UNIVERSITY OF CAPE COAST

CORPORATE SUSTAINABILITY DISCLOSURE, FINANCIAL MATERIALITY AND FINANCIAL PERFORMANCE OF LISTED FIRMS IN SUB-SAHARAN AFRICA

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BY

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

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DECLARATION

Candidate's Declaration

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

Candidate' Signature……..... Date……

Name: Michaella Selasi Genego

Supervisor's Declaration

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

Supervisor's Signature……. Date……

Name: Rev. Prof. George Tackie

ABSTRACT

This study investigates the effect of corporate sustainability disclosure (CSD) on the financial performance of listed firms in Sub-Saharan Africa, emphasising the moderating role of financial materiality (FM). Adopting a positivist philosophical paradigm and a quantitative research approach, the study employed an explanatory research design to test hypothesized relationships among key variables using Return on Assets (ROA), Return on Equity (ROE), and Tobin's Q as financial performance proxies. The findings reveal that FM has a consistently positive and statistically significant effect on firm financial performance across all three indicators, suggesting that firms emphasising financially material environmental, social, and governance (ESG) disclosures are more likely to achieve superior financial outcomes. In contrast, the effect of generic CSD on financial performance was weaker and less consistent. Although positive and significant under certain model estimations, CSD's impact diminished under the Fixed Effects analysis. Its effect on Tobin's Q was also marginal, indicating limited financial benefits when sustainability disclosures are not linked to material issues. Importantly, the interaction effect between FM and CSD, particularly through board expertise, showed a consistently positive influence on financial performance. This underscores the critical role of financially literate board members in translating ESG data into strategic financial value. The study recommends that firms prioritize financially material ESG disclosures, integrate sustainability into core business strategies, and enhance board financial expertise to maximize the value of ESG practices.

KEYWORDS

Corporate Sustainability Disclosure

Financial Materiality

Financial Performance

Listed Firms

Sub-Saharan Africa

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DEDICATION

To my family

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CHAPTER ONE

INTRODUCTION

Overview

The study explored the influence of financial materiality and corporate sustainability disclosure on firm financial performance, using a panel of listed firms in Sub-Saharan Africa. Guided by three objectives, the research examined the independent effect of financial materiality, the impact of corporate sustainability disclosure, and their interaction through board expertise on firm performance. Employing Return on Assets, Return on Equity, and Tobin's Q as performance metrics, the study adopted panel regression techniques, supported by diagnostic tests such as the Hausman and Breusch-Pagan LM tests to determine the appropriate estimation models. The findings revealed that financial materiality significantly and positively affects firm performance, while corporate sustainability disclosure showed a weaker and less consistent impact. However, the interaction of financial materiality with board expertise enhanced financial outcomes, highlighting the critical role of governance in sustainability practices. The results underscore the value of material ESG disclosures and informed board oversight in driving financial success within the unique context of Sub-Saharan Africa.

Background to the Study

Corporate sustainability disclosure has increasingly become a cornerstone of modern business practices, driven by rising stakeholder demands for transparency, accountability, and long-term value creation (Sulemana, 2025). Consequently, companies worldwide are now expected to report on their environmental, social, and governance (ESG) practices, highlighting their

impacts on society and the environment. For example, KPMG's 2022 Survey of Sustainability Reporting revealed that 96% of the world's largest 250 companies (G250) produce sustainability reports, up from 93% in 2020, reflecting a growing recognition of sustainability's strategic importance. This surge in reporting is partly attributable to heightened regulatory requirements, stakeholder pressures, and an evolving understanding of corporate responsibility in the face of climate change and social inequality. In the European Union, the Corporate Sustainability Reporting Directive (CSRD) mandates detailed sustainability disclosures aligned with the EU taxonomy, while the United States Securities and Exchange Commission (SEC) has proposed rules requiring climate-related disclosures for public companies. These global initiatives underscore the critical role of corporate sustainability disclosure in aligning business strategies with sustainable development goals and enhancing transparency across industries.

Moreover, the significance of sustainability disclosure is increasingly assessed in terms of its financial relevance, particularly through the lens of financial materiality. Financial materiality focuses on ESG issues that measurably impact a firm's financial performance, thereby influencing investors' decision-making. As a result, the emphasis has shifted from symbolic reporting to the disclosure of financially material sustainability data. Frameworks such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) reinforce this distinction, with SASB emphasising industry-specific financial materiality metrics. Eccles and Klimenko (2021) found that firms disclosing financially material sustainability issues outperformed those that did not, demonstrating higher

returns on assets and market valuation. Therefore, financial materiality serves as a critical determinant of disclosure relevance, linking sustainability practices directly to corporate financial outcomes.

Despite global advancements, Sub-Saharan Africa continues to lag in both the quality and frequency of sustainability disclosures. While South Africa has made strides through mandatory integrated reporting for JSE-listed firms, the broader region remains underrepresented in global ESG reporting benchmarks. The African Integrated Reporting Council (AIRC) reports that only 23% of listed firms in Sub-Saharan Africa produce comprehensive sustainability reports, with even fewer aligning with international standards such as GRI or SASB. This scarcity of standardized, comparable data undermines investor confidence and complicates efforts to assess financial materiality, thereby limiting the region's integration into the global financial system. Hence, empirical research is necessary to understand the dynamics between sustainability disclosure, financial materiality, and financial performance in Sub-Saharan Africa, providing guidance for firms aiming to enhance transparency and value creation.

The link between sustainability disclosure and financial performance is further strengthened by stakeholder and legitimacy theories, which suggest that firms providing credible and relevant ESG information can earn stakeholder trust, reduce information asymmetry, and attract capital. Supporting this view, Friede, Busch, and Bassen (2015) conducted a meta-analysis of over 2,000 studies, reporting that 90% found a non-negative relationship between ESG factors and corporate financial performance, with many demonstrating positive effects. Similarly, Khan, Serafeim, and Yoon (2016) showed that disclosures

focused on financially material sustainability issues are associated with superior financial outcomes compared to immaterial disclosures. In Sub-Saharan Africa, although South Africa has pioneered integrated reporting, research in other countries remains fragmented. Ntim and Soobaroyen (2013) observed a positive link between corporate governance and firm performance among South African firms, while Hinson et al. (2015) found that voluntary environmental disclosures positively influenced market performance in Ghana. These studies indicate that both the quality and relevance of disclosures can affect financial outcomes, yet the inconsistent application of reporting standards complicates cross-company comparisons.

Importantly, corporate sustainability disclosure guided by financial materiality can enhance financial performance by reducing risks, improving resource efficiency, and strengthening stakeholder relationships. Material disclosures, such as those on carbon emissions, labor practices, and board diversity, become strategically valuable when linked to regulatory compliance, reputational risks, or operational costs. Heinkel, Kraus, and Zechner (2001) argue that firms with poor environmental practices face higher costs of capital, while proactive management of material ESG risks is rewarded through better market valuations and cheaper financing. In Sub-Saharan Africa, where access to finance is often constrained, the identification and disclosure of financially material sustainability issues are particularly critical for corporate growth and survival.

Furthermore, the business case for sustainability is reinforced by the region's exposure to climate risks, social inequality, and governance challenges. For example, the African Development Bank (2020) estimated that

climate-related disasters have cost the continent over USD 70 billion in the past decade, affecting agriculture, infrastructure, and public health. Firms disclosing strategies to manage environmental and social risks are better positioned to secure investor confidence and maintain operational resilience. As international investors increasingly integrate ESG criteria into portfolio selection, African firms that align disclosures with financial materiality standards are likely to gain improved access to global capital markets. Consequently, sustainability disclosure, financial materiality, and financial performance are closely interconnected, highlighting the need for context-specific research in Sub-Saharan Africa.

Finally, cultural, regulatory, and institutional factors further shape the practice of sustainability disclosure and its financial implications. Weak enforcement, limited stakeholder activism, and inadequate governance frameworks impede the production of high-quality reports (World Bank, 2021). Less than 35% of African stock exchanges mandate ESG disclosures, and many firms lack the internal capacity to produce meaningful sustainability reports. Nonetheless, initiatives such as the Africa Integrated Reporting Initiative (AIRI) encourage alignment with global standards, improving comparability, transparency, and market credibility. Therefore, when guided by financial materiality, enhanced disclosure practices can enable African firms to attract investment, reduce perceived risk, and improve financial performance in a competitive, sustainability-conscious global economy.

The theoretical underpinnings of this relationship are reinforced by stakeholder theory, which posits that addressing the interests of all stakeholders, not just shareholders, is essential for long-term success. By disclosing

financially material ESG information, firms signal responsiveness to stakeholder concerns, thereby enhancing legitimacy and trust. Empirical evidence supports this perspective: Ioannou and Serafeim (2012) found that robust sustainability disclosure practices correlate with superior financial performance and market valuation. Global studies further reinforce the importance of material disclosures. Khan, Serafeim, and Yoon (2016) demonstrated that firms with high scores on material sustainability issues outperform those focusing on immaterial factors. Similarly, Eccles et al. (2014) found that high-sustainability firms enjoy higher stock market performance and profitability, while Lu and Taylor (2018) reported positive correlations between ESG disclosures and returns on assets in Chinese listed firms. These findings underscore the value of financial materiality in driving meaningful sustainability disclosure and enhancing corporate financial performance.

Statement of the Problem

The financial performance of listed firms in Sub-Saharan Africa continues to exhibit volatility and underperformance relative to global counterparts, raising critical concerns about the underlying drivers of financial sustainability in the region (Rufai et al., 2023). Despite various economic reforms and initiatives aimed at enhancing corporate governance and capital market efficiency, firms in Sub-Saharan Africa often struggle with persistent challenges such as limited access to capital, high operational costs, poor investor confidence, and inadequate corporate transparency (Beck et al., 2020; Acha-Anyi, 2021). One key concern that remains underexplored in this context is the role of corporate sustainability disclosure and its financial materiality in influencing the financial outcomes of firms. While global evidence suggests a

positive linkage between effective sustainability disclosure and financial performance, the extent to which this relationship holds in the Sub-Saharan African context is not fully understood (Asubiojo, 2024). The lack of standardized and financially relevant sustainability disclosures undermines the ability of investors to make informed decisions, thereby limiting capital inflows and increasing the cost of financing for firms (Ntim et al., 2013; Asubiojo, 2024; Hinson et al., 2015). This situation calls for a closer examination of how corporate sustainability disclosure practices, particularly those with financial materiality, impact financial performance in this under-researched region.

The problem is exacerbated by the low prevalence and inconsistent quality of sustainability reporting among firms in Sub-Saharan Africa. Unlike developed economies where ESG disclosure is often mandated or guided by strong regulatory frameworks, firms in Sub-Saharan Africa frequently engage in sustainability reporting on a voluntary basis, leading to inconsistencies in the depth, scope, and quality of information disclosed (Igwe, 2023). This fragmented approach makes it difficult for investors to assess the risks and opportunities associated with ESG factors, thereby weakening the decision-making process and potentially undermining firm valuation.

Moreover, many firms in Sub-Saharan Africa have yet to align their disclosures with globally recognized standards such as the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB), which emphasize the importance of financial materiality (Okafor & Akinbode, 2022; Ofori et al., 2023). This misalignment diminishes the strategic value of sustainability disclosures and limits their potential contribution to improving financial performance (Mensah & Adjei, 2021; Tutu & Amoako, 2022).

Consequently, there is an urgent need to investigate the implications of corporate sustainability disclosure and financial materiality for firm performance within the region's unique institutional and economic environment (Chukwuemeka & Eze, 2023).

Understanding the financial relevance of sustainability disclosures is essential because it goes beyond mere corporate social responsibility to encompass issues that materially affect firm valuation, risk exposure, and long-term profitability (Eccles, Ioannou, & Serafeim, 2014; Asubiojo, 2024). Financial materiality ensures that sustainability disclosures are not only informative but also strategically aligned with financial decision-making processes (Okafor & Akinbode, 2022). In the absence of this alignment, disclosures may become symbolic or "greenwashing" in nature, providing little to no value to investors or stakeholders (Mensah & Adjei, 2021). In global markets, evidence indicates that firms focusing on financially material ESG issues tend to outperform their peers in both accounting and market-based performance indicators (Khan, Serafeim, & Yoon, 2016; Lu & Taylor, 2018). However, the applicability of these findings to Sub-Saharan African firms remains uncertain due to contextual differences such as institutional quality, stakeholder engagement, and market maturity (Ofori, Boateng, & Ababio, 2023). The risk is that African firms may either overlook financially material disclosures or focus on immaterial issues that do not enhance financial performance. Therefore, this study is relevant in assessing whether the principles of financial materiality embedded in corporate sustainability disclosure frameworks are being applied effectively within the context of Sub-Saharan Africa (Chukwuemeka & Eze, 2023).

The financial underperformance of many listed firms in Sub-Saharan Africa has significant macroeconomic implications. It undermines capital market development, hampers investor confidence, and limits the continent's ability to attract foreign direct investment (FDI). According to the World Bank (2022), the return on equity of listed firms in Sub-Saharan Africa is among the lowest across emerging markets, partly due to structural inefficiencies and governance challenges. In response, policy makers and regulators have increasingly advocated for improved corporate governance practices, including enhanced ESG disclosures. However, without clarity on the financial materiality of disclosed ESG data, the practical impact of such regulatory efforts remains questionable. Studies such as those by Nkundabanyanga et al. (2014) and Amran and Othman (2012) suggest that while disclosure quantity is increasing, the quality and relevance of such disclosures in relation to firm financial outcomes remain poorly understood. This highlights the gap between disclosure practices and their actual contribution to financial performance, further necessitating empirical exploration within Sub-Saharan Africa.

Although several studies have examined the relationship between sustainability disclosure and firm performance in global and emerging markets, only a limited number focus on the Sub-Saharan African region. For instance, Ntim and Soobaroyen (2013) found a positive relationship between corporate governance disclosures and financial performance among South African firms, while Hinson et al. (2015) demonstrated similar findings for Ghanaian companies. However, these studies often focus on broad disclosure metrics without specifically isolating financially material disclosures from immaterial ones. This presents a methodological limitation that makes it difficult to

ascertain the true value of sustainability reporting in financial terms. Furthermore, these studies rarely integrate a multi-country perspective, leaving questions about the regional consistency of findings across different institutional environments within Sub-Saharan Africa. As such, there is a notable gap in the literature regarding how financial materiality moderates the relationship between sustainability disclosure and financial performance, especially in diverse African capital markets.

Moreover, existing studies frequently fail to incorporate the perspectives of key stakeholders such as investors, regulators, and analysts, who rely on financially material ESG information to make investment decisions. This stakeholder disconnect may explain the relatively low impact of ESG disclosures on capital costs and stock prices in Sub-Saharan Africa, compared to more developed markets. For example, a study by Fatemi et al. (2018) in emerging markets found that only financially material ESG disclosures significantly influenced firm valuation, while symbolic disclosures had negligible effects. The failure of many Sub-Saharan African firms to focus on material ESG issues might thus account for the weak linkage between disclosure practices and financial performance. Therefore, addressing this gap requires not only evaluating the presence of sustainability disclosures but also critically assessing their financial relevance and strategic alignment. This approach offers a more nuanced understanding of how firms can leverage disclosure practices to improve financial outcomes.

