilized. The fourth chapter delves into the results and discussions of the findings. Before engaging in dialogue, the researcher rigorously tests hypotheses and analyzes data, following the procedures outlined in chapter three. Findings are not only discussed but also linked to prior studies, determining their confirmation or refutation. The final

chapter encapsulates the main findings of the study and their implications. It includes a concluding paragraph summarizing the research and presenting recommendations, along with identifying potential avenues for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews all the existing literature about the research topic. Also, the section contains the conceptual review in section 2.2, the theoretical review in section 2.3, followed by the empirical literature in section 2.4, and finally, the conceptual framework in section 2.5. When it comes to making decisions, boards of directors are the best in the business. When it comes to strategic choices, such as mergers and acquisitions, capital structure changes, and, perhaps most importantly, the hiring and firing of senior leaders, they can be trusted. Various features of the boards have been the subject of much inquiry. According to some, boards are composed of varied individuals who experience various forms of injustice and prejudice and exhibit arrogant behavior because of societal constraints and power relationships.

On the other hand, other studies view the board as a unified entity in which the directors are autonomous from the management. In recent years, academic pipelines have seen an increase in the amount of research on boardroom female participation. Diversification may be quantified on a variety of variables, including gender, age, ethnic origin, national origin, educational background, industry experience, and organizational participation. Boardroom participation by women and intellectual capital efficiency, which is the most contentious diversity issue in terms of boardroom female participation and intellectual capital efficiency, as well as women's participation in economic activities and society, is the focus of this study's research.

2.2 Conceptual Literature Review

2.2.1 Corporate Governance

Corporate governance in the Cadbury Committee's definition, the first body to address the subject, is a set of rules that govern how businesses are directed and controlled (Cadbury Committee, 1993). Corporate governance is concerned with overcoming the agency problem first articulated by Berle and Means (1932) and expanded upon by Jensen and Meckling (1976) and several other scholars. Corporate governance is focused on developing systems that assure that firms' financiers obtain a high-quality return on their investments (Shleifer & Vishny, 1996), hence lowering the agency divergence perspective. It consists of several processes that enable the management, board of directors, controlling shareholders, minority shareholders, and other stakeholders' interests to be aligned. These devices can be located either internally or externally in the business. The ownership structure, the board of directors, and creditor monitoring are the three mechanisms of internal governance. Regulation, the requirement for external capital, rivals, and takeover markets are all examples of external governance devices (Denis and McConnel l, 2002). The corporate governance literature highlights the critical role of sound corporate governance in creating long-term value for shareholders and other major stakeholders. It aims to incentivize the board of directors and management to pursue objectives that are in the best interests of the firm and its shareholders. Corporate governance is most effective when owners, management, and the board of directors work collaboratively. Even if the structure of the arrangement between various interest groups is partially influenced by the legal environment, the board of directors is a critical governance device (Campbell & Mínguez-Vera, 2008).

2.2.2 Corporate Governance Code

The corporate governance code provides a guide for several essential components of effective board governance. It is based on the core principles of good governance: accountability, transparency, and probity, as well as a long-term focus on the sustainable growth of an organization (Financial Reporting Council, 2012). Corporate governance codes are classified globally in corporate governance literature into three legislative achievements. The first is the Cadbury Committee report (1992) in the United Kingdom, which argues for the establishment of a code of best practices. The commendations cover a broad range of governance practices, including the form and makeup of the primary board of directors and board committees, and emphasize the critical role of non-executive directors. Additionally, it establishes the "comply or explain" approach, which requires organizations that violate the code to justify their non-compliance. Throughout its two decades of actual application, the code, now known as the UK Corporate Governance Code, has been amended and expanded upon. The code was last modified in October 2012. It requires businesses to establish a policy on boardroom gender diversity and to report on it on an annual basis (Financial Reporting Council, 2012). The second code to consider is the Accounting Industry Reform Act of 2002, also known as Sarbanes-Oxley. The Act was signed into law in 2002 in the aftermath of two significant corporate governance scandals in the United States: the collapse of Enron and WorldCom. Its mission is to safeguard investors by enhancing the precision and credibility of corporate disclosures. This reform addresses potential conflicts of interest and close collaboration between businesses and their auditors. It requires external auditors to be independent, emphasizing the CEOs' and CFOs' responsibilities by establishing severe penalties for not telling the truth about their firms' financial performance and condition in annual

reports. The Sarbanes-Oxley Act had a profound effect on corporate governance in the United States and throughout the world (Maier, 2005).

Finally, there is the 1996 OECD Principles for Corporate Governance. These principles are not legally obligatory, but they do reflect widely accepted corporate governance norms and best practices, and they are frequently used as a benchmark by legislators, firms, and other stakeholders (Maier, 2005). The five principles of corporate governance are

- Right of the shareholder: right to vote, right of control, right to residual income, right to residual asset, pre-emptive right, limited liability)
- Equal treatment of all shareholders (i.e. majority shareholders, cross –border shareholders)
- The important role of all stakeholders
- Disclosure and transparency (preparation and audit financial statement, audit committee, risk management committee, remuneration committee, disclosure of all board members their names and what they do, proper internal controls and disclosure of possible conflict of interest.
- Properly constituted board with well-defined responsibilities. It is involve lawyer, Accountant, Economist and Banker. It must be balanced in expertize.

According to the OECD, as governance rules and standards develop, investors are searching for variables that lead to the production of long-term value in addition to basic compliance. When reviewing a company's governance structure, a larger emphasis is being placed on social, environmental, and ethical risk management, as well as equity views and board-level responsibilities for stakeholders.

Considering the norms, there is emerging consensus in the corporate governance literature that board diversity may be favorably associated with business success. Increased boardroom diversity has been shown in the literature to result in a more successful board, and in recent years, gender diversity in the boardroom and the workforce has emerged as a critical corporate governance problem.

2.2.3 Relevance of Corporate Governance

Corporate governance is all about governing (running or managing) corporations (incorporate businesses). By their nature, large incorporate businesses are usually owned by one group of people (the owners or shareholders) whilst being run by other group of people (the management or the directors). This separation of ownership from management creates an issue of trust. The management has to trust to run the company in the interest of shareholders and other stakeholders. If information was available to all stakeholders in the same form at the same time, corporate governance would not be an issue at all. Armed with the same information as managers, shareholders and creditors would not worry about the former wasting their money on useless projects; suppliers would not worry about customers not fulfilling its part of a supply agreement; and customers would not worry about a supplier firm not delivering the goods/services agreed.

Looking at conventional firms, management will usually have an informational advantage over other stakeholders and hence the need for corporate governance. Again, many large corporations are multinational and transitional in nature. This means that these corporations' impact on citizens of several countries across the globe. If things go wrong, they will affect many countries notwithstanding some more severely than others.

It is therefore necessary to look at the various ways to improve corporate governance through board diversity. Paying particular attention to the role of women on corporate boards, numerous arguments have been advanced in the literature in favour of gender diversity in the governing bodies of businesses. All these arguments are underpinned, though not conclusively, by some empirical evidence that organization performance is higher when there are more women in senior positions in companies (Ana Isabel Cabrera Fernández Rocío Martínez-Jiménez María Jesús Hernández-Ortiz, (2016).

2.2.4 Roles of Participants in the Governance System

The various participants in the governance system are Shareholders, Board of Trustees/Board of Directors, Financial Institutions and other creditors, Employees, Auditors e.t.c. All these groups ensure responsibilities are properly identified, and that tasks are assigned in accordance with responsibilities and accountability.

I. Shareholders

Shareholders must have the right to influence the corporate body on certain fundamental issues, such as;

- A. The election of board members
- B. Changes in capital
- C. Amendments to the regulations of the company
- D. Approval of extraordinary transactions; and
- E. Other issues as specified in corporate law and the regulations of the corporate body

(Ofei-Darko, 2006, 'A Study of Corporate Governance in Corporate entities')

II. Board of Directors/Board of Trustees

Investors in equity have certain property rights over which they must have control and which should be protected. However, a corporation cannot be managed practically on a day-to-day basis by shareholder referendum. In the light of these realities, the responsibility for corporate governance strategy and operations is placed in the hands of the Board of Directors of the corporation and a management team that is selected, motivated and, when necessary, replaced by the board.

Some functions of the Board of Directors on implementation of good corporate governance include;

- A. Selecting, compensating, monitoring and when necessary, replacing key executive and overseeing succession planning.
- B. Ensuring the monitoring and management risk
- C. Ensuring compliance with relevant laws
- D. Overseeing the process of disclosure and communication

(Ofei-Darko, 2006, 'A Study of Corporate Governance in Corporate entities')

III. Financial Institutions and Other Creditors

“Financial Institutions (Banks) and other creditors have an extremely important role to play in fostering efficiency in state owned corporations or private firms. These creditors rely on debt repayment by their borrowers for their survival. Without dependable debt collection, there is no amount of supervision that can make these creditors operate efficiently. Due to this, creditors adopt strong incentives to ensure that debts are repaid. With corporations (borrowers) depending on the banks for survival, they are “compelled” to adopt good corporate governance which will enable them fulfill their debt obligations” (Gray, 2011).

IV. Employees

The role played by employees in the governance of corporations is very essential. Theirs is to ensure that they conform to whatever policies and procedures the organization has established so as to achieve corporate objectives since most cases of fraud are caused by employees. Thus, to contribute to good governance in every corporation, employees should do their possible best to do away with all acts of indiscipline such as pilferage and poor attitude towards their work (Ofei-Darko, 2006, 'A Study of Corporate Governance in Corporate entities').

V. Auditors

“Auditing is defined as obtaining and evaluating evidences regarding assertions about economic actions and events to ascertain the extent to which they correspond with the established criteria, and communicating the results to the interested users”. Thus it encompasses investigation process, attestation process, and the reporting process, pertaining to economic actions and events. Auditors examine the information prepared by others and provide assurance about the reliability of that representation to people who use them in making business decisions.

2.2.5 Ghana's Corporate Governance

Ghana's Securities and Exchange Commission first established the Code of Conduct in 2003. (SECG). And not just in the United Kingdom and South Africa, where the establishment of independent committees dedicated to producing a code of corporate governance best practices is prevalent, the Ghanaian Code has remained unchanged in recent years. This National Code provides corporate governance guidelines and principles that are specific to the nature of the different types of organizations that operate

in Ghana, including informal businesses and small and medium enterprises (SMEs), listed and private companies, and non- profit organizations.

2.3 Female Board Room Participation

Female board participation is the number of females on the board of any corporate entity. According to Moreno-Gomez *et al.*, (2017), boardroom female participation (BFP) compares the proportion of female board members to total board members. The increasing globalization of the economy has produced great cultural and social changes, one of which is diversity. Understood as coexistence within a given space, diversity is a level of variety within the geographic area that is produced by combining various cultural, economic, social and political aspects, which can be reflected on any scale, locally, nationally or globally (Ana Isabel Cabrera-Fernández Rocío Martínez-Jiménez María Jesús Hernández-Ortiz, (2016).

Diversity now also affects business, as business organizations are increasingly incorporating workers and managers from different groups according to age, race, sex and so on.

This drive for companies to implement the management of diversity comes from two sources:

- (1) A moral commitment that involves providing employees, regardless of their origin, equal opportunities and preventing discrimination in the workplace; and
- (2) A practical concern for the effect that such diversity can have on performance.

In fact, the variables associated with diversity can affect attitudes, behavior in the workplace and the ability to work with other employees.

The board of directors is a fundamental component of corporate governance, serving as the voice of shareholders in overseeing executive leadership. The directors' service on behalf of shareholders is critical due to the wide disbursement of stock in public corporations. Board independence, size, and composition (including diversity among its members) are essential aspects when examining whether or not the Board is effectively meeting its responsibilities (Hakovirta, Denuwara & Bharathi, 2020). In this regard, a key board function is to help shape and guide the company's long-term strategic positioning within its industry. It can be argued that the composition of the board of directors is core to its effectiveness as addressing strategic complexities requires diverse talent and perspectives. In this regard, progressive boards realize that they need to have an optimal composition that reflects the strategic priorities of the business and the diversity of its stakeholders (Macaulay et al., 2018). Boards are increasingly recognizing that those with members who represent a good mix of age, experience, and background tend to foster constructive debate and decision-making. For example, the 2012 Credit Suisse Research Institute report, *Gender Diversity and Corporate Performance*, found that during the six-year period ending in 2011, companies with female representation had better share price performance, higher return on equity, and better average growth than did those with no women on their boards (Gender diversity and corporate performance, 2012).

2.3.1 Contextual Framework of Boardroom Female Participation

Diversification, whether on the management team or in the boardroom, has been proven to provide value to an organization. Indeed, a Forbes report titled "Global Diversity and Inclusion: Fostering Innovation through a Diverse Workforce" highlighted diversity and inclusion as critical drivers of internal innovation and corporate success - something that no organization can prosper without (Koumouli, E., 2021). According to the International Labour Organization (2021), female involvement in labor markets globally increased

significantly throughout the 1970s and 1980s, however, this increase was not necessarily connected with increases in job quality. In the majority of European nations, women have a lower rate of labor force participation than males (Curdova, 2005).

2.3.2 The Commercial Rationale for Increased Female Representation on Corporate Boards of Directors and in Senior Management

For more than a decade, female board participation in the boardroom and senior executive roles has been the subject of public discussion, academic study, government concerns, and company strategy (Marinova, Plantenga, & Remery, 2016). Female boardroom participation proponents fall into two categories: ethical and economic. The former contends that excluding women from corporate boards based on their gender is decadent and that corporations should encourage gender diversity to produce a more equal outcome for society. On the other hand, proponents of economic reasoning argue that firms that do not select the most suitable individuals for the board of directors would suffer financial losses (Campbell & Miguez-Vera, 2008).

Additionally, economic considerations demonstrate that businesses that choose managers without regard for bias may attract and retain talent from a bigger pool of intellectual resources than those that fail to choose the most suitable individuals due to some form of bias (especially gender). According to Bjarnadóttir (2013), most of the academic literature on women in senior management and corporate governance is descriptive and lacks a well-defined theoretical framework. Terjesen, Sealy, & Singh, (2009) did a comprehensive examination of 180 published articles, working papers, and book chapters and identified twenty theory-based studies on women on boards of directors that apply a variety of frameworks at the individual, board, corporate, and environmental levels. At the organizational level, which is most important for this work, the prominent viewpoints

are resource dependency theory (Ahmad *et al.*, 2018), upper echelons theory (Al-Musali, & Ku Ismail, 2015), and social identity theory (Mori, 2014). However, this study employs resource-based theory since it emphasizes the necessity of generating and exploiting internal systems (intellectual capital) through board selection, which may be more robust when gender parity in representation is considered (Hsu *et al.*, 2018).

2.4 Intellectual Capital

"Intellectual capital is the collection of abilities, knowledge, and skills essential to execute work that provides economic value for the organization," as defined by (Hamadamin & Atan, 2019). Also, according to the corporate finance institute 2015, Intellectual capital refers to the value of a company's collective knowledge and resources that can provide it with some form of economic benefit. It's also used to identify a firm's assets. According to the IFRS, intangible assets are non-monetary assets without physical substance. Like all assets, intangible assets are expected to generate economic returns for the company in the future. As a long-term asset, this expectation extends for more than one year or one operating cycle. Intangible assets lack a physical substance like other assets such as inventory and equipment. They form the second largest category of long-term assets, behind Plant, Property and Equipment.

There are three components of intellectual capital efficiency namely, human capital efficiency, structural capital efficiency and capital employed efficiency. Human capital is the umbrella term for the skills, education, experience, and value of an organization's workforce. It's the know-how and expertise of individuals within a company, which can bring the company value. An organization's human capital also shows how effectively management uses resources to help employees achieve their potential. Structural capital is the organization, process, and innovation capital that supports an organization's human

and relational capital. It includes culture, processes, databases, intellectual property (IP), non-physical infrastructure, hierarchy, and more. It refers to the knowledge and value that belongs to an organization's structure and processes. Capital employed efficiency measure the business ability to generate funds from its operating activities to fund their operations.

Performance of an organization places a premium on human capital as one of its most important resources. Aman-Ullah, Mehmood, Amin & Abbas, (2022) found that there is a considerable and positive correlation between human capital capacity, human capital skills, and human capital knowledge and the overall success of a company. Creative leadership has a moderating influence on the relationship between human capital knowledge and organizational performance. Following a comprehensive classification of the notion, Aman-Ullah et al., (2022) concluded that employees' knowledge, creativity, competence, and experience are crucial elements of human capital.

A company can generate value and keep a competitive edge so long as it learns how to effectively manage its intellectual capital. The research conducted by Huang and Huang (2020) reveals that external capabilities (market knowledge, relationships), as well as internal capabilities (innovation), have a favorable impact on the organizational performance of businesses. According to the findings of their study, the authors indicated that companies that want to improve their performance should work on developing both their internal capabilities (such as research and development) and their external capabilities (e.g., through partnerships or joint ventures). Also, they find that the ability to come up with new ideas is the single most important factor in both intellectual capital and the performance of an organization. Organizational competitive advantage relies on

the effectiveness of its human capital, which is directly tied to the quality of its intellectual capital, (Huang & Huang (2020). Ur Rehman A, Aslam E, Iqbal A (2022) state that the operational and market performance of Islamic banks is significantly influenced by all three components of intellectual capital efficiency (ICE): structural capital efficiency (SCE), human capital efficiency (HCE), and relational capital efficiency.

2.5 Firms Performance

Successful firms represent a key ingredient for developing nations. Many economists consider them similar to an engine in determining their economic, social, and political development. To survive in a competitive business environment, every firm should operate in conditions of performance (Taouab, & Issor, 2019). Bartoli and Blatrix (2015) believed that the definition of performance should be achieved through items such as piloting, evaluation, efficiency, effectiveness, and quality.

2.5.1 Return on Equity (ROE)

Return on equity (ROE) is a measure of equity holder returns and the potential growth on their investment (Buallay et al. 2021; Esteban-Sanchez, Cuesta-Gonzalez & Paredes-Gazquez 2017). ROE is a key profitability ratio that investors use to measure the amount of a company's income that is returned as shareholders' equity. A bank's ROE can be changed in two ways: through a change in net income or by operating with more or less equity

Return on equity is measured as follows:

$$\text{ROE} = \frac{\text{Profit after tax}}{\text{Average Total Shareholders Fund}} \times 100$$

2.5.2 Return on Asset (ROA)

Return on Assets (ROA) is a relevant metric for banks and financial institutions, as it provides insights into how effectively they are utilizing their assets to generate profits.

Return on Assets (ROA) is a financial ratio that measures a company's profitability in relation to its total assets. It provides insight into how efficiently a company is utilizing its assets to generate profits. ROA serves as an efficiency measure for banks. A higher ROA indicates that a bank is effectively using its assets to generate profits, while a lower ROA may suggest inefficiency.

ROA is expressed as a percentage and is calculated using the following formula:

$$\text{ROA} = \text{Net Income} / \text{Average Total Assets} \times 100$$

Where:

- Net Income is the company's net profit (after deducting all expenses, taxes, and interest).
- Average Total Assets is the average value of the company's total assets over a specific period.

2.6 Theoretical Foundation

Over the past decade, the presence of female board members, women in senior executive positions, and related concerns of governments and businesses have been extensively discussed in public discourse, scholarly research, business strategies, and policy considerations (Marinova *et al.*, 2016). Two primary motivations for supporting female board involvement are ethical and financial. Ethical reasons emphasize the need for gender diversity to promote a more egalitarian society, opposing the exclusion of women from corporate boards solely based on gender (Scafarto, V., Ricci, F., Magnaghi, E., and Ferri, S. 2021). On the other hand, advocates of financial reasoning argue that companies

could face financial losses if they fail to select the best candidates for their boards of directors (Scafarto *et al.*, 2021).

According to Jaiswal (2020), the academic literature on women in senior management and corporate governance has been primarily descriptive and lacks a clear theoretical framework. However, Terjesen *et al.*, (2009) identified 20 theory-based studies on women on boards of directors by employing various frameworks at individual, board, corporate, and environmental levels, including the prominent viewpoints are the resource dependency theory (Ahmad *et al.*, 2018), upper echelons theory (Al-Musali *et al.*, 2015), the critical mass theory (Moreno-Gomez *et al.*, 2018), and social identity agency theory (MacKay, J. R., Hughes, K., Marzetti, H., Lent, N., and Rhind, S. M. 2019). For this study, the resource-based theory is used, as it emphasizes the importance of creating and utilizing internal systems (intellectual capital) through board selection, which becomes even more relevant when considering gender parity in representation (Zhang and Zhang, 2020).