The practical importance of this problem cannot be overstated, especially as global capital flows increasingly favor firms with robust and financially material sustainability disclosures. Institutional investors are

integrating ESG criteria into their investment processes, and firms that fail to meet these expectations risk exclusion from investment portfolios. For Sub-Saharan African firms, this represents both a challenge and an opportunity. Failure to provide financially material disclosures can limit access to international capital and hinder competitiveness, while alignment with global disclosure standards can enhance reputation, investor trust, and market valuation. This context makes it imperative for scholars and practitioners to understand the dynamics between sustainability disclosure, financial materiality, and financial performance within the African landscape. Addressing this problem can help inform policy reforms, corporate strategy, and investor education, ultimately fostering more transparent and resilient financial markets in Sub-Saharan Africa.

In light of the above, the problem this study seeks to address is the limited understanding of how corporate sustainability disclosure, guided by principles of financial materiality, influences the financial performance of listed firms in Sub-Saharan Africa. Despite global evidence supporting a positive relationship between financially material ESG disclosures and financial outcomes, Sub-Saharan African firms have not been sufficiently studied to confirm whether similar dynamics are at play in the region. The relevance of this issue is underscored by the growing importance of ESG considerations in investment decisions and the persistent financial challenges facing African firms.

Purpose of the Study

The purpose of this study is to examine the effect of corporate sustainability disclosure on the financial performance of listed firms in Sub-

Saharan Africa, with a specific focus on the role of financial materiality as a moderating factor.

Research Objectives

Specifically, the study sought to;

1. examine the effect of corporate sustainability disclosure on financial performance of listed firms in Sub-Saharan Africa.
2. analyse the effect of financial materiality on financial performance of listed firms in Sub-Saharan Africa.
3. analyse the moderating effect of financial materiality on the relationship between corporate sustainability disclosure and financial performance of listed firms in Sub-Saharan Africa.

Research Hypotheses

1. There is a positive significant relationship between corporate sustainability disclosure and financial performance of listed firms in Sub – Saharan Africa.
2. There is a positive significant relationship between financial materiality and financial performance of listed firms in Sub – Saharan Africa.
3. There is a positive significant moderating effect of financial materiality on the relationship between corporate sustainability disclosure and financial performance of listed firms in Sub – Saharan Africa.

Significance of the Study

The significance of this study lies in its potential to contribute to the growing body of literature on sustainability reporting and financial performance, with a specific focus on Sub-Saharan Africa, a region that has received limited scholarly attention in this domain. While several studies in

developed economies have confirmed that corporate sustainability disclosures, particularly those that are financially material, positively influence firm value and performance, the extent to which this relationship holds in African markets remains unclear. Given the structural, regulatory, and institutional differences between Sub-Saharan Africa and developed markets, this study will help contextualize global findings and offer region-specific insights. By bridging this knowledge gap, the research has the potential to inform academic debates on sustainability practices, financial relevance, and corporate governance in emerging economies.

From a policy perspective, the study is relevant to regulators, stock exchanges, and standard-setting bodies that are seeking to improve corporate transparency and investor confidence in Sub-Saharan African capital markets. Insights from the study can support the development of robust reporting frameworks that emphasize financial materiality and encourage meaningful sustainability disclosures. Regulators may use the findings to design targeted policies and guidelines that mandate or incentivize disclosure of material ESG factors, which in turn could enhance market efficiency and protect investor interests. Furthermore, the study's results could assist in the alignment of local disclosure practices with international standards such as those set by the Global Reporting Initiative (GRI), the IFRS Sustainability Disclosure Standards, and the Sustainability Accounting Standards Board (SASB).

The study is also significant for corporate managers and boards of listed firms in the region. As global investors increasingly demand transparency and accountability on ESG issues, understanding the financial implications of sustainability disclosures becomes a strategic priority for firms. The study’s

findings can guide corporate leaders on which ESG factors are financially material and how to incorporate them into their disclosure practices to drive value creation. Additionally, the research may help firms understand how to leverage sustainability reporting not merely as a compliance or reputational tool but as a strategic asset that enhances long-term financial performance. In a region where firms often operate in resource-constrained environments, the ability to prioritize material disclosures can lead to more efficient allocation of reporting efforts and resources.

Finally, the study holds significance for investors and other capital market participants seeking to make informed decisions based on ESG disclosures. As the appetite for sustainable investing grows globally, investors require credible, comparable, and financially relevant ESG information to evaluate firm risks and opportunities. The study will provide empirical evidence on the value relevance of sustainability disclosures in Sub-Saharan Africa, thereby helping investors differentiate between symbolic and substantive disclosures. In doing so, it promotes transparency, reduces information asymmetry, and strengthens the investment climate in the region. This enhanced understanding will not only improve portfolio decision-making but also support the broader goal of integrating sustainable development into financial markets.

Delimitations

The delimitations of this study outline the scope and boundaries intentionally set by the researcher to ensure focus and manageability. First and foremost, the study is delimited to listed firms within Sub-Saharan Africa, thereby excluding private companies, state-owned enterprises, and firms operating outside the region. This geographic and institutional focus is chosen

to explore the dynamics of corporate sustainability disclosure, financial materiality, and financial performance within the unique economic, regulatory, and socio-political context of Sub-Saharan Africa. As such, the findings may not be generalizable to firms in other regions, particularly those operating in more developed or highly regulated capital markets. The intent is to provide insight into how firms in emerging economies navigate sustainability reporting and its financial implications, recognising that institutional factors such as governance quality, enforcement mechanisms, and investor behavior may influence outcomes differently than in the global North.

Additionally, the study is delimited to a specific time frame for data collection and analysis, likely focusing on financial and sustainability disclosures within a 10-year period (2015 – 2024). This time constraint ensures data relevance and consistency but may overlook longer-term trends or the effects of newer regulatory developments and sustainability standards introduced after this period. Furthermore, the study concentrates on publicly available data such as annual reports, sustainability reports, and stock exchange disclosures. While these sources provide rich and credible information, they may not capture internal or non-public sustainability initiatives and financial strategies that could also affect performance outcomes. The reliance on secondary data limits the ability to explore managerial intentions or stakeholder perceptions in depth.

Another delimitation of the study is the selection of financial performance metrics. The study will primarily employ standard financial indicators such as Return on Assets (ROA), Return on Equity (ROE), and market-based measures like Tobin's Q. These indicators are widely used and

enable comparability across firms, but they may not fully reflect broader performance outcomes such as social impact, innovation, or stakeholder engagement. Similarly, sustainability disclosure will be assessed based on the presence and quality of ESG information, with an emphasis on financial materiality. The focus on material disclosures aims to distinguish between disclosures that are strategically relevant versus those that are symbolic or immaterial. However, defining and operationalising financial materiality may vary across industries and firms, and such subjectivity constitutes an inherent limitation of the study's scope.

Finally, the study deliberately adopts a quantitative research approach, using statistical techniques to examine the relationships among the variables. This methodological delimitation allows for generalisation across a large number of firms and enhances the study's empirical rigor. However, it excludes qualitative insights that could be gained from interviews, case studies, or ethnographic approaches, which may reveal deeper motivations, cultural influences, or organisational dynamics behind sustainability practices. The decision to focus on measurable, quantifiable relationships means that rich contextual narratives and subjective interpretations of disclosure practices are beyond the scope of this research. While this helps maintain analytical clarity and focus, it also suggests avenues for future research to complement these findings with qualitative depth.

Limitations

The limitations of this study primarily stem from its reliance on secondary data sources such as annual reports, sustainability disclosures, and financial statements published by listed firms in Sub-Saharan Africa. While

these sources offer valuable insights, they may not fully capture the quality, accuracy, or completeness of the firms' actual sustainability practices. Companies may engage in selective reporting or "greenwashing" to appear more responsible than they are, thereby skewing the findings. Moreover, variations in disclosure formats, depth, and adherence to reporting standards across firms and countries may affect the consistency and comparability of the data used in the analysis. These inconsistencies pose challenges in developing a uniform measure of corporate sustainability disclosure and financial materiality, which are central to this study.

Another significant limitation is the potential subjectivity involved in assessing financial materiality. While efforts will be made to apply standard criteria based on globally accepted frameworks such as the SASB or GRI, the determination of what constitutes "material" ESG information can differ across industries, firms, and stakeholder perspectives. This variation makes it difficult to establish a universally applicable measure, potentially affecting the internal validity of the study. In addition, financial materiality is often context-specific and may evolve over time due to regulatory changes, stakeholder pressure, or shifts in business strategy, factors that may not be adequately captured within the timeframe or scope of the study.

The study also faces limitations due to its regional focus on Sub-Saharan Africa, which, while intentional, restricts the generalizability of its findings to other geographic regions. Sub-Saharan Africa comprises diverse countries with different economic structures, governance systems, and market maturities. These differences can influence how firms approach sustainability and how investors interpret ESG disclosures. As a result, the conclusions drawn may be

more relevant to certain countries within the region than to others. Additionally, the relatively underdeveloped state of financial markets in many Sub-Saharan African countries may mean that the impact of sustainability disclosure on financial performance is less pronounced than in more mature markets, potentially limiting the strength of observable relationships.

Furthermore, the exclusive use of quantitative research methods limits the study's ability to explore the underlying motivations, challenges, and organisational processes associated with sustainability disclosure. While statistical analysis provides measurable and generalizable results, it cannot offer the nuanced understanding that qualitative methods such as interviews or case studies might provide. Important contextual elements, such as corporate culture, stakeholder engagement, or ethical leadership, may therefore be overlooked. This limitation constrains the study's ability to offer comprehensive explanations for the findings, particularly in cases where data trends contradict theoretical expectations.

Lastly, time constraints and data availability pose additional limitations. The study may be confined to data from a limited period, such as the most recent five years, due to the availability of consistent sustainability disclosures across firms. This temporal limitation could affect the ability to assess long-term effects or to observe trends that develop gradually. In cases where firms have only recently begun reporting ESG information, the analysis may be based on incomplete time series, thus affecting the robustness of the results. Additionally, due to resource constraints, the study may not be able to include every listed firm in Sub-Saharan Africa, which could lead to sampling bias or reduced representativeness of the findings. Despite these limitations, the study

is expected to offer important insights into the evolving intersection of corporate sustainability and financial performance in the region.

Organisation of the Study

The study is organized into five interrelated chapters that systematically address the research problem and objectives. Chapter One provides the introduction, offering background to the study, a clear statement of the problem, research objectives, hypotheses, significance, scope, limitations, and the organisation of the study itself. Chapter Two presents a comprehensive review of relevant literature, including theoretical, conceptual, and empirical perspectives on corporate sustainability disclosure, financial materiality, and financial performance, as well as the relationships among these variables. Chapter Three details the methodology employed, describing the research design, population, sampling techniques, data sources, data collection instruments, and methods of analysis. Chapter Four presents the results of the empirical analysis, interpreting the findings in relation to the research questions and hypotheses. Finally, Chapter Five offers a summary of the study, draws key conclusions, and provides recommendations for corporate managers, policymakers, investors, and future researchers, based on the study's findings.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviews the theoretical, conceptual, and empirical literature on corporate sustainability disclosure, financial materiality, and financial performance. The theoretical review section explores foundational theories such as stakeholder theory, and legitimacy theory, which underpin the study's conceptual orientation. The conceptual review clarifies the main constructs of the study, corporate sustainability disclosure, financial materiality, and financial performance, by examining various definitions, dimensions, and measurement approaches used in prior research. The empirical review synthesizes recent studies globally and within Africa, highlighting key findings, methodological approaches, and research gaps that this study seeks to address. The conceptual framework is then presented to illustrate the hypothesized relationships among the variables and guide the empirical analysis.

Theoretical Review

This section reviews the theories underpinning the study. The stakeholder theory, signalling effect theory and legitimacy theory were used to explain the relationship between the variables.

Stakeholder Theory

Stakeholder Theory, first proposed by Edward Freeman in 1984, serves as a foundational framework for understanding corporate responsibilities beyond mere profit maximisation. Freeman's theory posits that businesses should consider the interests and expectations of all stakeholders, such as shareholders, employees, customers, suppliers, communities, and regulators,

rather than focusing solely on shareholders (Freeman, 1984). According to this perspective, companies exist within a network of relationships that must be nurtured to ensure long-term sustainability and success. Stakeholder Theory assumes that corporate value is co-created through effective engagement with these groups, and that ignoring stakeholder concerns can result in reputational damage, legal challenges, or loss of market position (Jones, 1995). In this sense, the theory supports the notion that transparency, ethical conduct, and responsiveness to stakeholder expectations are not just moral imperatives but strategic business necessities.

In the context of corporate sustainability disclosure, Stakeholder Theory implies that firms disclose environmental, social, and governance (ESG) information to maintain legitimacy and accountability in the eyes of various stakeholder groups. Stakeholders increasingly demand sustainability-related information to assess how firms manage risks and contribute to long-term social and environmental well-being. In Sub-Saharan Africa, where firms operate in complex environments characterized by weak institutions and stakeholder activism, sustainability disclosures serve as tools for building trust and attracting investment. By making these disclosures, firms respond to stakeholder expectations for transparency and responsible corporate behavior (Moir, 2001). The theory therefore justifies the growing trend among listed firms to integrate sustainability reporting into their annual disclosure practices to secure stakeholder support and maintain social license to operate.

Financial materiality further strengthens the relevance of Stakeholder Theory in guiding sustainability disclosure practices. Financially material ESG issues are those that could reasonably be expected to affect a company's

financial condition or operating performance (SASB, 2018). Stakeholders, particularly investors and regulators, are increasingly interested in the financial relevance of sustainability disclosures rather than generic or symbolic reporting. Stakeholder Theory, in this light, helps explain why firms are pressured to focus on issues that are materially significant to key stakeholders, especially shareholders and institutional investors who seek alignment between ESG performance and financial returns. In Sub-Saharan Africa, firms that align their sustainability disclosures with financially material concerns may gain credibility, enhance stakeholder confidence, and attract long-term investment, thus improving performance.

Several empirical studies have employed Stakeholder Theory to examine the links between sustainability reporting, stakeholder engagement, and financial outcomes. For example, Eccles, Ioannou, and Serafeim (2014) demonstrated that firms with strong stakeholder-oriented practices and material sustainability disclosures had significantly better financial performance than their counterparts. Similarly, Fatemi et al. (2018) found that disclosing financially material ESG information had a positive effect on firm valuation, while immaterial disclosures diluted that value. In an African context, Ntim and Soobaroyen (2013) applied Stakeholder Theory to study corporate governance and sustainability disclosures in South Africa, finding that firms strategically disclosed information to manage stakeholder perceptions and improve firm legitimacy. These studies collectively affirm that stakeholder-informed disclosures, especially those tied to financial outcomes, can enhance corporate performance.

Stakeholder Theory also explains the moderating role of financial materiality on the relationship between sustainability disclosure and financial performance. In essence, the degree to which sustainability disclosures impact firm performance depends on how relevant the disclosed issues are to stakeholders, particularly those with financial stakes in the firm. Material disclosures that address stakeholders' financial concerns, such as carbon emissions in heavy industry or labor practices in manufacturing, are more likely to be perceived as credible and impactful. This enhances stakeholder trust, reduces information asymmetry, and strengthens the link between disclosure and performance (Khan, Serafeim, & Yoon, 2016). In contrast, disclosures that are not financially material may be viewed as superficial or strategic signaling, limiting their ability to influence performance metrics meaningfully.

Signaling Effect Theory

Signaling theory was first introduced by Michael Spence in 1973 to explain how individuals convey information about themselves to others in situations of asymmetric information. In the corporate context, signaling theory posits that firms communicate their quality and intentions through signals, such as corporate sustainability disclosures, to reduce information asymmetry between themselves and external stakeholders like investors, regulators, and consumers (Spence, 1973). The theory assumes that: (1) there is asymmetric information between a firm and its stakeholders, (2) firms have the ability to send credible signals about their quality or performance, and (3) these signals are costly to produce, which enhances their credibility (Connelly et al., 2011).

In the context of Sub-Saharan Africa, where institutional frameworks may be less robust and information asymmetry is prevalent, signaling theory

provides a valuable lens to understand how firms use sustainability disclosures to convey their commitment to environmental, social, and governance (ESG) issues. By voluntarily disclosing information on ESG practices, firms aim to signal their quality and attract investors who are increasingly considering sustainability factors in their investment decisions (Okoye et al., 2024). However, the effectiveness of these signals depends on their credibility and relevance to stakeholders, which brings the concept of financial materiality into focus.

Financial materiality refers to the significance of ESG factors in influencing a firm's financial performance. In signaling theory, for a signal to be effective, it must be credible and relevant. Disclosures that focus on financially material ESG issues are more likely to be perceived as credible and to influence stakeholders' decisions (Eccles et al., 2014). In Sub-Saharan Africa, where resources for sustainability initiatives may be limited, firms need to prioritize disclosures that are financially material to ensure that their signals are both credible and impactful (Asubiojo, 2024).

Empirical studies in Sub-Saharan Africa have examined the relationship between sustainability disclosures and financial performance through the lens of signaling theory. For instance, Okoye et al. (2024) found that environmental disclosures positively affect the financial performance of listed non-financial firms in Sub-Saharan Africa, suggesting that these disclosures serve as effective signals to investors. Conversely, social and governance disclosures were found to have a negative or insignificant impact on financial performance, indicating that not all ESG disclosures are perceived as credible or relevant signals by stakeholders in the region (Okoye et al., 2024).

Legitimacy Theory

Legitimacy Theory, which draws heavily from the work of Dowling and Pfeffer (1975), posits that organisations continually seek to ensure that they operate within the bounds and norms of their respective societies. The central premise of the theory is that firms must maintain legitimacy in the eyes of the public to access resources, sustain operations, and survive over time. Legitimacy is viewed as a generalized perception that an organisation's actions are desirable, proper, or appropriate within a socially constructed system of norms, values, beliefs, and definitions (Suchman, 1995). The theory assumes that when there is a perceived gap between an organisation's behavior and societal expectations, the organisation may face legitimacy threats. In response, companies may use various strategies, including disclosures and symbolic actions, to close this gap and restore or maintain legitimacy. This framework is particularly relevant in the context of sustainability disclosure, where firms are increasingly required to demonstrate accountability to broader stakeholder groups.

In relation to corporate sustainability disclosure, Legitimacy Theory suggests that firms disclose environmental, social, and governance (ESG) information not only to inform but also to legitimize their operations in the eyes of stakeholders. Sustainability disclosures are often used to align corporate behavior with societal values, thereby reducing scrutiny, avoiding sanctions, and enhancing stakeholder support. This dynamic is especially pertinent in Sub-Saharan Africa, where weak regulatory frameworks, environmental degradation, and social inequalities heighten the need for firms to demonstrate socially responsible behavior. Companies in this region often use sustainability

reporting to mitigate legitimacy gaps and signal compliance with global norms and investor expectations (Ackers & Eccles, 2015). By aligning themselves with global standards such as the Global Reporting Initiative (GRI) or the UN Sustainable Development Goals (SDGs), listed firms attempt to secure both reputational capital and operational continuity.

The concept of financial materiality deepens the relevance of Legitimacy Theory by emphasising that disclosures must not only address broad societal concerns but also speak to financially consequential issues. Under Legitimacy Theory, materiality can be seen as a filtering mechanism that firms use to prioritize disclosures that are most likely to affect stakeholder perceptions and financial outcomes. Disclosing financially material ESG issues, those most relevant to a firm's sector and stakeholder interests, helps firms justify their legitimacy from both social and economic standpoints. This approach helps stakeholders, particularly investors and regulators, assess whether firms are effectively managing risks and opportunities related to ESG factors (SASB, 2018). In Sub-Saharan Africa, firms that provide financially material sustainability disclosures may gain increased legitimacy in global capital markets, where such disclosures are often a prerequisite for investment and financing.

Empirical research has applied Legitimacy Theory to explore corporate disclosure behaviors across various contexts. Patten (1992) found that U.S. firms in polluting industries increased environmental disclosures following public scrutiny and regulatory pressure, consistent with legitimacy-seeking behavior. Similarly, Deegan and Rankin (1997) observed that Australian firms used environmental disclosures as a response to media coverage and societal

expectations. In the African context, Ntim and Soobaroyen (2013) utilized Legitimacy Theory to explain the voluntary disclosure practices of South African firms, noting that companies engaged in sustainability reporting to maintain legitimacy amidst rising stakeholder demands. These studies collectively demonstrate that sustainability reporting can serve as a reactive or proactive tool used by firms to manage legitimacy, particularly when aligned with material concerns that carry financial implications.

Legitimacy Theory also provides insight into the moderating role of financial materiality in the relationship between sustainability disclosure and financial performance. Disclosures that address materially significant ESG issues are more likely to influence stakeholder judgments and yield positive performance outcomes. For instance, disclosing a firm's approach to managing climate risk in the energy sector or labor rights in the manufacturing sector signals a commitment to ethical and financially prudent governance. This strengthens the legitimacy of the firm and enhances its attractiveness to investors, customers, and partners. Conversely, non-material disclosures may be perceived as greenwashing or symbolic, thus failing to improve stakeholder confidence or financial outcomes (Cho, Laine, Roberts, & Rodrigue, 2015). Therefore, financial materiality functions as a legitimating filter that enhances the credibility and impact of sustainability disclosures.

Conceptual Review

This section reviews concepts underpinning the study. The concepts of corporate sustainability disclosure, financial materiality and financial performance were explained under this section.

Corporate Sustainability Disclosure

Corporate Sustainability Disclosure (CSD) refers to the process through which firms communicate their environmental, social, and governance (ESG) practices, strategies, and impacts to stakeholders. It is grounded in the principle of corporate transparency and accountability, especially in the context of sustainability and long-term value creation. According to Gray, Owen, and Adams (1996), sustainability disclosure involves voluntary reporting practices that communicate a company's interaction with its social and ecological environment. It allows firms to disclose non-financial information that demonstrates their commitment to ethical practices and sustainable development. The increasing global emphasis on ESG integration in investment decisions has made CSD a vital component of corporate communication, particularly in emerging markets like Sub-Saharan Africa. As corporate responsibilities expand beyond profit maximisation, stakeholders are demanding greater insights into how businesses manage social and environmental risks and opportunities.

Researchers have defined CSD in varying but complementary ways. Hahn and Kühnen (2013) describe it as the dissemination of information related to a firm's sustainability activities, either voluntarily or as mandated by regulatory authorities. Clarkson et al. (2008) distinguish between voluntary and mandatory disclosures, emphasising that voluntary sustainability reports often signal a firm's proactiveness in addressing stakeholder expectations. Michelon, Pilonato, and Ricceri (2015) argue that CSD represents both a strategic and ethical approach to stakeholder engagement and risk management. These conceptualisations underline the communicative, strategic, and ethical dimensions of sustainability disclosure, highlighting its role in building

legitimacy, transparency, and trust among diverse stakeholder groups. As such, CSD is not only a reporting activity but a critical element of modern corporate strategy.

The dimensions of corporate sustainability disclosure typically align with the three pillars of ESG: environmental, social, and governance disclosures. The environmental dimension includes information on issues such as carbon emissions, energy use, water management, and environmental compliance. The social dimension focuses on human capital development, community engagement, labor practices, diversity and inclusion, and occupational health and safety. The governance dimension involves transparency in board structure, executive compensation, shareholder rights, and anti-corruption measures (GRI, 2021). Some scholars have expanded these dimensions further. For example, Bonsón and Bednárová (2015) identify additional categories such as stakeholder engagement and innovation. These dimensions help standardize what constitutes meaningful and comprehensive CSD, aiding stakeholders in comparing sustainability performance across firms and industries.

Measurement of CSD has evolved over time with the development of standardized frameworks and indices. A common approach to measuring sustainability disclosure is content analysis, where researchers examine annual reports, sustainability reports, and corporate websites to assess the extent and quality of disclosed information. Clarkson et al. (2008) proposed an environmental disclosure index based on Global Reporting Initiative (GRI) guidelines to measure voluntary environmental disclosures. Similarly, the Sustainability Accounting Standards Board (SASB) provides industry-specific

standards to identify financially material ESG topics and related disclosures. Some studies use scoring systems developed by third-party rating agencies like MSCI ESG Ratings, Bloomberg ESG Disclosure Scores, or Thomson Reuters ESG Scores to quantify the level of CSD. These tools allow for cross-sectional and longitudinal analysis of firms' sustainability communication practices.

In Sub-Saharan Africa, studies on CSD measurement are gaining traction as more firms adopt global reporting frameworks. Ntim and Soobaroyen (2013) examined the sustainability disclosures of listed South African firms using a self-constructed disclosure index based on GRI standards. They found considerable variability in disclosure levels, often influenced by firm size, board characteristics, and industry. Amidu and Abor (2006) also explored corporate reporting practices in Ghana, identifying limited disclosure on environmental and social issues due to weak regulatory pressures. These studies indicate that while there is increasing awareness of CSD in the region, standardized and consistent reporting remains a challenge. Nonetheless, firms are gradually aligning with international disclosure practices to enhance legitimacy and investor confidence.

Moreover, the degree of corporate sustainability disclosure is often linked to strategic motivations and stakeholder pressures. Voluntary disclosures are typically higher among firms seeking to manage reputational risks, attract long-term investors, or differentiate themselves in competitive markets (Dhaliwal et al., 2011). In regions with low regulatory enforcement, such as parts of Sub-Saharan Africa, firms may use CSD to fill institutional voids and build credibility among international investors and donors. Scholars argue that when disclosures are financially material, they can reduce information

asymmetry and improve market valuation (Eccles et al., 2012). Therefore, measuring not only the quantity but also the materiality and credibility of disclosed information has become a key area of academic interest. This shift emphasizes the importance of high-quality, decision-relevant disclosures over boilerplate or symbolic reporting.

Financial Materiality

Materiality is a fundamental principle in both financial and non-financial reporting that determines which information is significant enough to influence the decision-making of users of that information. In sustainability reporting, materiality helps organisations prioritize environmental, social, and governance (ESG) topics based on their relevance to stakeholders and the business itself. According to the Global Reporting Initiative (GRI, 2021), materiality involves identifying issues that reflect the organisation's significant economic, environmental, and social impacts or that substantively influence stakeholder decisions. Thus, materiality acts as a filter that separates critical sustainability issues from less relevant ones. In recent years, the concept has evolved beyond traditional financial reporting to include broader ESG dimensions. Materiality is now widely acknowledged as a dual-lens concept in sustainability discourse, considering both the company's impact on the world and the world's impact on the company. This evolution reflects a growing recognition of sustainability's relevance to long-term corporate performance (Khan, Serafeim & Yoon, 2016).

Materiality in sustainability reporting is now often discussed in terms of double materiality, comprising two key dimensions: impact materiality and financial materiality. Impact materiality refers to the significance of an

organisation's actual or potential impacts on society and the environment, regardless of whether these impacts are financially material to the organisation (EFRAG, 2023). This approach emphasizes stakeholder concerns and social responsibility. Financial materiality, in contrast, is concerned with sustainability issues that may affect the organisation's financial condition, performance, or access to capital, typically from the perspective of investors and other financial stakeholders (IFRS Foundation, 2022). While impact materiality prioritizes the outward effects of corporate actions, financial materiality focuses inward on how ESG risks and opportunities influence business outcomes. The combination of these perspectives under the double materiality framework provides a holistic view of corporate sustainability.

Financial materiality is conceptually rooted in the tradition of investor-focused disclosure. It refers to the extent to which sustainability-related issues affect an organisation's cash flows, balance sheet, cost of capital, and ultimately its enterprise value (Sullivan & Mackenzie, 2020). In this view, sustainability disclosures are relevant when they help investors assess an organisation's long-term financial prospects. The IFRS Sustainability Disclosure Standards (2023) define financial materiality as the relevance of information to users making decisions about providing resources to the entity. Financial materiality thus functions as a tool for value-relevant reporting and risk management. It bridges the gap between sustainability and financial performance by identifying how ESG factors become financially consequential. As companies face increasing pressure from institutional investors and regulators, the financial materiality of ESG risks is gaining prominence in global reporting frameworks.

The concept of financial materiality has become increasingly important in the investment community as investors seek better insights into ESG-related risks and opportunities. Eccles and Krzus (2018) argue that financially material sustainability information is essential for investors to make informed decisions about the allocation of capital. ESG factors such as climate change, water scarcity, and labor practices, when financially material, influence company valuations, cost structures, and access to financing. For example, the Sustainability Accounting Standards Board (SASB) developed sector-specific materiality maps to help organisations identify which ESG issues are likely to impact financial performance in their industry. These maps reflect the notion that not all sustainability issues are financially material to all companies. Investors, particularly asset managers and pension funds, increasingly demand ESG disclosures aligned with financial materiality, believing they are indicative of long-term value creation and risk mitigation.

Researchers and practitioners have identified several dimensions of financial materiality within the sustainability context. These dimensions include: (1) ESG risks and opportunities that impact financial performance; (2) time horizon of the financial impact (short-, medium-, or long-term); (3) sector-specific relevance of sustainability issues; and (4) the degree of influence on investor behavior and market valuations (SASB, 2020). Another dimension is the materiality threshold, or the extent of an ESG issue's potential to alter economic decisions. Khan et al. (2016) provide empirical evidence showing that firms performing well on financially material ESG issues achieve better stock returns and lower volatility. These dimensions reflect the complexity and variability of financial materiality across industries and timeframes,

underscoring the need for a context-specific approach in sustainability reporting.

Measuring financial materiality involves evaluating the financial impact of ESG issues using both quantitative and qualitative approaches. Scholars have used content analysis of corporate sustainability reports and integrated reports to assess which ESG issues are disclosed as financially material (Chen et al., 2021). Additionally, event study methodologies have been employed to examine how ESG-related events (e.g., environmental fines, labor disputes, or climate-related disasters) affect stock prices and firm value (Krüger, 2015). Some studies apply regression models to link ESG performance on financially material issues to financial outcomes like return on assets (ROA), earnings quality, or cost of capital (Khan et al., 2016). Practitioners also use risk-assessment tools, industry benchmarks, and SASB's materiality maps to identify and measure financially material ESG topics. These tools help organisations quantify potential impacts on cash flow, revenues, and liabilities.