2.6.1 The Resource Dependency Theory

Resource dependency theory, formulated by Pfeffer and Salancik in 1978, has become a crucial concept in organizational theory and strategic management. The resource dependency theory suggests that firms seek to attract and employ board members that best complement their existing resource profile and who can bring new forms of human and social capital to the company (Pfeffer & Salancik, 1978; Siciliano, 1996). The theory posits that businesses operate within an open system and rely on various elements in their environment to obtain the resources necessary for their survival. Theorists contend that board diversity helps sustain important resources like human capital of board members; advice and counsel; channels of communication and legitimacy (Hillman *et al.*, (2009);

Pfeffer & Salancik, 1978) .In the context of corporate governance, businesses seek connections with the best resources and, therefore, organize their boards of directors effectively. Directors offer organizations several benefits, including advice and guidance, information conduits, access to resources, and legitimacy (Hillman, Withers, & Collins, 2009).

Experts highlight the importance of specific resources that directors must acquire, particularly human and social capital. It is argued that diverse groups of individuals who can provide a wide range of resources suitable for the business culture are essential for effective leadership in today's complex and dynamic world (Stiles, 2001). Board diversity, including differences in age, gender, and place of origin, may improve a company's access to vital resources and enhance its understanding of consumers and other stakeholders (Galbreath, 2018).

Considering that women are responsible for over 70% of global consumer expenditure, increasing the proportion of women in management roles could lead to a better understanding of customer needs and preferences. This, in turn, may result in increased market share through the introduction of products and services that better cater to consumer expectations (Randøy, T., Thomsen, S., and Oxelheim, L. 2006). The resource dependency theory predicts that the most effective management teams will be diverse in terms of experience, work history, age, ethnicity, and gender. Moreover, a lack of women in senior management positions may be viewed as discriminatory and can hinder companies from accessing a larger pool of talented human resources (Shortland and Perkins, 2020).

2.6.2 Agency Theory

Agency theory deals with conflicts of interest between principals (e.g., shareholders) and agents (e.g., managers) and how the corporate board plays an important function in monitoring and resolving these conflicts (Jensen & Meckling, 1976). Agency theory explores the relationship between a primary party, such as a shareholder, and an agent, typically the manager. It acknowledges that these two parties often pursue distinct goals and may have different risk attitudes, legitimizing their divergent behaviors or decisions. Jensen and Meckling (1976) refined Berle and Means' work and established agency theory as they asserted that companies were created to reduce agency costs – the cost associated with persuading agents to act in the best interests of the principals. Within this framework, outside directors, like independent directors, serve as effective monitors of shareholders' interests, as they operate independently from inside counterparts.

Enhancing independence is a compelling argument in favor of diversity, as it may lead to more independent decision-making in the boardroom and better monitoring of management (Onday, 2016). Research has shown that a higher proportion of female directors in organizations is associated with stronger corporate governance and ethical behavior (Carter *et al.*, 2010). Women-dominated boards exhibit distinct governance practices, including a focus on communication, non-financial success indicators, diversity, corporate social responsibility, and stakeholder satisfaction.

Recent studies have indicated that female directors are more assertive in addressing critical governance issues, such as assessing board effectiveness and influencing CEO compensation levels (Dalton and Dalton, 2010). This changing dynamic may lead to a new era of more effective corporate governance.

Overall, the combination of resource dependency theory and agency theory offers valuable insights into the significance of gender diversity in boardrooms and its potential positive impact on business performance and governance practices. Agency and resource dependency theory have established that non-executive directors can assist in advancing two key functions of control and providing resources. From an agency theory standpoint, independent directors tend to better monitor managers as they give high importance to their status in the directorship arena (Jensen & Meckling, 1976).

2.7 Empirical Literature Review and Hypothesis Development

The majority of studies concerning women in boardrooms are empirical and draw their theoretical support from management literature. Past research has emphasized three layers of management theory—individual, board, and organization. While the relationship between gender diversity and stock price/profitability has been investigated in several studies, there are conflicting assumptions regarding its impact on board performance (Melkumov and Khoreva, 2015). On the whole, the limited number of published studies so far seem to support the hypothesis that gender diversity hinders performance. However, emerging nations have only recently started recognizing the importance of having more women on corporate boards for business development and sustainability. Research on corporate governance in developed regions, as measured by board diversity, shows that it has a significant and positive influence on performance (Isola *et al.*, 2020).

Halliday, Paustian-Underdahl, and Fainshmidt (2021) projected that achieving gender parity in large corporate boardrooms would require approximately 200 years, based on the 10-year growth rate of female directors. The author investigates the factors contributing to the underrepresentation of women on Fortune 500 boards of directors and

challenges the assertion that 43% of businesses with no female directors claimed their boards were "already full of suitable candidates." This argument lacks persuasiveness when considering the average director tenure and the frequency of director resignations.

In contrast, Arvanitis, Varouchas, and Agiomirgianakis, (2022) distinguish between two types of justifications for increasing female representation on boards: ethical and economic. Ethical considerations argue against barring women from corporate boards solely based on gender, advocating for increased representation to foster a more equitable society. On the economic front, the rationale suggests that companies failing to select the most qualified candidates for their boards may experience financial losses.

Reddy and Jadhav (2019) contribute to the discussion by noting that businesses closely connected to their end consumers, such as retail, banking, media, and utilities, exhibit the highest percentage of female directors. Conversely, industries with a strong focus on production, including resources, engineering, and business services, have fewer women directors due to their distance from end customers and predominantly male workforces. This pattern holds in the United States, as reported by Opoku & Williams, (2019), indicating that women managers often gravitate towards support roles like human resources, coaching, and brand management rather than assuming critical operational or marketing responsibilities.

Mensah and Onumah (2023) explored the contribution of "female directors" on company boards in sub-Saharan Africa and found that diversity on the board consistently improves financial performance. Similarly, Puntaier *et al.*, (2022) investigated the impact of gender and nationality diversity on management board performance in a sample of 309 SMEs in the UK's manufacturing sector from 2009 to 2019. They concluded that both types of

diversity have a positive impact on business performance. Campos-Garca and Ziga-Vicente (2022) examined the real connection between gender diversity and organizational performance and identified an "optimal" level of gender diversity on boards and in the workforce. They found that individual employees perform best when more women than men are employed, while the board of directors operates most effectively when both genders are represented. Similarly, Mastella, -M., Vancin, D., Perlin, M. and Kirch, G. (2021) investigated the effect of having more women on boards on risk and performance and found that having women on the board improves accounting and market performance indicators.

Furthermore, Arioglu (2020) studied the impact of female directors on company financial performance in a patriarchal emerging nation with a collectivistic culture and a significant gender equality gap. The study revealed that the presence and proportion of female directors both positively influence the company's financial success, despite cultural expectations to the contrary. Moreover, Moreno-Gómez *et al.*, (2018) examined how gender diversity in top management or boardroom and senior management roles affects business performance among Colombian public firms and found that gender diversity contributes to future company success.

Despite these findings, Tran, Ngo, and Tran, (2022) investigated the impact of gender diversity in top management teams on the financial performance of SMEs in Vietnam. They found that gender diversity in TMTs is negatively associated with the financial performance of family-controlled SMEs but has no discernible effect on non-family SMEs' financial performance.

Similarly, Okoyeuzu, Ujunwa, Ujunwa, and Onah, (2021) examined the influence of board independence and gender diversity on bank performance in Nigeria. The results showed that gender diversity is a strong positive predictor, but board independence is a significant negative predictor of bank performance in Nigeria. Stefanovic and Barjaktarovic (2021) examined the relationships between gender diversity and bank performance and found that gender diversity and performance are indirectly connected. Gender diversity on executive boards and bank performance are positively correlated up to a certain point. Adusei *et al.*, (2017) found evidence supporting their claim that the proportion of women on boards rises as the proportion of women in management rises. They also found that the financial performance of MFIs is negatively impacted by having female board members and concluded that until 50% or more female CEOs are chosen, there is little correlation between female executives and MFI's financial performance.

Shifting the focus to the effects of intellectual capital components on production, there has been significant research in this area, including human capital efficiency, structural capital efficiency, and capital employed efficiency. For example, Singla (2020) investigated whether intellectual capital and its subcomponents increased value and profitability for real estate and infrastructure organizations in India from 2008 to 2017. The study found that while intellectual capital positively affects value and profitability, capital-employed efficiency has a greater influence on the value and profitability of infra firms. Bayraktaroglu, Calisir, and Baskak, (2019) studied the relationship between intellectual capital and firm performance for Turkish manufacturing firms and found a moderating relationship between structural capital efficiency and profitability. Smriti and Das (2018) examined the connection between intellectual capital and financial performance for Indian-listed businesses from 2001 to 2016 and found that human capital had a significant impact on productivity. Dzenopoljac, Yaacoub, Elkanj, and Bontis,

(2017) analyzed the relationship between intellectual capital and corporate performance across Arab organizations and found that earnings and profitability were significantly influenced by structural and physical capital, while efficiency was mostly determined by physical capital and market performance by human capital.

Additionally, Ozkan, Cakan, and Kayacan, (2017) found a significant positive link among return on assets, capital employed efficiency, and human capital efficiency. Kasoga (2020) asserted that human capital, structural capital, capital utilized, return on assets, and return on equity of Nigerian banks are strongly positively correlated. Shamsudin and Yian (2013) and Anuonye, Chinma, Olukayode, and Suleiman, (2016) found no correlation between human capital efficiency and return on assets for Malaysian and Nigerian firms, respectively. However, they found a strong correlation between structural capital efficiency and return on assets and capital employed efficiency. Suherman, Usman, Mahfirah, and Vesta (2021) found that the efficiency of human capital and structural capital is not positively correlated with return on assets.

Moreover, Mollah and Rouf (2022) examined the impact of intellectual capital on the financial performance of all listed commercial banks in Bangladesh from 2014 to 2018. The study found that structural capital efficiency had statistically significant associations with bank performance, but capital-employed efficiency and human capital efficiency did not. Chowdhury, L.A.M., Rana, T. and Azim, M.I. (2019) explored the relationship between the organizational performance of the pharmaceutical industry in Bangladesh and the efficiency of intellectual capital. The study found that the components of the value-added intellectual coefficient—human capital, structural capital, and capital employed—significantly explained asset turnover and return on assets, but not return on

equity. Additionally, capital utilized had a positive influence on asset turnover, while structural capital had a negative one.