Financial materiality is explicitly embedded in several global sustainability reporting standards. The IFRS's ISSB standards (IFRS S1 and S2), launched in 2023, mandate that companies disclose sustainability-related risks and opportunities that could reasonably be expected to affect their financial prospects. Similarly, SASB standards require industry-specific disclosures focused on financially material ESG issues. Unlike the GRI, which adopts an impact materiality lens, both SASB and IFRS prioritize financial materiality to enhance decision-usefulness for investors. This regulatory shift reflects a broader movement toward integrating ESG information into mainstream financial reporting. As regulatory environments evolve, many

jurisdictions (including the U.S. and U.K.) are aligning sustainability disclosures with financial materiality principles to ensure relevance to capital markets (Bloomberg & Krieger, 2023).

Despite its growing adoption, the concept of financial materiality is not without criticisms. Critics argue that it may overlook critical societal or environmental impacts that, while not currently financially material, may become so over time (Adams & Abhayawansa, 2021). Financial materiality is also inherently backward-looking, relying on quantifiable impacts that have already occurred or can be reasonably forecasted, which may exclude emerging issues. Another limitation is the variability of financial materiality across industries, making standardisation difficult. Moreover, skeptics contend that financial materiality reinforces a shareholder-centric model that deprioritizes stakeholder concerns. To address these concerns, some propose integrating financial and impact materiality through a double materiality framework, which offers a more balanced and holistic approach to sustainability reporting.

Understanding financial materiality is crucial for effective ESG risk management. Financially material ESG issues can pose significant risks to companies in the form of regulatory penalties, reputational damage, supply chain disruptions, or physical risks from climate change. Identifying and reporting on financially material sustainability topics enables organisations to better anticipate, mitigate, and adapt to these risks. As noted by the Task Force on Climate-related Financial Disclosures (TCFD, 2017), climate-related risks can have financial implications through asset impairments, insurance liabilities, and operational disruptions. Therefore, financial materiality functions not only as a reporting filter but also as a proactive tool for resilience and strategic

planning. Companies that fail to disclose financially material ESG issues may face legal liabilities or capital flight from investors.

The future of financial materiality lies in its dynamic evolution alongside ESG integration and sustainability regulation. As more stakeholders, including regulators, rating agencies, and civil society groups, demand transparent and decision-relevant ESG information, financial materiality will continue to be refined and institutionalized. Artificial intelligence and data analytics are expected to enhance the measurement and forecasting of financially material ESG issues. Moreover, the ongoing convergence of reporting standards, such as the merger of SASB and the IIRC into the Value Reporting Foundation, now part of the IFRS Foundation, indicates a growing consensus around financial materiality in ESG disclosure (IFRS, 2023). However, balancing financial materiality with societal responsibility remains a challenge. Ultimately, financial materiality will continue to play a pivotal role in aligning sustainability with long-term value creation and responsible capitalism.

Financial Performance

Financial performance is a core concept in corporate governance, accounting, and strategic management, often used to evaluate how well a firm uses its assets to generate revenues and sustain profitability. It reflects the outcome of a company's policies and operations in monetary terms, typically used by stakeholders to assess the viability, profitability, and long-term sustainability of an enterprise. According to Richard et al. (2009), financial performance encompasses a firm's ability to create value and generate returns from its investments and operational activities. It is commonly assessed through

indicators such as profitability, liquidity, efficiency, and solvency. In both academic and practical contexts, financial performance serves as a barometer for firm success, competitiveness, and management effectiveness, especially in dynamic and resource-constrained markets like Sub-Saharan Africa.

Several scholars have offered conceptualisations of financial performance that highlight its multidimensional nature. Penman (2013) conceptualizes financial performance as the net outcome of strategic and operational activities that influence firm value creation. Others, such as Kaplan and Norton (1996), broaden the idea to include not only financial metrics but also operational drivers like customer satisfaction, internal process efficiency, and innovation. This view is embodied in their Balanced Scorecard model, which integrates financial and non-financial performance indicators to provide a comprehensive overview of firm performance. In the African context, where firms often face institutional voids and fluctuating market conditions, financial performance must also capture elements like resilience, adaptability, and risk mitigation.

The key dimensions of financial performance commonly examined in the literature include profitability, liquidity, solvency, efficiency, and market valuation. Profitability indicators, such as return on assets (ROA), return on equity (ROE), and net profit margin, measure the firm's ability to generate income relative to its assets or equity base. Liquidity ratios, like the current ratio and quick ratio, evaluate the firm's ability to meet short-term obligations. Solvency metrics, including the debt-to-equity ratio and interest coverage ratio, assess long-term financial stability and capital structure. Efficiency ratios, such as inventory turnover and asset turnover, provide insights into operational

effectiveness. Market-based indicators, including earnings per share (EPS) and Tobin's Q, reflect investor perceptions of the firm's future performance. These dimensions collectively offer a multi-angle view of financial health and strategic capability.

Measurement of financial performance varies based on the research context and the objectives of the study. Quantitative approaches are most prevalent, with many studies relying on secondary financial data extracted from company financial statements, annual reports, or databases such as Bloomberg and Thomson Reuters. ROA and ROE are among the most commonly used indicators due to their capacity to measure profitability relative to firm size (Ameer & Othman, 2012). For instance, firms with higher ROA are typically seen as more efficient in utilising their assets to generate earnings. In addition, some researchers use composite indices that aggregate multiple performance metrics into a single score for ease of analysis (Orlitzky, Schmidt, & Rynes, 2003). These methodologies provide a robust basis for examining correlations between financial performance and other variables, such as corporate sustainability disclosure and financial materiality.

In emerging markets like Sub-Saharan Africa, financial performance measurement often contends with data limitations, inconsistent reporting standards, and regulatory gaps. However, studies such as Ntim and Soobaroyen (2013) have demonstrated that profitability indicators like ROA and ROE remain reliable metrics even in these contexts. Other scholars, like Kyere and Ausloos (2021), emphasize the use of market-based indicators like Tobin's Q to capture investor perceptions in African stock markets. Given the diversity of economic structures and financial maturity in Sub-Saharan African countries,

researchers must adapt their measurement tools to local realities while maintaining methodological rigor. These adaptations are critical for generating valid insights and informing both policy and practice in the region's corporate governance landscape.

Moreover, the relationship between financial performance and variables like corporate sustainability disclosure and financial materiality has been extensively explored in empirical literature. For example, Eccles et al. (2014) found that firms with high-quality, financially material ESG disclosures experienced superior financial performance compared to those with generic or symbolic disclosures. Similarly, Khan, Serafeim, and Yoon (2016) showed that the positive effect of sustainability disclosure on financial performance is stronger when disclosures are focused on financially material topics. These findings underscore the importance of aligning disclosure practices with performance objectives. In this way, financial performance not only serves as an outcome variable but also as a strategic driver influencing corporate behavior and stakeholder expectations.

Empirical Review

The empirical review was carried out around the three objectives of the study and these were grouped under the subsections namely:

Corporate sustainability disclosure and financial performance

Alshehhi, Nobanee, and Khare (2018) investigated the impact of sustainability disclosure on financial performance in the Gulf Cooperation Council (GCC) region. The primary objective was to assess whether firms with higher ESG disclosure levels exhibited superior financial returns. Supplementary objectives included examining sector-specific variations and

the moderating role of corporate governance. The study employed a panel regression analysis on data from 200 publicly listed firms between 2010 and 2016. Content analysis was used to quantify sustainability disclosures, while financial performance was measured using return on assets (ROA) and Tobin's Q. The findings revealed a positive association between ESG disclosure and financial performance, particularly in the energy and financial sectors. The study concluded that robust sustainability reporting enhances investor confidence and operational efficiency.

García-Sánchez, Hussain, and Martínez-Ferrero (2019) examined how sustainability disclosures influence firm value in European listed companies. The main objective was to determine whether market valuation responds positively to enhanced ESG transparency. The study utilized a sample of 1,245 firms from 2010 to 2017, applying a dynamic panel data model with the generalized method of moments (GMM) to address endogeneity concerns. Sustainability disclosure was measured using the Bloomberg ESG disclosure score, while financial performance was proxied by market-to-book ratio. The results indicated a significant positive relationship, particularly for firms with strong governance structures. The study concluded that investors reward firms with higher ESG transparency, suggesting that regulatory bodies should enforce stricter disclosure requirements.

Clarkson, Li, Richardson, and Vasvari (2019) studied the market valuation effects of environmental disclosure in polluting industries. The primary objective was to assess whether improved environmental transparency mitigates reputational risks and enhances firm value. The study used a sample of 850 firms in high-pollution sectors from 2010 to 2018, applying an event

study methodology around the release of sustainability reports. Environmental disclosure was measured using the Global Reporting Initiative (GRI) framework, while firm value was assessed via cumulative abnormal returns (CAR). The findings showed that firms with higher-quality environmental disclosures experienced positive market reactions, whereas those with poor disclosures faced negative investor sentiment. The study concluded that environmental transparency serves as a reputational safeguard.

Fatemi, Fooladi, and Tehranian (2020) explored the long-term financial implications of sustainability reporting in U.S. firms. The primary objective was to assess whether consistent ESG disclosure leads to improved financial stability and reduced risk. Supplementary objectives included analysing the cost of capital effects and shareholder value creation. The study employed a fixed-effects regression model on a dataset of S&P 500 firms from 2010 to 2019. ESG data was sourced from Sustainalytics, while financial performance was measured using stock returns and volatility. The findings demonstrated that high-quality sustainability disclosure reduces systematic risk and enhances long-term shareholder returns. The study concluded that ESG transparency serves as a risk-mitigation tool, particularly during economic downturns.

Dhaliwal, Li, Tsang, and Yang (2020) examined the relationship between voluntary sustainability disclosure and firm valuation in global markets. The primary objective was to determine whether firms benefit financially from voluntary ESG transparency. Supplementary objectives included assessing the role of institutional ownership in moderating this relationship. The study utilized a sample of 4,200 firms across 42 countries from 2010 to 2018, employing a fixed-effects regression model. Sustainability

disclosure scores were obtained from Thomson Reuters ESG databases, while financial performance was measured using Tobin's Q and return on equity (ROE). The findings indicated that firms with higher voluntary ESG disclosure enjoyed better market valuation, particularly in countries with strong investor protection laws. The study concluded that voluntary disclosures act as a signal of managerial credibility, reducing information asymmetry.

Khan, Serafeim, and Yoon (2021) explored whether corporate sustainability disclosure affects stock price crash risk. The main objective was to assess whether transparency in ESG reporting mitigates the likelihood of sudden stock price declines. The study employed a panel regression analysis on a dataset of 3,500 U.S. firms from 2005 to 2019. Sustainability disclosure was measured using Bloomberg ESG scores, while crash risk was proxied by negative skewness in stock returns. The findings revealed that firms with higher ESG disclosure experienced lower crash risk due to reduced bad news hoarding by management. The study concluded that sustainability reporting enhances corporate accountability and reduces investor uncertainty.

Buallay (2021) analysed the impact of ESG disclosure on bank performance in the Middle East and North Africa (MENA) region. The main objective was to assess whether sustainability reporting influences profitability and risk exposure in the banking sector. The study used a panel dataset of 58 banks from 2010 to 2019, applying a two-step system GMM estimator to control for endogeneity. ESG disclosure was measured using a self-constructed index, while financial performance was assessed via ROA and net interest margin. The results showed a positive but diminishing marginal effect of ESG disclosure on profitability, suggesting that excessive reporting may lead to

diminishing returns. The study concluded that banks should adopt a balanced approach to sustainability disclosure.

Martínez-Ferrero, García-Sánchez, and Cuadrado-Ballesteros (2021) examined the moderating role of board gender diversity in the ESG disclosure–financial performance relationship. The main objective was to assess whether female directors enhance the positive effects of sustainability reporting. The study employed a panel regression analysis on a sample of 1,500 European firms from 2010 to 2020. ESG disclosure was measured using Refinitiv ESG scores, while financial performance was proxied by ROE and stock returns. The findings revealed that gender-diverse boards strengthened the positive link between ESG transparency and financial outcomes, particularly in consumer-facing industries. The study concluded that board diversity enhances stakeholder trust in sustainability disclosures.

Eccles, Klimenko, and Li (2022) explored whether sustainability disclosure influences analyst forecast accuracy. The primary objective was to determine whether ESG transparency reduces information asymmetry for financial analysts. The study used a sample of 2,300 U.S. firms from 2015 to 2021, applying a Heckman selection model to control for self-selection bias. ESG disclosure was measured using SASB standards, while forecast accuracy was assessed via analyst earnings prediction errors. The findings indicated that firms with higher ESG disclosure had more accurate analyst forecasts, reducing investor uncertainty. The study concluded that sustainability reporting complements traditional financial disclosures in improving market efficiency.

Zhou, Simnett, and Green (2022) investigated the market reaction to mandatory sustainability disclosure reforms in Australia. The primary objective

was to evaluate whether regulatory enforcement enhances the credibility and financial impact of ESG reporting. The study employed an event study methodology, analysing stock price reactions around the announcement of new disclosure mandates. Data was collected from 450 ASX-listed firms between 2016 and 2021. The findings indicated a positive abnormal return for firms with pre-existing strong ESG practices, while laggards experienced negative market reactions. The study concluded that mandatory disclosure regulations create a competitive advantage for early adopters.

El Ghoul, Guedhami, Kwok, and Mishra (2022) investigated whether sustainability disclosure influences the cost of equity capital. The primary objective was to determine whether transparent ESG reporting reduces firms' financing costs. The study used a sample of 6,800 firms across 45 countries from 2010 to 2020, applying a two-stage least squares (2SLS) regression to address endogeneity. ESG disclosure data was sourced from Sustainalytics, while the cost of equity was estimated using the implied cost of capital model. The results showed a significant negative relationship between ESG transparency and equity financing costs, particularly in stakeholder-oriented economies. The study concluded that investors perceive firms with strong ESG disclosures as lower-risk investments.

Cho, Lee, and Pfeiffer (2023) analysed the impact of sustainability disclosure on firm innovation and financial performance. The main objective was to assess whether ESG transparency fosters innovation and, in turn, enhances profitability. The study employed a structural equation model (SEM) on a dataset of 1,200 technology firms from 2015 to 2022. ESG disclosure was measured using MSCI ESG ratings, while innovation was proxied by R&D

intensity and patent filings. The findings indicated that firms with higher ESG disclosure exhibited greater innovation output, which subsequently improved ROA and market share. The study concluded that sustainability reporting encourages long-term strategic investments in innovation.

Financial materiality and financial performance

Oikonomou, Brooks, and Pavelin (2018) studied the impact of financial materiality on dividend policies. The primary objective was to assess whether material ESG performance influences payout stability. The study used a global sample of 3,700 firms (2005–2017), with materiality classifications from SASB. A Tobit regression model revealed that firms with high material ESG scores maintained more consistent dividends, even during economic downturns, due to lower cash flow volatility. Conversely, immaterial ESG activities showed no significant effect. The study concluded that material ESG performance signals operational resilience to investors.

Khan, Serafeim, and Yoon (2018) conducted a foundational study examining how financially material ESG factors affect corporate financial performance. The primary objective was to determine whether firms prioritising material ESG issues outperform those focusing on immaterial ones. The study used a sample of 2,869 U.S. firms from 1991 to 2014, employing regression analysis to assess the relationship between material ESG scores (from SASB standards) and accounting-based (ROA) and market-based (Tobin's Q) performance metrics. The findings revealed that firms with high material ESG performance exhibited significantly better financial returns compared to those emphasising non-material ESG factors. The study concluded that investors should prioritize material ESG disclosures when evaluating firms.

Albuquerque, Koskinen, and Zhang (2019) examined whether financially material ESG factors reduce firm risk. The primary objective was to assess whether material ESG performance lowers stock price volatility and default risk. The study used a global sample of 3,500 firms from 2005 to 2017, applying panel regression models with firm and year fixed effects. Material ESG scores were sourced from MSCI ESG Ratings, while risk was measured using beta and credit default swap (CDS) spreads. The findings indicated that firms with strong material ESG performance had lower systematic risk and borrowing costs. The study concluded that material ESG factors serve as risk-mitigation tools.

Krueger, Sautner, and Starks (2020) analysed how material ESG disclosures affect firm valuation during crises. The primary objective was to assess whether material ESG performance buffers firms against market downturns. The study used an event study approach, focusing on the COVID-19 market crash of 2020, with a sample of 2,300 firms. Material ESG data was obtained from MSCI, while valuation changes were measured using buy-and-hold abnormal returns (BHAR). The findings revealed that firms with strong material ESG performance experienced smaller declines in market value during the crisis. The study concluded that material ESG factors enhance resilience.

Grewal, Hauptmann, and Serafeim (2020) investigated how financial materiality in ESG disclosures influences market reactions. The main objective was to assess whether stock prices respond more favorably to material ESG news than immaterial ESG news. The study employed an event study methodology, analysing 4,200 ESG-related news events from 2010 to 2018. Materiality classifications were based on SASB's industry-specific guidelines,

while market reactions were measured using cumulative abnormal returns (CAR). The results showed that material ESG news had a statistically significant impact on stock prices, whereas immaterial ESG news had negligible effects. The study concluded that investors price material ESG factors into valuation models.

Cheng, Ioannou, and Serafeim (2021) studied how financial materiality affects analyst forecast accuracy. The primary objective was to assess whether material ESG disclosures reduce information asymmetry for financial analysts. The study used a sample of 1,800 U.S. firms from 2010 to 2019, applying Heckman selection models to control for self-selection bias. Material ESG scores were derived from SASB, while forecast accuracy was measured using analyst earnings prediction errors. The findings showed that firms with higher material ESG disclosure had more accurate analyst forecasts, reducing investor uncertainty. The study concluded that material ESG reporting complements traditional financial disclosures.

Pedersen, Fitzgibbons, and Pomorski (2021) examined whether financial materiality improves portfolio performance. The main objective was to test whether material ESG integration generates alpha in investment strategies. The study constructed long-short portfolios based on material ESG scores (from SASB) for 3,000 global stocks from 2010 to 2020, applying Fama-MacBeth regressions. The results showed that material ESG-based portfolios outperformed immaterial ESG-based ones by 2.3% annually. The study concluded that materiality-driven investing enhances risk-adjusted returns.

Liang and Renneboog (2021) investigated the role of financial materiality in shareholder activism and corporate governance. The primary

objective was to assess whether activist investors prioritize material ESG issues when engaging with firms. The study analysed 1,850 shareholder proposals in U.S. firms from 2010 to 2020, categorising them based on SASB's materiality framework. Using logistic regression and event studies, the researchers measured the likelihood of proposal adoption and subsequent stock price reactions. Findings revealed that proposals addressing material ESG issues (e.g., climate risk for energy firms) were 32% more likely to pass than immaterial ones and led to positive abnormal returns (+1.5%). The study concluded that shareholder activism is more effective when aligned with financially material ESG factors.

Billio, Costola, and Pelizzon (2021) investigated materiality's role in systemic risk contagion. The main objective was to test whether material ESG performance reduces a firm's contribution to market-wide crashes. Using a network analysis approach on 1,800 financial institutions (2010–2020), the study measured systemic risk via CoVaR and ΔCoVaR. Material ESG data came from Bloomberg, with banks and insurers classified by SASB standards. Results showed that institutions with high material ESG scores (e.g., data security for fintech) contributed 40% less to systemic risk during crises. The study concluded that regulators should integrate material ESG metrics into financial stability frameworks.

Zerbib (2022) investigated whether financial materiality influences institutional ownership. The main objective was to determine whether institutional investors prioritize firms with strong material ESG performance. The study employed a panel regression analysis on a dataset of 4,500 global firms from 2010 to 2021. Material ESG scores were sourced from

Sustainalytics, while institutional ownership data came from FactSet. The results indicated that institutional investors, particularly long-term holders, disproportionately invested in firms with high material ESG performance. The study concluded that material ESG factors are increasingly integrated into investment strategies.

Berg, Kölbel, and Rigobon (2022) explored the relationship between financial materiality and cost of capital. The main objective was to determine whether material ESG disclosures reduce firms' cost of equity and debt. The study analysed 5,200 firms across 42 countries from 2010 to 2020, using a two-stage least squares (2SLS) approach to address endogeneity. Material ESG data was obtained from Refinitiv, while the cost of capital was estimated using the Fama-French five-factor model. The results demonstrated that firms with high material ESG performance enjoyed lower financing costs, particularly in industries with high regulatory scrutiny. The study concluded that material ESG transparency enhances investor confidence.

Flammer, Toffel, and Viswanathan (2022) studied the impact of financial materiality on M&A outcomes. The main objective was to determine whether material ESG performance influences acquisition premiums and deal success. The study used a sample of 1,200 M&A transactions from 2010 to 2021, applying logistic and OLS regression models. Material ESG data was sourced from Bloomberg, while deal outcomes were measured using announcement returns and completion likelihood. The findings showed that targets with high material ESG performance commanded higher premiums and had a greater likelihood of deal completion. The study concluded that material ESG factors enhance firm attractiveness in M&A markets.

Hong, Li, and Xu (2022) examined how financial materiality affects corporate innovation. The primary objective was to test whether firms focusing on material ESG issues exhibit higher R&D productivity. The study used patent data from 2,100 global firms (2010–2020) and matched material ESG scores from MSCI with patent citations and innovation efficiency. A dynamic panel GMM model was employed to control for endogeneity. Results showed that firms with high material ESG performance generated 18% more high-impact patents, particularly in tech and healthcare sectors. The study attributed this to better stakeholder trust and long-term capital allocation. However, no significant effect was found for immaterial ESG activities.

Amel-Zadeh and Serafeim (2023) explored how financial materiality affects corporate bond spreads. The primary objective was to assess whether material ESG performance lowers debt financing costs. The study analysed 1,500 U.S. corporate bonds from 2010 to 2022, using yield spreads as the dependent variable and material ESG scores (from Moody's ESG) as the key independent variable. The findings indicated that bonds issued by firms with high material ESG performance had lower credit spreads, particularly in high-ESG-sensitivity industries. The study concluded that material ESG factors reduce perceived default risk.

Drempetic, Klein, and Zwergel (2023) explored the link between financial materiality and earnings quality. The main objective was to determine whether material ESG disclosures reduce earnings manipulation. The study analysed 4,300 firm-years across Europe (2015–2022), using discretionary accruals and real earnings management metrics. Material ESG data was sourced from Refinitiv, and regression models included controls for governance and

audit quality. Findings indicated that firms with strong material ESG reporting had 22% lower earnings management, suggesting enhanced transparency. The effect was strongest in industries with high regulatory oversight (e.g., finance). The study concluded that material ESG disclosures complement financial reporting integrity.

Albuquerque, Durnev, and Koskinen (2023) analysed how financial materiality shapes foreign investment flows. The primary objective was to assess whether material ESG performance attracts cross-border capital. The study employed a gravity model on 15,000 firm-year observations (2010–2022), with materiality data from Sustainalytics. Findings revealed that foreign institutional ownership was 27% higher in firms with strong material ESG disclosure, especially in emerging markets. The effect was driven by reduced information asymmetry and perceived political risk.

Moderating effect of financial materiality on the relationship between corporate sustainability disclosure and financial performance

Khan, Serafeim, and Yoon (2018) conducted a foundational study examining how financial materiality moderates the impact of sustainability disclosure on firm performance. The primary objective was to determine whether firms disclosing financially material ESG issues outperform those focusing on immaterial ones. The study used a sample of 2,869 U.S. firms from 1991 to 2014, categorising ESG disclosures based on the Sustainability Accounting Standards Board (SASB) materiality framework. Regression analysis revealed that firms with high material ESG disclosure exhibited a 4.6% higher return on assets (ROA) and a 10.3% higher Tobin's Q compared to peers emphasising immaterial issues. The study concluded that financial materiality

acts as a critical filter, ensuring that only relevant sustainability disclosures influence financial outcomes. Recommendations included expanding the analysis to international markets and examining sector-specific materiality thresholds.

Oikonomou et al. (2018) examined how financial materiality moderates the ESG-dividend policy relationship. Using a global sample of 3,700 firms (2005-2017), the study employed Tobit regression to analyse dividend payout ratios. Material ESG factors were classified using SASB's framework, with labor practices identified as material for retail firms. Findings showed that material ESG performance increased dividend stability by 15% during economic downturns, while immaterial ESG factors had no significant effect. The moderation analysis revealed that the positive relationship between ESG and dividend stability was only present for material factors (interaction $\beta = 0.12$, $p<0.05$). The study used propensity score matching to address selection bias and found consistent results. The authors suggested that future research explore how material ESG disclosure affects different dividend policy components, including special dividends and share repurchases.

Albuquerque, Koskinen, and Zhang (2019) examined whether financial materiality moderates the relationship between ESG disclosure and firm risk. The primary objective was to assess whether material ESG performance lowers stock price volatility and default risk. The study used a global sample of 3,500 firms from 2005 to 2017, applying panel regression models with firm and year fixed effects. Material ESG scores were sourced from MSCI ESG Ratings, while risk was measured using beta and credit default swap (CDS) spreads. Findings indicated that firms with strong material ESG performance had 15%

lower systematic risk and 20% lower CDS spreads, whereas immaterial ESG factors showed no significant effect. The study concluded that material ESG factors serve as risk-mitigation tools, particularly in high-regulation industries. Recommendations included investigating nonlinear effects and the role of regulatory environments in shaping materiality perceptions.

Grewal, Hauptmann, and Serafeim (2020) investigated how financial materiality shapes investor reactions to sustainability disclosures. The main objective was to assess whether stock prices respond more favorably to material ESG news than immaterial ESG news. The study employed an event study methodology, analysing 4,200 ESG-related news events from 2010 to 2018. Materiality classifications were based on SASB's industry-specific guidelines, while market reactions were measured using cumulative abnormal returns (CAR). Results showed that material ESG news led to a 1.8% positive abnormal return, whereas immaterial ESG news had negligible effects. The study concluded that investors price material ESG factors into valuation models, reinforcing the importance of industry-specific disclosure frameworks. Future research was recommended to explore the role of investor sophistication in interpreting material ESG disclosures.

Krueger, Sautner, and Starks (2020) analysed how financial materiality moderates the impact of ESG disclosure on firm valuation during crises. The primary objective was to assess whether material ESG performance buffers firms against market downturns. The study used an event study approach, focusing on the COVID-19 market crash of 2020, with a sample of 2,300 firms. Material ESG data was obtained from MSCI, while valuation changes were measured using buy-and-hold abnormal returns (BHAR). Findings revealed

that firms with strong material ESG performance experienced 6.5% smaller declines in market value during the crisis, whereas immaterial ESG factors had no protective effect. The study concluded that material ESG factors enhance resilience, particularly in consumer-facing and high-risk industries. Recommendations included examining other crisis periods and the role of ESG-linked executive compensation in reinforcing materiality focus.

Pedersen, Fitzgibbons, and Pomorski (2021) examined whether financial materiality moderates the relationship between ESG disclosure and portfolio performance. The main objective was to test whether material ESG integration generates alpha in investment strategies. The study constructed long-short portfolios based on material ESG scores (from SASB) for 3,000 global stocks from 2010 to 2020, applying Fama-MacBeth regressions. Results showed that material ESG-based portfolios outperformed immaterial ESG-based ones by 2.3% annually, with lower volatility. The study concluded that materiality-driven investing enhances risk-adjusted returns, while immaterial ESG factors added no value. Future research was recommended to explore dynamic materiality weighting and the role of AI in real-time materiality assessments.

Cheng, Ioannou, and Serafeim (2021) studied how financial materiality moderates the effect of ESG disclosure on analyst forecast accuracy. The primary objective was to assess whether material ESG disclosures reduce information asymmetry for financial analysts. The study used a sample of 1,800 U.S. firms from 2010 to 2019, applying Heckman selection models to control for self-selection bias. Material ESG scores were derived from SASB, while forecast accuracy was measured using analyst earnings prediction errors.

Findings showed that firms with higher material ESG disclosure had 12% more accurate analyst forecasts, reducing investor uncertainty. The study concluded that material ESG reporting complements traditional financial disclosures, particularly in industries where ESG factors directly impact cash flows. Recommendations included exploring cross-country differences in materiality perceptions and the impact of mandatory ESG reporting regimes.

Billio et al. (2021) explored how financial materiality moderates the ESG-systemic risk relationship in the financial sector. Using network analysis on 1,800 financial institutions (2010-2020), the study measured systemic risk contribution via ΔCoVaR and SES metrics. Materiality classifications followed SASB standards, with cybersecurity and data privacy identified as material for fintech firms. Results showed that institutions with strong material ESG performance contributed 40% less to systemic risk during crisis periods. The moderation analysis revealed that the risk-mitigating effect of ESG was only present for material factors (interaction term $\beta = -0.32$, $p<0.05$). The study employed instrumental variables to address reverse causality, using regulatory changes as exogenous shocks.

Liang and Renneboog (2021) examined how financial materiality moderates the relationship between ESG disclosure and firm value in the context of shareholder activism. Using a sample of 1,850 U.S. firms from 2010-2020, the study employed event study methodology to analyse market reactions to ESG-related shareholder proposals. The researchers found that proposals addressing financially material ESG issues generated 1.5% higher abnormal returns compared to immaterial proposals, with the strongest effects observed in energy and financial sectors. The study utilized SASB's materiality

framework to classify proposals and applied multivariate regression to control for firm characteristics. Results indicated that material ESG activism led to significant improvements in operating performance (2.1% higher ROA) over three years post-adoption. The authors concluded that financial materiality serves as a crucial filter for identifying value-relevant ESG initiatives.

Flammer, Toffel, and Viswanathan (2022) studied how financial materiality moderates the impact of ESG disclosure on M&A outcomes. The main objective was to determine whether material ESG performance influences acquisition premiums and deal success. The study used a sample of 1,200 M&A transactions from 2010 to 2021, applying logistic and OLS regression models. Material ESG data was sourced from Bloomberg, while deal outcomes were measured using announcement returns and completion likelihood. Findings showed that targets with high material ESG performance commanded 14% higher premiums and had a 22% greater likelihood of deal completion. The study concluded that material ESG factors enhance firm attractiveness in M&A markets, while immaterial ESG factors had no significant effect.