Regarding female representation on corporate boards, Isola *et al.*, (2020) stated that it has been measured in various ways and its contribution to increased company performance is significant. Abdulkarem, Al-Musali, and Ismail, (2015) found a correlation between gender diversity on boards of directors and corporate performance in the United States, with board effectiveness serving as a mediating factor. Similarly, Abdelzaher and Abdelzaher (2019) found a similar association in Egypt. According to their findings, intellectual capital efficiency increases as the mediating impact of board meetings does. While previous research has employed various management theories to explain diversity, the current study focuses on two management theories—the resource dependency theory and the agency theory. Ouni, Ben Mansour, and Arfaoui, (2022) analyzed the link between gender diversity and business performance and explored the mediating function of intellectual capital efficiency (ICE) in this relationship. The study found a positive correlation between gender diversity and financial success, supporting the idea that a diverse board enhances board performance and brings fresh perspectives to the organization, leading to higher productivity.

Khan and Ali (2017) investigated the effects of corporate governance (board and audit committee characteristics) on financial results (ROA, ROE, and Tobin's Q) and found that several mechanisms positively affect business performance according to agency theory. On the other hand, board size, audit committee size, and CEO duality have a negative impact. Innayah, Pratama and Hanafi (2020) investigated how intellectual capital affects company risk and performance and explored whether board diversity in terms of gender and nationality could strengthen the influence of intellectual capital on

business performance and risk in ASEAN's banking sectors. The findings showed that businesses perform better if they effectively employ intellectual capital and that intellectual capital can assist in reducing credit risk. The interaction effect suggested that board diversity hurts business performance and increases risk, in line with social psychology theory.

In summary:

H1: Ceteris paribus, there is a negative relationship between female representation on corporate boards and business performance.

H2: Ceteris paribus, there is a negative relationship between intellectual capital and business performance.

H3: Ceteris paribus, there is a negative relationship between the interplay of female representation and intellectual capital on business performance.

2.8 Conceptual Framework

Following the framework of Baron and Kenny's (1986) model using agency theory and resource dependence theory, the model was developed following a study of the existing literature on examining the impact of board gender diversity and intellectual capital efficiency on firm performance in Ghana.

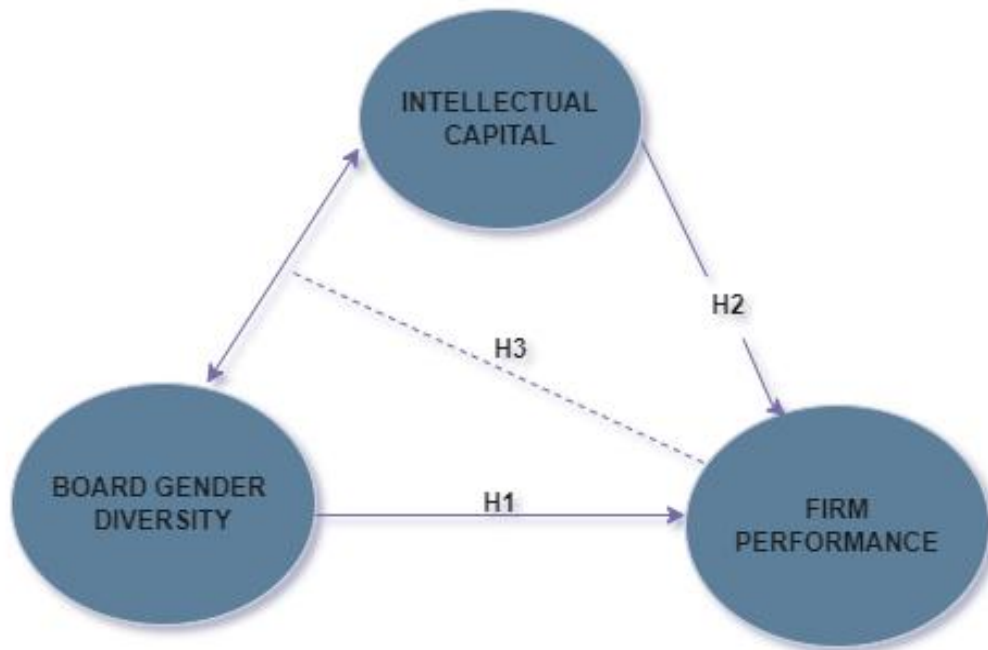


Figure 2.1: Conceptual Framework adapted from Baron and Kenny, 1986

Source: Adapted from Baron and Kenny, 1986

From the diagram above, the first framework (**H1**) seeks to ascertain the effect of board gender diversity on firm performance. This will aid in knowing whether firms with diverse genders enhance or improve their performance. The second framework (**H2**) also seeks to identify the impact of intellectual capital on performance. This will aid in knowing whether firms with the optimal capital improve performance. The last framework (**H3**) investigates the interaction effect of female representation on boards and intellectual capital on the business performance which is the major block of knowledge that this study seeks to fill.

2.9 Chapter Summary

The research employs two theories The Resource Dependency Theory by Pfeffer and Salancik, (1978) and Agency Theory by Jensen and Meckling, (1976). The Resource Dependency Theory posits that businesses operate within an open system and rely on various elements in their environment to obtain the resources necessary for their survival.

In the context of corporate governance, businesses seek connections with the best resources and, therefore, organize their boards of directors effectively. Directors offer organizations several benefits, including advice and guidance, information conduits, access to resources, and legitimacy. Agency theory explores the relationship between a primary party, such as a shareholder, and an agent, typically the manager. It acknowledges that these two parties often pursue distinct goals and may have different risk attitudes, legitimizing their divergent behaviors or decisions. With respect to the empirical review, researchers such as Isola *et al.*, (2020) researched on The interaction effect of female board representation and intellectual capital efficiency on business performance in Nigeria were they concluded that both female board representation and intellectual capital had Negative & significant relationship.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the study's research methodology. The methodology section details data, methods, description of variables and econometric model specification. The dependability of the findings and conclusions is highly dependent on the study design, sample size and sampling methodologies, data sources and collectors which are present in this chapter.

3.2 Research Design

This study adopted the explanatory research design which allowed the study of the relationships between the variables. In the same vain, the study adopted a quantitative approach relying on panel data regression analysis to realise the study's objectives. Annual reports were obtained from Ghana and official websites of the listed firms. Thus, the data collected is made up of a complete set of financial statements and other relevant information's of the listed firms in Ghana.

3.3 Research Paradigms

In this segment of the chapter, the study delves into the research paradigm that aligns with the study.

3.3.1 Positivism

The positivist research paradigm gained prominence in the 19th century, influenced by the significant works of August Comte (Asghar, 2013). Positivists seek to comprehend the natural world in a manner analogous to their approach to the social world. They consider the social world as context-independent and posit that researchers working in

diverse locations and eras will draw similar conclusions about a specific event. Researchers, in the positivist view, act as impartial observers studying phenomena that exist independently of them, without influencing or disrupting the phenomena under examination. Positivists employ symbols and language to label occurrences in their true form, devoid of any interference. According to Park *et al.*, (2020), positivists perceive the world as 'out there' and open for study in a relatively static form. They assert that there are laws governing social phenomena, and through scientific methods, researchers can formulate laws to describe and predict these phenomena (Taylor & Medina, 2011).

3.3.2 Interpretivism

Interpretivism is best understood as a response to the dominance of positivism. As per Goldkuhl (2012), interpretivism rejects the notion of a singular, verifiable reality independent of human senses. The ontology of interpretivism is anti-foundationalist, dismissing the adoption of perpetual benchmarks by which truth can be universally known (Potrac, Jones, & Nelson, 2014). Instead, interpretivism posits socially constructed multiple realities. Truth and reality, according to interpretivism, are human creations rather than discoveries. Consequently, understanding reality is challenging, as it is mediated by human senses. The epistemology of interpretivism is subjective, acknowledging that the external reality available to observers is tainted by concepts, backgrounds, worldviews, beliefs, etc. Charmaz (2008) contends that researchers are inherently part of the social reality they study and cannot detach themselves from the subject of their investigation. In interpretive analysis, diverse perspectives on the same issue are accepted, and there is no preference for one interpretation over another. The objective of interpretive analysis is not to uncover objective truths but to comprehend people's perceptions of the social phenomenon under investigation.

Decision: Following the exploration of these two primary paradigms, the study opts for positivism. The positivist framework aligns best with the study's objective of examining the impact of female representation in boardrooms and the efficiency of intellectual capital on the business performance of selected listed firms in Ghana. To achieve this goal, the study will rely on correlations and quantitative analysis in line with the positivist framework.

3.4 Data

The study's objectives were met using data obtained solely from various secondary sources. These sources included the fact book of Ghana, the Ghana stock exchange, the official websites of annual reports of Ghana, and websites of specific firms selected to form the sample. The data extracted covered the period from 2009-2022, resulting in a dataset of 434 observations from thirty-one (31) publicly traded companies. The choice of the years 2009-2022 was driven by the availability of data required to evaluate the hypothesis. This period was chosen because the Ghanaian Code of Best Practices on Corporate Governance was initially established in 2003 by the Securities and Exchange Commission Ghana, and 2009 was set as the starting point for data collection.

3.5 Population

Population is made up of all the units of analysis from which the sample is taken (Neuman, 2000). The target population, according to Cooper and Schindler (2008), is the entire group of people who will be used to generalize findings. In this study, the target population comprise all firms listed on the Ghana Stock Exchange Market.

3.6 Sample Size and Sampling Technique

The study was conducted in 2023, using the most recent data accessible at that time, which consisted of annual reports from 2009 - 2022. However, due to some firms' unavailability of annual reports for specific years, convenience sampling was employed in selecting listed companies. This process excluded companies that did not produce annual reports or had incomplete data on the Ghana Stock Exchange (GSE). The final sample size included 31 businesses out of a total population of 41 listed companies by using the convenience sampling technique. Each selected company had 14 years of data, covering the period from 2009-2022. The sample was balanced, meaning that all the firms in the sample were observed over the years in question. Additionally, the businesses were categorized into two groups based on their industry. To investigate the relationships between the variables and accomplish its objectives, the study adopted an explanatory research strategy. This approach utilized a quantitative method, employing panel data regression analysis.

3.7 Method

To conduct my analysis, I employed the longitudinal panel regression method along with OLS estimation Ciftcia, I., Tatoglu, E., Wood, G., Demirbag, M. and Zaimd, S. (2019) highlight the significance of the Hausman test in selecting the most appropriate estimation method for this study, as it is widely used for panel data specification testing. The p-value for the test statistic is crucial in advocating fixed effects over the RE estimator. However, my research did not disprove the null hypothesis, resulting in a Hausman test (1978) statistic of 0.87, justifying the use of the RE model. Furthermore, the Wooldridge test indicates non-significant p-values, indicating the absence of serial and autocorrelation in the data. Nonetheless, the Breusch and Pagan (1980) Lagrangian

multiplier tests reveal significant p-values, indicating the presence of heteroskedasticity, thereby affirming the appropriateness of employing the RE model to achieve our study objectives.

3.8 Description of Variables

In this research, we focus on two dependent variables, namely, the performance measurements for businesses: ROA and ROE, which are based on prior studies (Abdelzaher and Abdelzaher, 2019; Hsu *et al.*, 2018). These ratios are calculated by dividing net income by total assets and total equity, respectively. Our independent variables consist of intellectual capital and female representation on corporate boards. The assessment of intellectual capital involves aggregating the firm's human, structural, and capital resources and comparing the percentage of female board members to all board members (Isola *et al.*, 2020). Scholars generally consider Pulic's VAIC as the most suitable method for evaluating intellectual capital efficacy, as it relies on evidence from a company's performance rather than subjective measurements (Isola *et al.*, 2020). Due to its quantitative approach, we utilize this metric. VAIC is computed as the sum of the firm's structural, human, and capital resources, represented as follows:

$$VAIC = HCE + SCE + CEE \quad (1)$$

The value-added capital employed efficiency (CEE) of a corporation is calculated as the sum of operating profit (OP), employee expenses (EC), amortization (A), and firm depreciation (D). Meanwhile, the firm's structural capital efficiency (SCE) is determined by the difference between value-added and investment in human capital. The proportion of value generated attributed to human capital investment is known as a firm's human capital efficiency (HCE). Value-added (VA) is calculated using the formula:

$$VA = EC + OP + D + A \quad (2)$$

Furthermore, the VAIC can be expressed as:

$$VAIC = \frac{HC}{VA} + \frac{VA}{SC} + \frac{CE}{VA} \quad (3)$$

Where HC stands for “human capital expenses”, CE for "stock of equity capital," HCE for "human capital costs," and SC for "VA - HC." While the study employs the VAIC measure of intellectual capital, the primary focus lies in investigating the contributions of each component to business performance. To control for other factors that may influence firm performance, we include various control variables such as board size, firm size, firm age, directors' shareholding structure, and board independence, aligning with comparable research (Abdelzaher and Abdelzaher, 2019; Hsu *et al.*, 2018). Board size is measured by the total number of directors, which reflects the expertise and competence of board members. Firm size is represented by the natural logarithm of the company's total assets (ln assets). "Firm age" refers to the duration of a company's existence based on its year of creation. Board independence is assessed by the proportion of independent directors to the size of the board, while the distribution of directors' shareholdings is evaluated by the proportion of their holdings to the total number of shares.

3.9 Econometric Model Specification

In light of Abdelzaher and Abdelzaher's (2019) empirical results, we propose the revised econometric model as follows:

$$FP_{it} = \alpha_0 + \alpha_1 BFP_{it} + \alpha_2 HCE_{it} + \alpha_3 CEE_{it} + \alpha_4 SCE_{it} + \alpha_5 Fsize_{it} + \alpha_6 DS_{it} + \alpha_7 Bsize_{it} + \alpha_8 FAge_{it} + \alpha_9 OC_{it} + \mu \quad (4)$$

Where:

- FPit represents a metric of firm performance defined by ROE and ROA,
- α_0 is the constant term,
- α_1 to α_9 are parameters to be estimated,
- i and t denote the number of companies and time, respectively,
- And μ represents the disturbance term.

The equation is evaluated progressively using ROA and ROE as alternating dependent variables. Initially, we explore the relationship between female participation and business performance, followed by the examination of the relationship between intellectual capital components and business performance.

3.10 Summary of Methodology

The study's objectives were fulfilled by sourcing data exclusively from various secondary sources, including the fact book of Ghana, the Ghana stock exchange, the official websites containing annual reports of Ghana, and selected firms' websites that constituted the sample. The relevant data spanned the period 2009-2022, resulting in a dataset comprising 434 observations from thirty-one publicly traded companies. The research employed an explanatory research strategy to explore the relationships between variables, utilizing a quantitative approach with panel data regression analysis.

To scrutinize the data, the study applied the longitudinal panel regression method and OLS estimate. Following Ciftcia *et al.*'s (2019) assertion, the Hausman test was used to select the most suitable estimating method, being a widely employed panel data specification test. The significance of the p-value for the test statistic favored the use of fixed effects over the RE estimator.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.0 Introduction

This chapter features data from the financial statements of the thirty-One (31) selected business listed on the Ghana Stock Exchange and provide discussions to help achieve the study's key goals. In order to determine these associations, the study used descriptive statistics such as mean and standard deviation.

4.1 Descriptive Statistics

Table 4.1 presents the descriptive statistics for the various variables analyzed in the study. The data in Table 4.1 reveals interesting insights about the sampled firms' performance. For the variable "ROA rate," the mean is found to be 7.76, with a standard deviation of 12.84. The range of values for this variable spans from a low of -54.54 to a high of 60.99. These results are consistent with previous research conducted by Hou *et al.*, (2018), which also reported a positive mean value for ROA. This highlights the significant variability in ROA rates among the companies included in the study. Moving on to the variable "ROE" (Return on Equity), the average value is -1.75, with a reported range of 575.02. This indicates that some companies experienced negative ROE values during the study period.

The study also examined the representation of female board members in the sampled firms. The highest ratio of female board members to total board members was 54.55%, while some companies had no female board members at all. On average, female board members constituted approximately 16.27% of the total board members (Table 4.1).

Next, the study explored the value-added production efficiency in the sector "HCE" (Human Capital Employed). The analysis found that the maximum efficiency ratio was 8.81, the minimum ratio was -8.31, and the mean value was 6.73. These findings underscore the importance of optimizing human resources within organizations, as many firms may not be fully utilizing their human capital potential.

Similarly, the "SCE" (Structural Capital Employed) was assessed, and the results were concerning. The maximum efficiency ratio was found to be 8.83, the mean efficiency capital employed ratio was 6.83, and the average capital employed efficiency was 7.18. These figures suggest that the sampled companies were not generating substantial returns on their value added.

The study concludes that the average improvement in efficiency for the chosen Ghanaian businesses was an impressive 718 percent. This highlights the potential for considerable growth and optimization within these companies if they can enhance their operational efficiency.

In summary, the descriptive statistics in Table 4.1 shed light on the performance and characteristics of the studied variables among the sampled firms. The results reflect significant variability, underscoring the need for improving efficiency and maximizing the potential of resources within the organizations.

Table 4.1: Descriptive Statistics

Variables	Mean	Standard Dev.	Minimum	Maximum
ROA	7.76	12.84	-54.54	60.99
ROE	-1.75	575.02	-9198.33	1372.44
BFP	16.27	11.59	0.02	54.55
SCE	6.83	2.56	-8.29	8.83
HCE	6.73	2.59	-8.31	8.81
CEE	7.18	2.50	-8.24	9.07
Fsize	19.17	2.31	12.15	23.31
DS	5.71	13.55	0.02	60.59
B size	57.77	23.70	0.01	112.50
FAge	45.08	24.41	14.01	123
OC	1.31	0.49	0.01	2.01

Notes: Return on Assets (ROA), Return on Equity (ROE), BFP (Boardroom Female Participation), SCE (Structural Capital Employed), HCE (Human Capital Employed), CEE (Capital Employed Efficiency), FSize (Firm Size), DS (Director Shareholding), BSize (Board Size), FAge (Firm Age), and OC (Ownership Concentration). **Source:** Stata output data, (2023).

4.2 Correlation Analysis

Table 4.2 displays the results obtained from the correlation analysis of the input variables. This table presents the degree of correlation between the variables, using the Pearson correlation coefficient. The primary aim of this analysis is to assess the extent of correlation among the variables used for different objectives. The findings reveal that none of the correlation coefficients exceed the critical limit of 0.90, indicating the absence of a perfect correlation between any two variables. This observation dismisses concerns about multicollinearity, as reported by Mela and Kopalle (2002). Moreover, given that both variables are alternating dependent variables, this outcome poses no

econometric challenge. To further investigate the possibility of multicollinearity, we computed the variance inflationary factor (VIF) for all explanatory variables. None of the variables exhibited a VIF greater than 10, confirming the absence of multicollinearity in the dataset.

Table 4.2: Correlation Analysis

Variables	A	B	C	D	E	F	G	H	I	J	K
ROA	1										
ROE	-0.03	1									
BGD	0.01	0.02	1								
SCE	0.45	-0.04	0.15	1							
HCE	0.45	-0.04	0.15	0.65	1						
CEE	0.45	-0.04	0.13	0.68	0.98	1					
FSize	0.03	-0.03	0.33	0.50	0.50	0.46	1				
DS	-0.20	0.05	-0.15	-0.54	-0.53	-0.48	-0.56	1			
BSize	0.25	-0.06	-0.17	-0.03	-0.04	-0.00	-0.21	-0.01	1		
FAge	0.13	0.02	0.18	0.25	0.25	0.22	0.33	-0.25	0.09	1	

Notes: Return on Assets (ROA), Return on Equity (ROE), BFP (Boardroom Female Participation), SCE (Structural Capital Employed), HCE (Human Capital Employed), CEE (Capital Employed Efficiency), FSize (Firm Size), DS (Director Shareholding), BSize (Board Size), FAge (Firm Age), and OC (Ownership Concentration). **Source:** Stata output data, (2023).