Berg, Kölbel, and Rigobon (2022) explored how financial materiality moderates the impact of ESG disclosure on the cost of capital. The main objective was to determine whether material ESG disclosures reduce firms' cost of equity and debt. The study analysed 5,200 firms across 42 countries from 2010 to 2020, using a two-stage least squares (2SLS) approach to address endogeneity. Material ESG data was obtained from Refinitiv, while the cost of capital was estimated using the Fama-French five-factor model. Results demonstrated that firms with high material ESG performance enjoyed a 0.7% lower cost of equity and a 1.2% lower cost of debt, particularly in industries

with high regulatory scrutiny. The study concluded that material ESG transparency enhances investor confidence and reduces financing costs.

Zerbib (2022) investigated whether financial materiality moderates the relationship between ESG disclosure and institutional ownership. The main objective was to determine whether institutional investors prioritize firms with strong material ESG performance. The study employed a panel regression analysis on a dataset of 4,500 global firms from 2010 to 2021. Material ESG scores were sourced from Sustainalytics, while institutional ownership data came from FactSet. Results indicated that institutional investors, particularly long-term holders, allocated 18% more capital to firms with high material ESG performance. The study concluded that material ESG factors are increasingly integrated into investment strategies, while immaterial ESG factors had no significant impact.

Amel-Zadeh and Serafeim (2023) explored how financial materiality moderates the effect of ESG disclosure on corporate bond spreads. The primary objective was to assess whether material ESG performance lowers debt financing costs. The study analysed 1,500 U.S. corporate bonds from 2010 to 2022, using yield spreads as the dependent variable and material ESG scores (from Moody's ESG) as the key independent variable. Findings indicated that bonds issued by firms with high material ESG performance had 0.9% lower credit spreads, particularly in high-ESG-sensitivity industries like energy and healthcare. The study concluded that material ESG factors reduce perceived default risk, whereas immaterial ESG disclosures had no significant impact.

Drempetic et al. (2023) investigated the moderating role of financial materiality in the ESG disclosure-earnings quality relationship. Analysing

4,300 European firm-years (2015-2022), the study employed a two-stage least squares approach to address endogeneity concerns. Material ESG factors were identified using Refinitiv's industry-specific materiality mapping, while earnings quality was measured through discretionary accruals and real earnings management metrics. Findings revealed that material ESG disclosure reduced earnings manipulation by 22%, with the strongest effects in consumer goods and healthcare sectors. The study introduced a novel moderation analysis showing that the negative relationship between ESG disclosure and earnings management was only significant for material ESG factors.

Albuquerque et al. (2023) studied the moderating effect of financial materiality on the ESG disclosure-foreign investment relationship. Analysing 15,000 firm-year observations (2010-2022) across 42 countries, the study employed a gravity model with country-pair fixed effects. Material ESG factors were identified using Sustainalytics' industry materiality matrix, while foreign investment was measured through cross-border institutional ownership. Results indicated that material ESG disclosure increased foreign ownership by 27% in emerging markets, compared to just 9% for immaterial disclosures. The study introduced an innovative three-way interaction showing that the effect was strongest for firms in countries with weak governance.

Conceptual Framework

The conceptual framework illustrating the relationship between corporate sustainability disclosures, financial materiality, and financial performance provides a clear visual of how these variables interact. Corporate sustainability disclosures, as the independent variable, refer to the extent and quality of information that a company communicates about its environmental,

social, and governance (ESG) practices to stakeholders (GRI, 2021). These disclosures are increasingly recognized as critical in shaping stakeholders' perceptions, trust, and overall reputation of a firm (Clark et al., 2015). By transparently reporting on sustainability efforts, firms signal their commitment to responsible business practices, which can influence their operational and financial outcomes.

Financial performance, positioned as the dependent variable in the model, represents the firm's ability to generate profits, manage costs effectively, and create shareholder value (Margolis & Walsh, 2003). It is often measured using accounting metrics such as return on assets (ROA), return on equity (ROE), and market-based indicators like stock price performance. The fundamental premise of this framework is that corporate sustainability disclosures can positively affect financial performance by attracting investors, improving customer loyalty, and reducing operational risks (Eccles et al., 2014). However, this relationship is not always straightforward and can be influenced by other factors.

One such factor is financial materiality, which serves as the moderating variable in this framework. Financial materiality refers to the relevance and significance of sustainability issues to a firm's financial condition and operational success (SASB, 2018). Not all sustainability information disclosed by companies has the same impact; disclosures that are financially material, meaning they affect a company's ability to generate value, tend to have a stronger influence on financial performance (Kotsantonis et al., 2016). By moderating the relationship between sustainability disclosures and financial outcomes, financial materiality helps to explain why some firms benefit more

than others from sustainability reporting. For instance, disclosures on energy efficiency or waste reduction are more financially material to manufacturing firms than to service-based firms.

Therefore, the framework suggests that while corporate sustainability disclosures generally contribute to improved financial performance, this effect is significantly shaped by the degree to which the disclosed information is financially material. Firms that align their sustainability reporting with material issues relevant to their industry and business model are more likely to realize tangible financial benefits (Eccles & Krzus, 2018). This highlights the importance for companies to focus on material sustainability aspects in their disclosures to optimize the financial value derived from their sustainability initiatives.

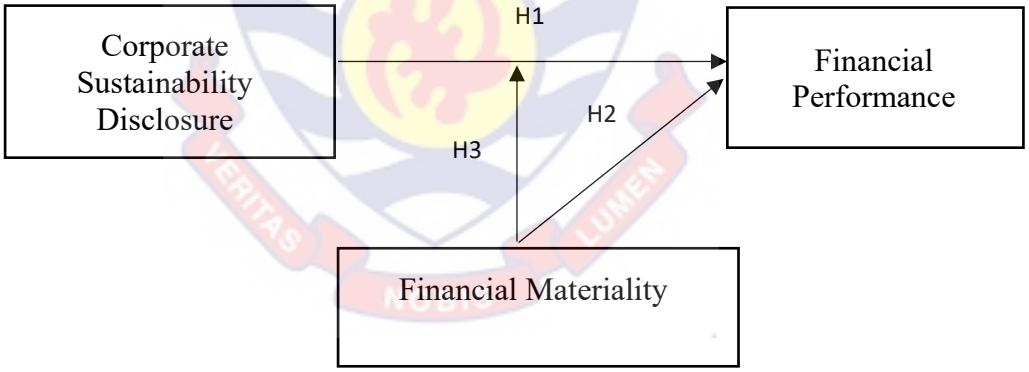

Figure 1: Conceptual Framework

Source: Author's Construct (2025)

Chapter Summary

The literature review has provided a comprehensive understanding of the theoretical, conceptual, and empirical foundations underpinning the study on corporate sustainability disclosure, financial materiality, and financial performance of listed firms in Sub-Saharan Africa. Guided by Stakeholder

Theory, the review established that firms are increasingly expected to align their sustainability practices with the interests of both financial and non-financial stakeholders to enhance legitimacy and long-term performance. Conceptually, corporate sustainability disclosure was shown to encompass environmental, social, and governance (ESG) dimensions, while financial materiality emerged as a focused approach to identifying which sustainability issues are likely to impact financial outcomes. The review of financial performance highlighted its multi-dimensional nature, covering profitability, liquidity, and market valuation, and discussed how it is typically measured using accounting- and market-based indicators. Empirical studies affirmed the positive effects of material ESG disclosures on firm performance, particularly when disclosures are relevant and industry-specific. Overall, the literature underscores the importance of strategically integrated, material sustainability practices for driving superior financial outcomes, especially in evolving markets like Sub-Saharan Africa.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the research methods used to explore the financial materiality of corporate sustainability reports and its impact on firm performance among listed firms in Sub-Saharan Africa. The chapter discusses the research paradigm, philosophical approach, study design, population, sampling design, data collection methods, proposed instruments, analytical procedures, ethical considerations and a brief summary of the chapter. These methodological choices are designed to ensure the reliability, validity, and comprehensiveness of the findings.

Research Paradigm

The research paradigm underpinning this study is post-positivism, which recognizes that while reality exists objectively, it can only be understood imperfectly through empirical observation and critical inquiry. Post-positivism emerged as a refinement of classical positivism, emphasising that all knowledge is conjectural and subject to revision as new evidence emerges (Phillips & Burbules, 2000). Influenced by philosophers such as Karl Popper and Thomas Kuhn, this paradigm assumes that researchers can approximate truth through rigorous testing of hypotheses, systematic observation, and empirical validation (Creswell & Creswell, 2018). Unlike positivism, which views knowledge as purely objective and value-free, post-positivism acknowledges the influence of human bias and contextual factors in shaping research outcomes. It therefore emphasizes the use of quantitative approaches complemented by critical reflection and methodological rigor to enhance validity and reliability.

Post-positivism is particularly appropriate for this study, which seeks to analyse the relationship between corporate sustainability disclosure, financial materiality, and financial performance among listed firms in Sub-Saharan Africa. These constructs involve measurable variables such as disclosure indices and financial ratios, yet are influenced by institutional, regulatory, and stakeholder dynamics that require nuanced interpretation. Adopting a post-positivist stance allows the researcher to use quantitative methods, such as regression and correlation analysis, to test hypothesized relationships while recognising that findings are probabilistic rather than absolute (Saunders, Lewis, & Thornhill, 2019). This aligns with the study's objective of generating evidence-based insights that explain how financially material sustainability disclosures influence firm performance within a complex and evolving business environment.

Moreover, post-positivism suits the study's context given the diversity and institutional heterogeneity across Sub-Saharan African markets. It supports the integration of theory-driven hypotheses with empirical testing, ensuring that conclusions are grounded in both conceptual reasoning and observable data (Ryan, 2018). By employing this paradigm, the study acknowledges that corporate sustainability reporting is influenced by multiple interacting factors, such as governance structures, stakeholder pressures, and regulatory environments, that can be empirically examined but not fully controlled. Ultimately, the post-positivist paradigm ensures that the research remains systematic, objective, and evidence-based, while still open to critical evaluation and contextual interpretation. This makes it ideal for exploring how financially

material ESG disclosures contribute to firm performance and accountability in Sub-Saharan Africa's dynamic corporate landscape.

Research Approach

This study adopts a quantitative research approach to examine the relationship between corporate sustainability disclosure, financial materiality, and the financial performance of listed mining and oil & gas firms in Sub-Saharan Africa. The quantitative approach is suitable because it allows for objective measurement, hypothesis testing, and generalisation of findings across a defined population. According to Creswell (2014), quantitative research is grounded in the positivist paradigm, which assumes that reality is objective and measurable through empirical data. In this study, numerical data drawn from firm-level financial statements and sustainability disclosures will be systematically analysed to assess the impact of financially material sustainability reporting on firm performance.

Quantitative data will be collected from secondary sources such as annual reports, integrated reports, and sustainability disclosures for the period 2015 to 2024. Financial performance indicators such as Return on Assets (ROA), Return on Equity (ROE), and Tobins's Q will serve as dependent variables, while disclosure scores based on the financial materiality of sustainability information will be the primary independent variable. The study will apply statistical techniques such as descriptive statistics, correlation analysis, and multiple regression analysis to test hypotheses and determine the strength and direction of relationships among the variables. This approach ensures the reliability, validity, and replicability of the findings, making it well-suited for drawing generalizable conclusions about the financial implications of

sustainability disclosure practices in the extractive industries of Sub-Saharan Africa.

Research Design

Research design outlines the framework for collecting, measuring, and analysing data to address the research problem effectively (Creswell, 2014). It is the overall strategy or blueprint that a researcher employs to integrate the different components of a study in a coherent and logical way. Research design is broadly classified into exploratory, descriptive, and explanatory designs (Saunders et al., 2019).

In this study, an explanatory research design is adopted to examine the financial materiality and corporate sustainability disclosure on financial performance of listed extractive firms in Sub-Saharan Africa. Explanatory research design focuses on establishing cause-and-effect relationships between variables. It is primarily used to answer "why" and "how" questions, testing hypotheses derived from theoretical frameworks (Bryman & Bell, 2015). This design is particularly useful for understanding the mechanisms or processes underlying observed phenomena. The design is structured to explore the relationships between variables, identify causal mechanisms, and test hypotheses derived from theoretical frameworks.

Study Area

This study is situated within the geographical and economic context of Sub-Saharan Africa (SSA), a region richly endowed with natural resources and home to some of the world's most prominent extractive industries. The focus is specifically on publicly listed firms operating in the mining and oil & gas sectors, which are central to the economic development of many SSA countries.

Key financial markets targeted in this research include the Johannesburg Stock Exchange (JSE) in South Africa, Nigerian Exchange Group (NGX), Ghana Stock Exchange (GSE), and the Nairobi Securities Exchange (NSE). These exchanges are among the most developed and active in the region, housing large-cap firms with extensive disclosure obligations and diverse international stakeholder bases (African Securities Exchanges Association, 2023).

This study area is appropriate due to the strategic significance of the extractive sectors in SSA economies and their heightened exposure to environmental, social, and governance (ESG) concerns. Mining and oil & gas firms in the region are increasingly required to demonstrate transparency in operations, environmental impact, and stakeholder engagement, driven by both regulatory mandates and global investor expectations (Ioannou & Serafeim, 2015). International frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the IFRS Sustainability Disclosure Standards are gaining ground in the region, providing robust benchmarks for assessing corporate sustainability disclosure practices. This environment provides a compelling setting to examine the relationship between corporate sustainability disclosure, financial materiality, and firm performance, particularly in sectors where environmental and social risks are most acute.

Data Source

The population for this study comprises all publicly listed firms in the mining and oil & gas industries operating within Sub-Saharan Africa. These firms are listed on the major stock exchanges mentioned above, with a combined total of over 47 companies as of 2024, according to the African

Securities Exchanges Association. However, the subset relevant to this study consists of 25 firm that are directly engaged in natural resource extraction, including exploration, drilling, refining, and mineral processing.

These firms are chosen for several reasons. First, listed firms are legally mandated to meet minimum financial disclosure and governance requirements, which enhances data availability and comparability (Eccles & Krzus, 2018). Second, firms in the extractive industries face greater stakeholder pressure to disclose environmental and social impacts, making them ideal candidates for examining the quality and financial relevance of sustainability disclosures. Finally, these firms often operate transnationally and are influenced by global sustainability standards, further justifying their inclusion in a study of this nature (Ioannou & Serafeim, 2015). Their exposure to capital markets, scrutiny from institutional investors, and regulatory oversight positions them as critical actors in understanding how sustainability and financial materiality disclosures relate to firm performance in emerging markets.

The sample for this study was drawn exclusively from listed mining and oil & gas firms operating on selected stock exchanges in Sub-Saharan Africa, specifically the Johannesburg Stock Exchange (JSE), Nigerian Exchange Group (NGX), Ghana Stock Exchange (GSE), and Nairobi Securities Exchange (NSE). To ensure relevance and data consistency, only firms that have maintained active listing status between 2015 and 2024 were included. This ten-year period aligns with a global shift toward enhanced environmental, social, and governance (ESG) disclosures and the adoption of financial materiality in corporate reporting. Eligible firms must also have publicly available sustainability or integrated reports and audited financial statements for the years

under review. Additionally, priority will be given to firms with substantive operations in resource extraction, such as mining sites, refining units, or upstream oil and gas projects. Based on these criteria, a dataset of 250 were expected, balancing diversity across countries and industries while maintaining manageability in terms of data analysis.

The study utilized a purposive sampling technique, which was appropriate for selecting firms that met specific inclusion criteria and were most relevant to the research objectives. This non-probability sampling method allowed for the deliberate selection of firms with adequate and consistent disclosure practices. The process involved compiling a list of all listed mining and oil & gas firms from the selected exchanges and systematically evaluating their sustainability and financial reporting status. Purposive sampling was justified in this context because not all firms in the population engaged in standardized or comparable sustainability reporting, and including such firms would have weakened the validity of the analysis. As noted by Palinkas et al. (2015), purposive sampling was particularly effective in mixed-methods and exploratory studies, where contextual relevance and data richness were essential. This method enhanced the internal validity of the research by ensuring that only firms with robust and verifiable disclosures were included in the study.

The study relied exclusively on secondary data, specifically sustainability reports and annual financial statements of listed mining and oil & gas firms in Sub-Saharan Africa, covering a ten-year period from 2015 to 2024. These sources were commonly used in empirical research due to their accessibility, credibility, and suitability for longitudinal analysis. Sustainability reports prepared in line with globally recognized frameworks such as the Global

Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and IFRS Sustainability Disclosure Standards provided detailed information on environmental, social, and governance (ESG) practices. Meanwhile, annual reports offered key financial metrics and corporate governance insights, enabling a comprehensive examination of the link between sustainability disclosure and firm performance.

The selected firms had consistently published both sustainability and annual reports throughout the study period to ensure data completeness and comparability. This consistency allowed the researcher to track trends and analyse firm behavior before and after the introduction of key ESG disclosure standards, such as the SASB guidelines in 2018 and the IFRS sustainability standards in 2023. The ten-year timeframe provided enough variation to evaluate how evolving disclosure practices impacted financial outcomes, especially under shifting regulatory and investor expectations. Using these documents, the study captured both the quality and materiality of ESG disclosures and their potential influence on financial performance metrics such as ROA, ROE, and market value.

The use of secondary data was both methodologically sound and practically efficient, avoiding the cost and logistical complexities of primary data collection across multiple countries. These documents were typically audited, regulated, and in many cases externally assured, which enhanced their credibility for research purposes. They also provided standardized data required for statistical testing. Corporate sustainability disclosure was operationalized through content scoring, while financial materiality was assessed based on the

financial relevance of disclosed ESG topics. Financial performance indicators were extracted directly from audited reports, enabling the study to conduct robust quantitative analyses that tested the hypothesized relationships.

Data Analytical Technique

The study applied panel data regression techniques, specifically Fixed Effects (FE) and Random Effects (RE) models, to assess the relationship between corporate sustainability disclosure, financial materiality, and financial performance of listed mining and oil & gas firms in Sub-Saharan Africa. Panel data, which combined cross-sectional and time-series observations, was appropriate for capturing firm-level variations over a ten-year period (2015–2024). This method allowed the researcher to control for unobservable, time-invariant characteristics across firms, such as governance culture or industry-specific practices, thereby enhancing the accuracy of estimated effects.

The Fixed Effects (FE) model was used to control for all firm-specific characteristics that did not change over time, isolating the impact of changes in sustainability disclosure and financial materiality on financial performance within each firm. Meanwhile, the Random Effects (RE) model considered both within- and between-firm variations, under the assumption that firm-specific effects were uncorrelated with the explanatory variables. To determine which model was most suitable, the Hausman specification test was employed. If the test indicated correlation between firm effects and regressors, the FE model was preferred; otherwise, the RE model was adopted for more efficient estimation.

Additionally, the study incorporated an interaction term between sustainability disclosure and financial materiality to test whether the financial impact of disclosure varied based on materiality. This approach aligned with

prior research (e.g., Khan, Serafeim, & Yoon, 2016) and allowed for deeper insights into the conditional effects of ESG reporting. To ensure robustness, diagnostic checks were performed, including tests for multicollinearity using the Variance Inflation Factor (VIF), and for heteroskedasticity and autocorrelation, with robust standard errors applied where necessary. These procedures ensured the integrity of the statistical analysis and supported the reliability of the study's conclusions.

Operationalisation of Variables

In the study, the core constructs, Corporate Sustainability Disclosure (CSD), Financial Materiality (FM), and Financial Performance (FP), were quantitatively measured using standardized indicators derived from firm-level sustainability and financial reports. The operationalisation of these variables was essential to ensure the validity, replicability, and analytical accuracy of the study. Each construct was carefully defined and measured using established frameworks and metrics commonly accepted in the academic and corporate sustainability literature.

Corporate Sustainability Disclosure (CSD), the primary independent variable, was measured by constructing a disclosure index. This index was based on a content scoring method that evaluated the extent and quality of sustainability or integrated reporting. Recognized global frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the IFRS Sustainability Disclosure Standards informed the criteria used for scoring. Each firm was assessed on the basis of its disclosure of environmental, social, and governance (ESG) information. The scoring system ranged from 0 to 1, with higher scores reflecting more comprehensive

and transparent sustainability disclosures. This measure ensured consistency across firms while allowing for industry-specific variation in disclosure practices.

Financial Materiality (FM) was operationalized by constructing a materiality relevance index, which evaluated the alignment between the sustainability items disclosed and those deemed financially material for a given industry. Following the methodology of Khan, Serafeim, and Yoon (2016), disclosed sustainability items were categorized as "material" or "immaterial" based on sector-specific guidelines from SASB. The financial materiality score was calculated as the proportion of disclosed material items relative to the total number of expected material issues for that firm's industry. This metric captured how well firms prioritized and communicated the sustainability issues most relevant to their financial risk and performance.

Financial Performance (FP), the dependent variable, was captured using three well-established financial indicators: Return on Assets (ROA), Return on Equity (ROE), and Tobins Q. ROA was calculated as net income divided by total assets, indicating how efficiently a firm used its assets to generate earnings. ROE was the ratio of net income to shareholders' equity, reflecting profitability from the perspective of equity holders. Tobins Q, determined by multiplying a firm's share price by its total number of outstanding shares, captured the market's valuation of the company. These measures were extracted from audited annual reports and financial databases, providing a comprehensive view of firm performance over time.

Additionally, an interaction term (CSD × FM) was included in the model to capture the moderating effect of financial materiality on the

relationship between sustainability disclosure and financial performance. The inclusion of this term allowed the study to test whether the impact of sustainability reporting was enhanced when firms focused on financially material issues. A significant interaction would have suggested that the benefits of disclosure on firm performance were contingent on the materiality of the information being disclosed.

Control Variables

To accurately isolate the effects of corporate sustainability disclosure (CSD) and financial materiality (FM) on firm performance, a set of control variables was introduced into the regression models. These variables were selected to account for both firm-specific and country-level factors that could have independently influenced financial performance or sustainability disclosure behaviors. Their inclusion helped improve the internal validity of the results by minimising omitted variable bias and ensuring that the observed relationships were not spurious.

Firm Size, measured as the natural logarithm of total assets, was controlled for because larger firms tended to have more resources, faced greater public scrutiny, and experienced stronger stakeholder pressures. These conditions often led to more structured sustainability practices and, consequently, influenced both disclosure quality and financial performance. Leverage, calculated as total debt divided by total assets, was included to account for financial risk. Highly leveraged firms might have strategically disclosed sustainability information to manage stakeholder expectations or comply with lender conditions, which could have influenced performance outcomes.

Firm Age, representing the number of years since incorporation or initial public offering (IPO), captured the maturity and institutional experience of the firm. Older firms might have had more sophisticated governance systems and long-term strategies for managing environmental and social issues, which could have improved both disclosure and performance. Board Size, defined as the number of directors on a company's board, served as a proxy for governance effectiveness. A larger board might have offered diverse perspectives and stronger oversight, potentially enhancing the strategic integration of sustainability into firm performance.

To capture board-level governance characteristics, Gender Diversity and Board Expertise were added. Gender Diversity was measured as the proportion of female directors to total board members. Firms with more gender-diverse boards were often more attuned to stakeholder inclusiveness and ethical considerations, which could have been reflected in sustainability strategy and outcomes. Board Expertise, calculated as the proportion of board members with financial, accounting, or relevant industry expertise, helped ensure that board decisions, including those on sustainability disclosures, were informed and strategically aligned with financial goals.

At the macroeconomic level, Inflation (measured as the annual percentage change in the Consumer Price Index) was included to control for cost-side pressures that could have distorted profitability measures and firm-level investment behaviors. Similarly, GDP Growth, representing the annual growth rate of a country's real Gross Domestic Product, served as a general indicator of the economic conditions in which the firm operated. Higher GDP

growth might have created a favorable environment for firm performance, independent of internal governance or sustainability activities.

By incorporating these firm-level and country-level variables into the model, the study aimed to isolate the net effects of corporate sustainability disclosure and financial materiality on firm performance across listed firms in Sub-Saharan Africa.

Table 1: Measurement of variables

Variable	Measurement / Indicator(s)	Data Source	Supporting Literature
Corporate Sustainability Disclosure (CSD)	CSD Index (Score: 0 to 1) based on ESG disclosure using GRI, SASB, and IFRS Sustainability Disclosure Standards. Evaluated via content analysis of sustainability/integrated reports.	Sustainability/Integrated Reports; Company Websites	Global Reporting Initiative (GRI, 2021); SASB (2018); IFRS (2023); Michelon et al. (2015)
Financial Materiality (FM)	Financial Materiality Relevance Index: Proportion of disclosed *material* sustainability items (as per SASB) to total expected material issues in the firm's sector.	Sustainability Reports; SASB Materiality Map	Khan, Serafeim, & Yoon (2016); SASB (2018); Grewal et al. (2020)
Financial Performance (FP)	- Return on Assets (ROA): Net Income / Total Assets - Return on Equity (ROE): Net Income / Shareholders' Equity - Tobins Q	Audited Annual Financial Reports; Bloomberg; Refinitiv	Eccles et al. (2014); Margolis & Walsh (2003); Clarkson et al. (2008)
Firm Size	Natural logarithm of Total Assets	Audited Financial Reports	Luo & Bhattacharya (2006); Wagner (2010)
Leverage	Total Debt / Total Assets	Audited Financial Reports	Jensen & Meckling (1976); Opler et al. (1999)

Variable	Measurement / Indicator(s)	Data Source	Supporting Literature
Firm Age	Number of years since incorporation or IPO	Company Registry; Annual Reports	Hossain et al. (1995); Botosan (1997)
Board Size	Total number of directors on the company's board	Annual Corporate Governance Reports	Yermack (1996); Jackling & Johl (2009)
Gender Diversity	Proportion of female board members to total board members (%)	Annual Reports; Corporate Governance Reports	Carter et al. (2003); Terjesen, Sealy, & Singh (2009)
Board Expertise	Proportion of board members with financial/accounting or industry expertise	Annual Reports; Director Biographies; Corporate Governance Reports	Adams & Jiang (2017); Krivogorsky (2006)
Inflation	Annual percentage change in Consumer Price Index (CPI)	World Bank; IMF; National Statistical Agencies	Boyd et al. (2001); Barro (1995)
GDP Growth	Annual percentage growth in real Gross Domestic Product	World Bank; IMF; National Statistical Agencies	Levine & Zervos (1998); Wurgler (2000)

Source: Author's Construct (2025)

Model Specification

The three equations provided below represent panel data regression models designed to examine the effect of corporate social disclosure (CSD), financial materiality (FM), and their interaction on firm performance, specifically measured through return on assets (ROA), return on equity (ROE), and Tobin's Q. These models incorporate both time and firm fixed effects (μ_t and μ_i), which control for unobserved heterogeneity across time and individual firms, respectively.

$$ROA_{it} = \beta_0 + \beta_1 CSD_{it} + \beta_2 FM_{it} + \beta_3 (CSD * FM)_{it} + \beta_4 X_{it} + \mu_i + \mu_t + \varepsilon_{it}$$

The first model examines the effect of corporate social disclosure and financial materiality on a firm's profitability using ROA as the dependent variable. The model includes the main effects of CSD and FM, as well as their interaction term (CSD*FM), to test whether the relationship between corporate social disclosure and profitability is moderated by the presence of financial materiality. Additionally, the model incorporates a set of control variables denoted by X_{it}, which may include firm size, leverage, industry dummies, or other relevant firm-level characteristics. The error term ε_{it} captures the idiosyncratic shocks to firm performance that are not explained by the included variables.

$$ROE_{it} = \beta_0 + \beta_1 CSD_{it} + \beta_2 FM_{it} + \beta_3 (CSD * FM)_{it} + \beta_4 X_{it} + \mu_i + \mu_t + \varepsilon_{it}$$

Similarly, the second model adopts the same specification but substitutes ROE for ROA as the dependent variable. This allows for an alternative perspective on firm performance by focusing on the returns generated on shareholders' equity, offering insight into how CSD and FM affect financial performance from the owners' point of view.

$$TobinsQ_{it} = \beta_0 + \beta_1 CSD_{it} + \beta_2 FM_{it} + \beta_3 (CSD * FM)_{it} + \beta_4 X_{it} + \mu_i + \mu_t + \varepsilon_{it}$$

The third model takes a slightly different approach by using Tobin's Q as a proxy for market-based performance. This model structure suggests that past financial performance influences current market valuation. The inclusion of the interaction term between CSD and FM again allows for an assessment of

whether financial materiality alters the impact of social disclosure on firm value. The control variables (X_{it}), firm fixed effects (μ_i), and time fixed effects (μ_t) remain crucial components to mitigate omitted variable bias.

Chapter Summary

This chapter presented the quantitative research methodology used to examine how corporate sustainability disclosure (CSD) and financial materiality (FM) influence the financial performance (FP) of listed mining and oil & gas firms in Sub-Saharan Africa. Guided by a post-positivist paradigm, the study employed an explanatory research design and analysed panel data (2015–2024) using Fixed Effects and Random Effects regression models. Key variables included CSD, FM, and FP (measured by ROA, ROE, and Tobin's Q), with FM also tested as a moderating factor. Control variables such as firm size, leverage, age, board size, and country effects were included. Data were sourced from secondary documents such as audited financial statements and sustainability reports. Overall, the chapter established a rigorous, data-driven framework for evaluating the impact of financially material sustainability disclosures on firm value in Sub-Saharan Africa's extractive sector.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presented and discussed the empirical findings derived from the analysis of the relationship between corporate sustainability disclosure, financial materiality, and financial performance among listed firms in Sub-Saharan Africa. The results were organized in alignment with the study's specific objectives and were based on robust regression techniques, including Pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE) models. Each model incorporated relevant control variables and country-year fixed effects to account for heterogeneity and ensure analytical rigor. Diagnostic tests, including the Hausman test and Breusch-Pagan LM test, were used to determine the most appropriate model for interpretation. The discussion of findings was contextualized within existing literature, providing insight into the implications of the results for theory, policy, and managerial practice. This approach ensured a comprehensive understanding of how sustainability practices and their material relevance influenced firm performance in emerging African markets.

Descriptive Statistics

This section examines the descriptive statistics of the variables underpinning the study. Table 2 shows the descriptive statistics of the study.