4.3 Empirical Results

4.3.1 Empirical Results (Dependent Variable-ROE)

The study's regression analysis is presented in Tables 4.3 and 4.4, where we employ the dependent variables ROE and ROA alternately. Columns A to E are used as the five systematic estimations for the study's equation. In Column A, the study focuses on the nexus between female board representation and business performance. The results indicate that the presence of women on corporate boards does not significantly influence business performance. This suggests that adding more women to corporate boards may not lead to an improvement in business performance. One possible explanation for this finding is the relatively lower representation of women on boards compared to men, which could result in their contributions to the firm's development being overlooked.

These findings are consistent with the studies conducted by Manita *et al.*, (2018), Tran *et al.*, (2022), Okoyeuzu *et al.*, (2021), Stefanovic and Barjaktarovic (2021), Adusei *et al.*, (2017), and Ahmad *et al.*, (2018). However, they differ from the conclusions drawn by Scholtz and Kieviet (2018), Isola *et al.*, (2020), Mensah and Onumah (2023), Puntaier *et al.*, (2022), Campos-Garca and Ziga-Vicente (2022), Mastella *et al.*, (2021), Arioglu (2020), and Moreno-Gómez *et al.*, (2018). It's worth noting that Manita *et al.*, (2018) found a similar result in their research, specifically in the association between gender diversity and environmental, cultural, and democratic accountability disclosures. Similarly, Ahmad *et al.*, (2018) asserted that the presence of female board members does not significantly impact a company's CSR performance.

Table 4.3: Empirical Results (Dependent Variable-ROE)

Variables	A	B	C	D	E
BFP	0.02(0.41)			0.006(0.27)	0.14(1.75)
HCE	1.23(3.14)	1.01 (44.21)	-1.54(-0.782)	0.07(1.05)	
SCE	2.22 (4.24)	1.00(101.4)***	1.53(-0.76)	0.93(12.00)**	
CEE		4(0.15)**			
Fsize	-1.41(-3.50)**	0.01(0.90)	1.13 (2.93)	-0.01(0.93)	-3.48(-5.3)*
DS	0.020 (0.29)	0.01(0.96)	0.07(1.13)	0.01(4.63)**	0.44 (1.33)
B size	0.121 (4.00)	-0.006 (-0.70)	-0.06 (-2.16)	0.08(2.61)	0.23 (5.11)
FAge	0.01(0.54)		0.04 (1.47)	0.06 (1.55)	0.02(0.54)
OC	1.42(0.92)	0.03 (0.88)	6.47(4.47)	-0.11(-1.93)	2.92(1.27)
Constant	6.14 (0.77)	3.61 (7.11)	-12.88 (-1.68)	0.48 (1.61)	8.32 (2.9)
Adjusted R ²	0.29	0.33	0.17	0.40	0.34
Year dummies	Yes	Yes	Yes	Yes	Yes
No. Obs	434	434	434	434	434

Notes: Statistical significance is indicated by ***, **, and * at 1%, 5%, and 10% levels; BFP (Boardroom Female Participation), SCE (Structural Capital Employed), HCE (Human Capital Employed), CEE (Capital Employed Efficiency), FSize (Firm Size), DS (Director Shareholding), BSize (Board Size), FAge (Firm Age), and OC (Ownership Concentration). **Source:** Stata output data, (2023).

4.3.2 Empirical Results (Dependent Variable-ROA)

Column B displays the outcome of integrating the ROE (Return on Equity) and VAIC (Value Added Intellectual Coefficient) components. The findings underscore the significance and value of intellectual capital efficiency in determining business performance. Notably, a strong and positive relationship is observed between human capital, capital employed and ROE. These results align with prior studies by Singla (2020), Bayraktaroglu *et al.*, (2019), Smriti and Das (2018), Dzenopoljac *et al.*, (2017), Ozkan *et al.*, (2017), Kasoga (2020), Chowdhury *et al.*, (2018), and Anifowose *et al.*, (2017), all of which emphasize the influential role of Human Capital Efficiencies (HCEs) in shaping business performance.

However, a contrasting view is presented by Mollah and Rouf (2022), who disagree with Shamsudin and Yian (2013), Anuonye *et al.*, (2016), Suherman *et al.*, (2021), and Chowdhury *et al.*, (2019). These studies assert a statistically significant relationship between the efficiency of both Capital Employed Efficiency (CEE) and Human Capital Efficiency (HCE) and the performance of banks. Such conflicting outcomes might be attributed to differences in assessment methods, calibration errors, or variations in the companies' innovative pursuits, capabilities, and infrastructure to support creative solutions.

Interestingly, the findings from the study by Nadeem *et al.*, (2019) align with the notion that Structural Capital exhibits a weak association with ROE, highlighting the limited impact of this aspect on business performance. Possible reasons for this insignificance could be related to the evaluation approach and potential calibration errors. Moreover, it is conceivable that the selected companies may not be exploring enough novel ideas or lack the necessary abilities or infrastructure to facilitate innovative solutions effectively.

These results remain consistent even when ROA (Return on Assets) is used as a dependent variable in Column B of Table 4.4.

Furthermore, the operational relationship between female boardroom involvement and HCE on the performance of the selected businesses is illustrated in Column C of Table 4.3. Surprisingly, the results demonstrate that human capital and female boardroom involvement alone do not significantly impact corporate performance. Consequently, when thoroughly examining HCEs, women's representation seems to have no considerable influence on business performance.

Table 4.4: Empirical Results (Dependent variable-ROA)

Variables	A	B	C	D	E
BFP	0.04 (0.63)	0.02(0.37)	0.04 (0.635)	0.08(0.27)	0.034(0.410)
HCE	0.96 (0.46)	0.80(0.394)	0.79 (2.02)	0.13(1.45)	0.74(1.41)
SCE	1.72 (0.81)	1.99 (0.96)	1.93 (0.93)	0.93(12.00)**	
CEE		12(1.12)**			
Fsize	-1.12 (-2.59)*	-1.39 (-3.47)*	-1.14 (-2.65)	-0.22(-6.21)	-1.52 (-4.60)*
DS	0.004(0.06)	-0.00(-0.00)	0.00 (0.11)	0.07(2.41)**	0.02(0.30)
B size	0.11(3.85)	0.11(3.82)**	0.11(3.78)	0.11(1.81)	0.23(3.00)
FAge	0.02(0.79)	0.01(0.02)	0.02 (0.788)	0.06 (1.55)	0.34(1.55)
OC	1.10(0.70)	1.62 (1.54)	1.18 (0.75)	-0.42(-6.7)	3.44(6.44)
Constant	1.03 (0.12)	5.35(0.66)	647.29 (1.745)	0.73 (2.53)	8.22 (2.7)
Adjusted R ²	0.27	0.29	0.29	0.41	0.33
Year dummies	Yes	Yes	Yes	Yes	Yes
No. Obs	434	434	434	434	434

Notes: Statistical significance is indicated by ***, **, and * at 1%, 5%, and 10% levels; BFP (Boardroom Female Participation), SCE (Structural Capital Employed), HCE (Human Capital Employed), CEE (Capital Employed Efficiency), FSize (Firm Size), DS (Director Shareholding), BSize (Board Size), FAge (Firm Age), and OC (Ownership Concentration). **Source:** Stata output data, (2023).

4.4 Robustness and Endogeneity Test

Researchers in the fields of accounting, business, and corporate governance are increasingly concerned about the issue of endogeneity. Specifically, there is a lack of evidence to support the assertion that having female board representation on company boards of directors leads to improved business performance. In other words, women serving on corporate boards may represent various types of companies based on their preferences (Bilimoria & Piderit, 1994).

To address the endogeneity problem, the researchers utilized the two-stage least squares method (2SLS) as captured in Table 4.5. In doing so, they selected the industry average and the lag in the proportion of female board members as instrumental variables to adhere to certain measures (Usman *et al.*, 2019). The endogeneity test results ($\chi^2 = 3.207$; $p = 0.073$) indicate statistical significance at the 10% level based on robust standard error, revealing that female board representation is indeed endogenous.

The instruments employed by the researchers also passed the initial regression test, with their F-statistics value being greater than 10. Moreover, the over-identifying restriction tests conducted by Sargan ($\chi^2 = 1.605$; $p = 0.205$) and Basman ($\chi^2 = 1.425$; $p = 0.232$) produced negligible p-values, thereby affirming the appropriateness of using the gender lag and industry average as instruments. The coefficients obtained from the 2SLS regression analysis indicate a positive relationship with female board representation, providing further insight into the subject matter.

Table 4.5: Empirical Results (Dependent variable-ROA)

Variables	Expected Sign	Model 1	2SLS
BFP	+		3.207 (0.073)**
HCE	+	1.00(101.4)***	
SCE	-	2.22 (4.24)	
CEE	+		4(0.069)**
Fsize	-	-1.41(0.062)**	0.01(0.90)
DS	-	0.07(1.13)	0.01(0.063)**
B size	+	-0.06 (-2.16)	0.08(2.61)
FAge	+	0.04 (1.47)	0.06 (1.55)
OC	-	6.47(4.47)	-0.11(-1.93)
Year Dummy	+/-	Yes	Yes
Industry Dummy	+/-	Yes	Yes
Intercept	+/-	0.19 (7.11)	-12.88 (-1.68)
Prob. F		0.00	0.00
R-Squared		0.25	0.23
No of Obs		434	434

Notes: Statistical significance is indicated by ***, **, and * at 1%, 5%, and 10% levels; BFP (Boardroom Female Participation), SCE (Structural Capital Employed), HCE (Human Capital Employed), CEE (Capital Employed Efficiency), FSize (Firm Size), DS (Director Shareholding), BSize (Board Size), FAge (Firm Age), and OC (Ownership Concentration). **Source:** Stata output data, (2023).

4.5 Discussions of Findings

The study's results indicate that having more women in boardroom positions has a minimal impact on business performance. Consequently, there is insufficient evidence to support the notion that increasing the number of women in executive roles would enhance business performance, and their influence on a firm's success may largely go unnoticed. As a result, hypothesis H1 is accepted. The underrepresentation of women on boards may have contributed to this outcome. These findings align with previous studies conducted by Manita *et al.*, (2018), Tran *et al.*, (2022), Okoyeuzu *et al.*, (2021), Stefanovic and

Barjaktarovic (2020), Adusei *et al.*, (2017), Ahmad *et al.*, (2018), but they contradict the findings of Scholtz and Kieviet (2018), Isola *et al.*, (2020), Mensah and Onumah (2023), Puntaier *et al.*, (2022), Campos-Garca and Ziga-Vicente (2022), Mastella *et al.*, (2021), Arioglu (2020), Moreno-Gómez *et al.*, (2018).

Ahmad *et al.*, (2018) observed that the presence of female board members does not impact a company's Corporate Social Responsibility (CSR) performance. Similarly, Manita *et al.*, (2018) reached the same conclusion based on the correlation between gender diversity and disclosures related to environmental, cultural, and democratic accountability.

On the other hand, the findings emphasize the significant positive contribution of intellectual capital efficiency to business performance. There is a strong and positive correlation between human capital, capital employed, and Return on Equity (ROE). However, hypothesis H2 is disregarded. These results support the findings of Singla (2020), Bayraktaroglu *et al.*, (2019), Smriti and Das (2018), Dzenopoljac *et al.*, (2017), Ozkan *et al.*, (2017), Kasoga (2020), Chowdhury *et al.*, (2018), and Anifowose *et al.*, (2017), which demonstrate that intellectual capital efficiencies have a significant impact on business performance. Conversely, Mollah and Rouf (2022) found that the performance of banks is statistically related to both capital employed efficiency (CEE) and human capital efficiency (HCE), contradicting the findings of Shamsudin and Yian (2013), Anuonye *et al.*, (2016), Suherman *et al.*, (2021), and Chowdhury *et al.*, (2019). Furthermore, the results of the Nadeem *et al.*, (2019) study support the idea that structural capital has a weak association with ROE.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

This study fills this gap and attempts to establish the influence of female participation in the boardroom and the efficiency of intellectual capital on the business performance of selected firms in Ghana.

5.2 Summary of Findings

According to the research results, there is no evidence to support the claim that expanding the proportion of female boardroom members improves business performance. This result may be linked to the disproportionate makeup of women on the board, and as a result, their effect on the firm's performance will go mostly unnoticed. These results contradict Scholtz and Kieviet (2017) but agree with Ahmad et al. (2018). The study's findings show that there is a strong and positive association between human capital, capital employed, and ROE. These findings complement those of Anifowose et al. (2017), who found that HCEs had a favorable and substantial impact on company profitability. The study's findings also suggest that neither human capital nor female boardroom involvement had a substantial impact on corporate success. This suggests that when HCEs are extensively investigated, female representation has no meaningful influence on company performance. The findings indicate that female board involvement must be increased, and female board members ought to have suitable abilities, academic ability, as well as certification programs related to business operations.

5.3 Conclusion

This research aims to investigate the impact of female representation on corporate boards in effectively managing intellectual capital and its influence on business performance, specifically within the context of the Ghana Stock Exchange. The study utilizes data from thirty-one (31) publicly listed companies on the GSE spanning from 2009 to 2022 and employs the RE estimating technique for data analysis. Recent developments in corporate finance literature have highlighted the significant role of intellectual capital in driving business performance. Leveraging intellectual capital not only creates a competitive advantage but also enhances quality and attracts both domestic and foreign investments. The findings of this study underscore the importance of promoting the presence of women in senior roles, even though the statistical significance of their impact may not be evident. Previous research indicates that women contribute significantly to a firm's comparative advantages, particularly when there is a convergence of intellectual capital components and board gender diversity.

5.4 Recommendations

Promoting a culture that acknowledges the potential benefits of having more women on corporate boards becomes a key policy recommendation for businesses. The implications of this study extend to gender equity practitioners, policymakers, and scholars. Emphasizing intellectual assets as essential elements for gender equity and diversity further enhances business performance. This research significantly advances the understanding of the effects of female board representation on the performance of listed companies in Ghana. Policymakers are encouraged to promote more women in corporate boardrooms to leverage the potential economic advantages associated with their presence. To achieve this goal, increasing mentoring programs for young career women

in corporate Ghana is crucial. Such programs can pave a clear pathway for women's progression in their chosen careers. Additionally, businesses should be incentivized to improve gender diversity in their boardrooms, possibly through tax breaks or competitive advantages when bidding for government contracts.

5.5 Suggestions for Future Research

However, it's essential to acknowledge certain limitations in the research. The study's data source is restricted to selected manufacturing and non-manufacturing companies, which limits the generalization of the findings. Future research could consider gathering information from medium-sized businesses across the nation to enhance the study's scope and applicability. The geographic scope of the study is also a drawback, as it only includes businesses from well-known and prominent areas, making it challenging to apply the findings to all businesses in Ghana, given the diversity of industries operating throughout the nation. To assess the reproducibility of the results across various sites, additional studies should be conducted in different businesses and industries.

REFERENCES

- Abdelzaher, A. & Abdelzaher, D. (2019), "Women on boards and firm performance in Egypt: post the Arab spring". *The Journal of Developing Areas*, 53.
- Abdulkarem, M., Al-Musali, M. & Ismail, K.N. (2015), "Board diversity and intellectual capital performance: the moderating role of board effectiveness." *Accounting Research Journal*, 28(3), 268-283.
- Adams, R. B. (2016). "Women on boards: The superheroes of tomorrow?" *The Leadership Quarterly*, 27(3), 371-386.
- Adusei, M., Akomea, S. Y., & Poku, K. (2017). "Board and management gender diversity and financial performance of microfinance institutions." *Cogent Business & Management*, 4(1), 1360030.
- Ahmad, N. B. J., Rashid, A., & Gow, J. (2018). "Corporate board gender diversity and corporate social responsibility reporting in Malaysia". *Gender, Technology and Development*, 22(2), 87-108.
- Al-Musali, M. A. K. M., & Ku Ismail, K. N. I. (2015). "Board diversity and intellectual capital performance: The moderating role of the effectiveness of board meetings." *Accounting Research Journal*, 28(3), 268-283.
- Aman-Ullah, A., Mehmood, W., Amin, S., & Abbas, Y.A. (2022). Human capital and organizational performance: A moderation study through innovative leadership. *J Innovat Knowledge* 7(4):100261. <https://doi.org/10.1016/j.jik.2022.100261>
- Ana Isabel Cabrera-Fernández Rocío Martínez-Jiménez María Jesús Hernández-Ortiz, (2016). "Women's participation on boards of directors: a review of the literature", *International Journal of Gender and Entrepreneurship*, 8(1), 69 – 89.

- Anifowose, M., Abdul Rashid, M.H. and Annuar, H.A. (2017), "Intellectual capital disclosure and corporate market value: does board diversity matter?". *Journal of Accounting in Emerging Economies*, 7(3), 369-398.
- Anuonye, J. C., Chinma, C. E., Olukayode, J., & Suleiman, A. (2016). "Nutrient composition, amylose content and pasting characteristics of some elite accessions of NERICA rice". *Journal of Food Technology Research*, 3(1), 36-47.
- Appiah, K.O., Asamoah, L.A. & Osei, B. (2016b). "Nomination committee-board gender diversity nexus in Ghana". *International Journal of Business Governance and Ethics*, 11(2), 135-158.
- Arioglu, E. (2020). "Female board members: the effect of director affiliation", *Gender in Management*, 35(2), 225-254. <https://doi.org/10.1108/GM-05-2019-0080>.
- Arvanitis, S. E., Varouchas, E. G., & Agiomirgianakis, G. M. (2022). Does board gender diversity improve firm performance? Evidence from Greek listed firms. *Journal of Risk and Financial Management*, 15(7), 306.
- Bayraktaroglu, A.E., Calisir, F. & Baskak, M. (2019), "Intellectual capital and firm performance: an extended VAIC model." *Journal of Intellectual Capital*, 20(3), 406-425. <https://doi.org/10.1108/JIC-12-2017-0184>.
- Bilimoria, D. & Piderit, S.K. (1994), "Board committee membership: effects of sex-based bias". *Academy of Management Journal*, 37(6), 1453-1477.
- Breusch, T.S. & Pagan, A.R. (1980), "The Lagrange multiplier test and its applications to model specification in econometrics." *The Review of Economic Studies*, 47(1). 239-253.

- Campos-García, I. & Zúñiga-Vicente, J.Á. (2022). "The gender diversity–performance linkage at the board of directors and the workforce levels: testing two competing curvilinear models", *Gender in Management*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/GM-02-2022-0054>.
- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). "The gender and ethnic diversity of US boards and board committees and firm financial performance." *Corporate Governance: An International Review*, 18(5), 396-414.
- Chowdhury, L. A. M., Rana, T., Akter, M., & Hoque, M. (2018). "Impact of intellectual capital on financial performance: evidence from the Bangladeshi textile sector." *Journal of Accounting & Organizational Change*.
- Chowdhury, L.A.M., Rana, T. & Azim, M.I. (2019), "Intellectual capital efficiency and organizational performance: In the context of the pharmaceutical industry in Bangladesh." *Journal of Intellectual Capital*, 20(6), 784-806.
<https://doi.org/10.1108/JIC-10-2018-0171>.
- Ciftcia, I., Tatoglu, E., Wood, G., Demirbag, M. and Zaimd, S. (2019), "Corporate governance and firm performance in emerging markets: evidence from Turkey." *International Business Review*, 28(1), 90-103.
- Dalton, D. R., & Dalton, C. M. (2010). "Women and corporate boards of directors: The promise of increased, and substantive, participation in the post-Sarbanes-Oxley era." *Business Horizons*, 53(3), 257-268.
- De Jonge, A. (2022). "Women on Boards in China and India:" *Corporate Regulation and Gender Empowerment*. Taylor & Francis.
- Dzenopoljac, V., Yaacoub, C., Elkanj, N. & Bontis, N. (2017), "Impact of intellectual capital on corporate performance: evidence from the Arab region." *Journal of Intellectual Capital*, 18(4), 884-903. <https://doi.org/10.1108/JIC-01-2017-0014>

- Galbreath, J. (2018). "Is board gender diversity linked to financial performance? The mediating mechanism of CSR." *Business & Society*, 57(5), 863-889.
- Hakovirta, M., Denuwara, N., & Bharathi, S. (2020). The importance of diversity on boards of directors' effectiveness and its impact on innovativeness in the bioeconomy. *Humanit Soc Sci Commun* 7, 116 <https://doi.org/10.1057/s41599-020-00605-9>
- Halliday, C. S., Paustian-Underdahl, S. C., & Fainshmidt, S. (2021). Women on boards of directors: A meta-analytic examination of the roles of organizational leadership and national context for gender equality. *Journal of Business and Psychology*, 36, 173-191.
- Hamadamin, H.H., & Atan, T. (2019). The impact of strategic human resource management practices on competitive advantage sustainability: the mediation of human capital development and employee commitment. *Sustainability* 11(20). 5782.
- Hausman, J.A. (1978). "Specification tests in econometrics", *Econometrica: Journal of the Econometric Society*, 46(6). 1251-1271.
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). "Resource dependence theory: A review." *Journal of Management*, 35(6), 1404-1427.
- Højlund Madsen, D. (2019). *Women's Political Representation and Affirmative Action in Ghana*, Nordiska Afrikainstitutet.
- Hsu, T. C., Chang, S. C., & Hung, Y. T. (2018). "How to learn and how to teach computational thinking: Suggestions based on a review of the literature." *Computers & Education*, 126, 296-310.

- Huang CC, Huang SM (2020) External and internal capabilities and organizational performance: does intellectual capital matter? *Asia Pac Manag Rev* 25(2), 111–120. <https://doi.org/10.1016/j.apmr.2019.12.001>
- Innayah, M. N., Pratama, B. C., & Hanafi, M. M. (2020). “The effect of intellectual capital towards firm performance and risk with board diversity as a moderating variable: Study in ASEAN banking firms.” *JDM (Jurnal Dinamika Manajemen)*, 11(1), 27-38.
- Isola, W. A., Adeleye, B. N., & Olohunlana, A. O. (2020). “Boardroom female participation, intellectual capital efficiency, and firm performance in developing countries: Evidence from Nigeria.” *Journal of Economics, Finance and Administrative Science*, 25(50), 413-424.
- Jaiswal, A. (2020). Female directors on board: the roadmap for India.
- Jensen, M. & Meckling, W. (1976). "Theory of the firm: Managerial behavior, agency costs, and ownership structure." *Journal of Financial Economics*, 48: 831-880.
- Joshua, M. U. (2020). The Impact of Board Ethnic Diversity of Quoted Companies on Dividend Decision Policy.
- Kamil, R. & Appiah, K.O. (2022). “Board gender diversity and cost of debt: Do firm size and industry type matter?” *Gender in Management: An International Journal*, 37(1), 19-38.
- Kasoga, P. S. (2020). Does investing in intellectual capital improve financial performance? Panel evidence from firms listed in Tanzania DSE. *Cogent Economics & Finance*, 8(1), 1802815.

- Khan, S. N., & Ali, E. I. E. (2017). "How intellectual capital moderates the relationship between corporate governance and firm performance in the capital market of Pakistan: A conceptual review and proposal." *Journal of Economic & Management Perspectives*, 11(2), 359-371.
- Macaulay, C., Richard, O., & Peng, M. et al. (2018). Alliance network centrality, board composition, and corporate social performance. *J Bus Ethics* 151(4): 997–1008.
- MacKay, J. R., Hughes, K., Marzetti, H., Lent, N., & Rhind, S. M. (2019). "Using National Student Survey (NSS) qualitative data and social identity theory to explore students' experiences of assessment and feedback." *Higher Education Pedagogies*, 4(1), 315-330.
- Manita, R., Bruna, M.G., Dang, R. & Houanti, L. (2018), "Board gender diversity and ESG disclosure: evidence from the USA", *Journal of Applied Accounting Research*, 19(2), 206-224.
- Marinova, J., Plantenga, J., & Remery, C. (2016). "Gender diversity and firm performance: Evidence from Dutch and Danish boardrooms." *The International Journal of Human Resource Management*, 27(15), 1777-1790.
- Mastella, -M., Vancin, D., Perlin, M. & Kirch, G. (2021), "Board gender diversity: performance and risk of Brazilian firms", *Gender in Management*, 36(4), 498-518. <https://doi.org/10.1108/GM-06-2019-0088>.
- Mela, C.F. & Kopalle, P.K. (2002). "The impact of collinearity on regression analysis: the asymmetric effect of negative and positive correlations." *Applied Economics*, 34(6), 667-677.
- Melkumov, D., & Khoreva, V. (2015). "The effect of board capital and conflict on the tasks of the board of directors." *International Studies of Management & Organization*, 45(1), 60-79.

- Mensah, E. & Onumah, J.M. (2023), "Women on boards, firm earnings management (EM) and performance nexus: does gender diversity moderate the EM–performance relationship?" *Corporate Governance*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/CG-06-2022-0262>.
- Mollah, M. A. S., & Rouf, M. A. (2022). The impact of intellectual capital on commercial banks' performance: evidence from Bangladesh. *Journal of Money and Business*.
- Moreno-Gómez, J., Lafuente, E. & Vaillant, Y. (2018), "Gender diversity in the board, women's leadership, and business performance", *Gender in Management*, 33(2), 104-122. <https://doi.org/10.1108/GM-05-2017-0058>.
- Nadeem, M. (2020). "Does board gender diversity influence voluntary disclosure of intellectual capital in initial public offering prospectuses? Evidence from China." *Corporate Governance: An International Review*, Vol. 28, No.2, pp.100-118.
- Nadeem, M., Farooq, M. B., & Ahmed, A. (2019). "Does female representation on corporate boards improve intellectual capital efficiency?" *Journal of Intellectual Capital*.
- Okoyeuzu, C., Ujunwa, A., Ujunwa, A.I. & Onah, E.O. (2021), "Independent board, gender diversity and bank performance in Nigeria: a system-GMM approach", *Gender in Management*, 36(6), 677-696. <https://doi.org/10.1108/GM-04-2020-0129>.
- Önday, Ö. (2016). Organizational economics theory: from the theory of firm of Jensen & Meckling to business transactions of Rubin, 38933-38943.
- Opoku, A., & Williams, N. (2019). Second-generation gender bias: An exploratory study of the women's leadership gap in a UK construction organisation. *International Journal of Ethics and Systems*, 35(1), 2-23.

- Ouni, Z., Ben Mansour, J., & Arfaoui, S. (2022). "Corporate Governance and Financial Performance: The Interplay of Board Gender Diversity and Intellectual Capital." *Sustainability*, 14(22), 15232.
- Ozkan, N., Cakan, S., & Kayacan, M. (2017). "Intellectual capital and financial performance: A study of the Turkish Banking Sector." *Borsa Istanbul Review*, 17(3), 190-198.
- Pfeffer, J. & Salancik, G.R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*, Harper and Row, New York, NY.
- Puntaier, E., Zhu, T. & Hughes, P. (2022), "Board diversity as a strategic choice and why it should matter to SMEs " *International Journal of Entrepreneurial Behavior & Research*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/IJEBR-03-2022-0225>.
- Randøy, T., Thomsen, S., & Oxelheim, L. (2006). The performance effects of board diversity in Nordic Firms.
- Reddy, S., & Jadhav, A. M. (2019). Gender diversity in boardrooms—A literature review. *Cogent Economics & Finance*, 7(1), 1644703.
- Scafarto, V., Ricci, F., Magnaghi, E., & Ferri, S. (2021). "Board structure and intellectual capital efficiency: does the family firm status matter?" *Journal of Management and Governance*, 25, 841-878.
- Scholtz, H. & Kieviet, S. (2018). "The influence of board diversity on company performance of South African companies." *Journal of African Business*, 19(1), 105-123.
- Shamsudin, L. I., & Yian, R. Y. M. (2013). "Exploring the relationship between intellectual capital and performance of commercial banks in Malaysia." *Review of Integrative Business and Economics Research*, 2(2), 326.

- Shortland, S., & Perkins, S. J. (2020). "Women's expatriate careers: losing trust in organizational equality and diversity policy implementation?" *Journal of Global Mobility: The Home of Expatriate Management Research*, 8(2), 183-208.
- Singla, H.K. (2020). "Does VAIC affect the profitability and value of real estate and infrastructure firms in India? A panel data investigation", *Journal of Intellectual Capital*, 21(3), 309-331. <https://doi.org/10.1108/JIC-03-2019-0053>.
- Smriti, N. & Das, N. (2018). "The impact of intellectual capital on firm performance: a study of Indian firms listed in COSPI." *Journal of Intellectual Capital*, 19(5), 935-964. <https://doi.org/10.1108/JIC-11-2017-0156>
- Stefanovic, N. & Barjaktarovic, L. (2021), "Gender makes the difference: the moderating role of gender on the relationship between management structure and performance in banking", *Gender in Management*, 36(1), 18-38. <https://doi.org/10.1108/GM-09-2019-0162>.
- Suherman, S., Usman, B., Mahfirah, T. F., & Vesta, R. (2021). "Do female executives and CEO tenure matter for corporate cash holdings? Insight from a Southeast Asian country." *Corporate Governance: The International Journal of Business in Society*, 21(5), 939-960.
- Taouab, O., & Issor, Z. (2019). Firm performance: Definition and measurement models. *European Scientific Journal*, 15(1), 93-106.
- Terjesen, S., Sealy, R., & Singh, V. (2009). "Women directors on corporate boards: A review and research agenda." *Corporate Governance: An International Review*, 17(3), 320-337.

- Tran, N.M., Ngo, Q.G. & Tran, Q.T. (2022), "Top management team gender diversity and the financial performance of Vietnamese SMEs: family and non-family owned firms", *Gender in Management*, Vol. ahead-of-print, No. ahead-of-print. <https://doi.org/10.1108/GM-11-2021-0345>.
- Transparency International (2020). "Corruption perceptions index 2020", [Online], available at www.transparency.org/en/cpi/2020/index/nzl.
- Ur Rehman, A., Aslam, E., & Iqbal, A. (2022). Intellectual capital efficiency and bank performance: evidence from islamic banks. *Borsa Istanbul Rev* 22(1), 113–121. <https://doi.org/10.1016/j.bir.2021.02.004>
- Usman, M., Farooq, M.U., Zhang, J., Makki, M.A.M. & Khan, M.K. (2019), "Female directors and the cost of debt: does gender diversity in the boardroom matter to lenders?" *Managerial Auditing Journal*, 34(4), 374-392.
- Zhang, J., & Zhang, Y. (2020). "Tourism and gender equality: An Asian perspective." *Annals of Tourism Research*, 85, 103067.