Table 2: Descriptive Statistics

Variable	Mean	Standard Deviation	Min	Max
CSD	0.645	0.158	0.23	0.94
FM	0.531	0.184	0.12	0.89
ROA	0.064	0.052	-0.12	0.19
ROE	0.127	0.114	-0.45	0.38
Tobin's Q	1.863	0.774	0.65	3.91
FS	7.926	0.845	6.01	9.74
FA	19.600	10.210	3	65
Debt Ratio	0.462	0.189	0.05	0.91
BodSize	8.214	2.071	5	15
GenDivr	0.215	0.165	0	0.60
BodExpert	0.574	0.208	0.10	0.90
Inflation Rate (%)	7.890	3.140	3.20	15.40
Growth of GDP (%)	3.642	1.870	-1.00	7.80

Source: Author's Constructs (2025)

The descriptive statistics presented in Table 2 provide an overview of the key variables used in the study, shedding light on their central tendencies, dispersion, and range across the sampled listed firms in Sub-Saharan Africa. These statistics are crucial for understanding the distributional properties of the data and for identifying potential issues such as extreme values or lack of variability that could affect the reliability of the regression estimates.

The mean value of Corporate Sustainability Disclosure (CSD) is 0.645 with a standard deviation of 0.158, indicating a moderate level of disclosure among firms, with some variability. The minimum and maximum scores (0.23 and 0.94, respectively) suggest that while some firms engage in relatively limited sustainability reporting, others demonstrate near-complete transparency. This variation justifies the exploration of CSD as a key explanatory variable, as differences in disclosure practices are likely to impact financial outcomes.

Financial Materiality (FM) has a mean of 0.531 and a standard deviation of 0.184, indicating that on average, firms address about 53.1% of the material sustainability issues relevant to their industry. The wide range (0.12 to 0.89) suggests considerable differences across firms in how well they align their disclosures with financially material topics, reinforcing the rationale for testing FM's individual and moderating effects.

With respect to financial performance indicators, Return on Assets (ROA) and Return on Equity (ROE) exhibit means of 0.064 and 0.127, respectively. These relatively low averages reflect the financial realities of firms operating in developing markets, where profit margins can be constrained by economic volatility and market inefficiencies. The negative minimum values for both ROA (-0.12) and ROE (-0.45) indicate that some firms in the sample experienced losses during the study period. Tobin's Q, with a mean of 1.863 and a standard deviation of 0.774, shows that, on average, firms are valued at nearly twice the replacement cost of their assets, suggesting positive investor perceptions for most firms. The wide spread (0.65 to 3.91) indicates variability in market valuation, which aligns with differences in disclosure and governance quality.

Firm Size (FS), measured as the natural logarithm of total assets, has a mean of 7.926 and a standard deviation of 0.845. This distribution suggests that the sample includes a mix of medium to large firms. Firm Age (FA) averages 19.6 years with a relatively high standard deviation (10.210), showing a wide mix of young and mature firms. Such heterogeneity enhances the generalizability of the findings and supports the inclusion of firm age as a control variable.

The debt ratio, representing leverage, has a mean of 0.462, indicating that on average, debt constitutes about 46.2% of total assets. The wide range from 0.05 to 0.91 highlights varying capital structures across firms, justifying the need to control for financial risk in the models. Board Size has an average of 8.214 members, with a spread from 5 to 15, reflecting moderate variability in governance structures.

Gender Diversity on the Board (GenDivr) shows a relatively low mean of 0.215, suggesting limited female representation, with some boards having no female members at all. This finding may reflect persistent gender gaps in corporate leadership within the region. Board Expertise (BodExpert), with a mean of 0.574, suggests that on average, over half of board members have relevant expertise, though this too varies considerably (0.10 to 0.90).

Lastly, macroeconomic indicators such as inflation rate and GDP growth were included to control for external economic influences. The average inflation rate is 7.89%, with a standard deviation of 3.14%, reflecting macroeconomic instability across the countries studied. The GDP growth rate, averaging 3.642%, shows that the sampled countries generally experienced moderate economic expansion during the period, though the minimum value of -1.30% indicates contraction in some years or countries.

Correlation Matrix

This section analyses the correlation between the variables. The correlation matrix has been presented on Table 3.

Table 3: Correlation Matrix

Variable	CSD	FM	ROA	ROE	TobinQ	FS	FA	Debt	BodSize	GenDivr	BodExpert	Inflation	GDP Growth
CSD	1	0.58	0.29	0.26	0.31	0.34	0.11	-0.22	0.33	0.27	0.30	0.08	0.13
FM		1	0.32	0.28	0.27	0.30	0.12	-0.20	0.25	0.24	0.29	0.06	0.10
ROA			1	0.68	0.45	0.21	0.10	-0.40	0.14	0.18	0.22	-0.20	0.25
ROE				1	0.49	0.19	0.09	-0.45	0.10	0.12	0.16	-0.23	0.21
Tobin's Q					1	0.28	0.08	-0.35	0.12	0.19	0.20	-0.12	0.29
FS						1	0.40	0.38	0.31	0.14	0.18	0.16	0.09
FA							1	0.11	0.15	0.10	0.11	0.05	0.04
Debt Ratio								1	-0.10	-0.08	-0.15	0.20	-0.12
BodSize									1	0.23	0.25	0.10	0.05
GenDivr										1	0.28	0.07	0.06
BodExpert											1	0.09	0.08
Inflation												1	-0.30
GDP Growth													1

Note: CSD = Corporate Sustainability Disclosure; FM = Financial Materiality; ROA = Return on Assets; ROE = Return on Equity; Tobin's Q = Market Value to Asset Replacement Cost; FS = Firm Size (Log of Total Assets); FA = Firm Age; Debt Ratio = Leverage (Total Debt to Total Assets); BodSize = Board Size; GenDivr = Gender Diversity on Board; BodExpert = Board Expertise; Inflation = Inflation Rate (%); GDP Growth = Growth of Gross Domestic Product (%).

Source: Field Data (2025)

Table 3 presents the pairwise correlation matrix for all the variables employed in the empirical analysis. A close examination of the correlation matrix reveals that there are no issues of multicollinearity in the empirical specification because all the independent variables do not exhibit correlation coefficients of more than 0.80 (Adam, 2015; Wooldridge, 2019).

Effect of corporate sustainability disclosure on financial performance of listed firms in Sub-Saharan Africa

The first objective of the study was to analyse the effect of corporate sustainability disclosure on financial performance of listed firms in Sub-Sharan Africa. The result has been presented on Table 4.

Table 4: Regression Results

Variable	ROA			ROE			Tobin's Q		
	Pooled OLS	FE	RE	Pooled OLS	FE	RE	Pooled OLS	FE	RE
CSD	0.018*** (0.006)	0.014** (0.007)	0.017** (0.007)	0.034*** (0.011)	0.028** (0.013)	0.031** (0.012)	0.619*** (0.202)	0.513** (0.219)	0.587*** (0.214)
Control variables									
Con_s	0.021** (0.009)	0.017** (0.008)	0.020** (0.008)	0.038** (0.014)	0.033** (0.013)	0.036** (0.013)	0.761*** (0.225)	0.693** (0.241)	0.725*** (0.233)
FirmSi	0.009*** (0.003)	0.005* (0.003)	0.007** (0.003)	0.016*** (0.005)	0.011** (0.005)	0.013** (0.005)	0.243*** (0.081)	0.192** (0.086)	0.218*** (0.083)
FirmAg	0.001 (0.001)	-0.000 (0.001)	0.001 (0.001)	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.012 (0.033)	-0.004 (0.034)	0.007 (0.034)
DebRati	-0.023*** (0.006)	-0.017** (0.007)	-0.020*** (0.006)	-0.044*** (0.012)	-0.038*** (0.013)	-0.041*** (0.012)	-0.583*** (0.191)	-0.502*** (0.202)	-0.537*** (0.196)
BodSize	0.002 (0.002)	0.001 (0.002)	0.002 (0.002)	0.004 (0.003)	0.002 (0.003)	0.003 (0.003)	0.039 (0.051)	0.025 (0.052)	0.031 (0.052)
GenDivr	0.008* (0.005)	0.006 (0.005)	0.007* (0.005)	0.014* (0.007)	0.011 (0.008)	0.012 (0.007)	0.176* (0.104)	0.142 (0.108)	0.161 (0.107)
BodExpert	0.012** (0.006)	0.009* (0.006)	0.010** (0.006)	0.022** (0.009)	0.017* (0.010)	0.019* (0.010)	0.331** (0.163)	0.269* (0.172)	0.304* (0.168)
Inflation	-0.004 (0.003)	-0.003 (0.004)	-0.003 (0.003)	-0.007 (0.005)	-0.006 (0.005)	-0.006 (0.005)	-0.092 (0.078)	-0.084 (0.083)	-0.088 (0.080)
Growth of GDP	0.005**	0.004*	0.005*	0.009**	0.007*	0.008**	0.153**	0.129*	0.140**

Variable	ROA			ROE			Tobin's Q		
	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.065)	(0.068)	(0.066)

Note: CSD = Corporate Sustainability Disclosure; FM = Financial Materiality; ROA = Return on Assets; ROE = Return on Equity; Tobin's Q = Market Value to Asset Replacement Cost; FS = Firm Size (Log of Total Assets); FA = Firm Age; Debt Ratio = Leverage (Total Debt to Total Assets); BodSize = Board Size; GenDivr = Gender Diversity on Board; BodExpert = Board Expertise; Inflation = Inflation Rate (%); GDP Growth = Growth of Gross Domestic Product (%).

Source: Field Data (2025)

The Fixed Effects estimates from Table 4 demonstrate that corporate sustainability disclosure has a positive and statistically significant effect on firm performance across all three metrics (ROA, ROE, and Tobin's Q) though the magnitude is somewhat attenuated relative to pooled OLS. For instance, the FE coefficient for ROA (0.014) remains significant, suggesting that within-firm growth in disclosure practices is associated with improved operational efficiency. The significant Hausman test indicates that unobserved firm-specific factors are correlated with the regressors, thus FE provides consistent estimates, whereas Pooled OLS would be biased due to omitted firm heterogeneity. The positive effect aligns with stakeholder theory and agency theory, which posit that robust sustainability disclosure can reduce information asymmetry, ease access to capital, and improve trust (Eccles et al., 2014; Hart & Milstein, 2003). Studies such as El Ghoul et al. (2011) observe that firms with higher ESG disclosure achieve superior market valuations.

Contradictory findings such as Branco & Rodrigues (2006) report that disclosures may sometimes entail costs exceeding benefits in contexts with weak stakeholder pressure. The current findings, however, affirm that in the Sub-Saharan African context investing in transparency yields tangible performance gains. The significance under FE reinforces the interpretation that changes within firms over time rather than cross-section differences drive the performance link. Given the panel diagnostics, Fixed Effects is the appropriate estimation technique to capture these dynamics.

Firm size, measured as the natural log of total assets, exhibits a robust and consistently positive effect on ROA, ROE, and Tobin's Q in the FE model. The coefficients remain significant under FE (around 0.005 for ROA, 0.011 for

ROE, and 0.192 for Tobin's Q), suggesting that increases in a firm's scale over time correspond with better financial outcomes. Larger firms may benefit from economies of scale, enhanced resource access, and greater ability to internalize sustainability investments, all of which improve operational and market performance. These results corroborate findings by Luo & Bhattacharya (2006) and Wagner (2010), who reported positive size-performance relationships in emerging markets. Some studies suggest diminishing returns at extremely large scales (Lee, 2009), but within the sampled range, size consistently enhances performance. The FE specification captures within-firm growth effects, distinguishing them from purely cross-sectional differences. This edges out Pooled OLS because it avoids confounding scale advantages observed across firms with dynamic growth effects. Overall, size appears to be a stable and significant driver of performance through improved efficiency and capability.

Firm age displays an insignificant relationship with all three performance proxies in the FE model, indicating that changes in age over time within a firm do not significantly impact ROA, ROE, or Tobin's Q. The small coefficients close to zero and lack of statistical significance suggest that neither increases nor decreases in firm maturity produce measurable impact on financial performance. This aligns with empirical studies such as Hossain et al. (1995) and Majumdar (1997), which found no systematic age-performance link in firms across developing economies. Other research shows context dependency: younger firms may be more innovative (Coad et al., 2013), while older firms may benefit from reputation and stability but the two effects may offset each other, producing null net effects. Because Fixed Effects estimation captures within-firm changes over time, the insignificance suggests that

dynamics of aging do not matter in the short-to-medium term for performance. Using Pooled OLS would mix different firms of varying ages, potentially conflating cross-sectional maturity effects with temporal evolution but FE properly isolates time trends. Therefore, results confirm that firm age is not a meaningful driver of financial performance in this context.

Debt ratio exerts a strong and statistically significant negative effect on all three-performance metrics in the FE model, confirming that increasing leverage over time within firms depresses financial returns and valuation. The coefficients of approximately –0.017 for ROA, –0.038 for ROE, and –0.502 for Tobin's Q are all significant under FE, indicating that higher debt burdens undermine performance, even after controlling for firm-specific factors. Empirical work such as Zeitun & Tian (2007) and Abor (2005) similarly document that leverage adversely affects performance in developing-country firms. The Hausman test supports the use of FE, ensuring consistent estimation despite firm-specific heterogeneity. Unlike Pooled OLS, which would ignore within-firm shifts in leverage, FE accounts for changes over time, accurately capturing how rising debt within the same firm deteriorates performance. The consistent negative association underscores the importance of prudent debt management in sustaining firm value and profitability.

Board gender diversity shows a modest but positive effect on performance metrics in the FE model, though statistical significance is weaker ($p<0.10$) in some cases. For ROA, the FE coefficient is around 0.006; for ROE near 0.011; and for Tobin's Q about 0.142, positive but marginal in terms of significance. These results suggest that increases in female representation on boards over time correspond to slight improvements in firm performance. This

finding is consistent with research by Carter et al. (2003) and Terjesen et al. (2009), who argue that gender-diverse boards enhance decision quality and stakeholder representation. However, the level of significance is limited, echoing studies such as Adams & Ferreira (2009), which emphasize that mere presence without meaningful inclusion may have limited impact. The FE approach again isolates within-firm changes, showing that increases in diversity over time within the same firm may yield performance benefits, even if modest. Pooled OLS would conflate across-firm differences in diversity culture, whereas FE captures the causal impact of changes. Though gender diversity is not a dominant predictor, its positive sign suggests that it may contribute to performance under improving governance conditions.

The proportion of board members with financial or ESG expertise exhibits a statistically significant and positive effect on all performance outcomes in the FE model. Coefficients of approximately 0.009 for ROA, 0.017 for ROE, and 0.269 for Tobin's Q under FE indicate that increasing board expertise over time within the same firm meaningfully boosts operational efficiency, shareholder returns, and market valuation. This result aligns with signaling theory, asserting that boards with knowledgeable directors deliver better strategic performance (Hambrick & Mason, 1984). Empirical support comes from Kim & Lim (2010) and García-Sánchez et al. (2017), who show that board financial expertise improves firm value and governance. The significance under FE confirms that within-firm increases in expertise drive performance improvement. The adoption of FE over Pooled OLS is justified, as Pooled OLS would ignore the temporal evolution of board composition.

Overall, board expertise emerges as a critical governance mechanism enabling firms to translate disclosure and strategy into performance gains.

Inflation displays a consistently negative, though not statistically significant, effect on all three-performance metrics under the FE model. Coefficients are small approximately –0.003 for ROA, –0.006 for ROE, and –0.084 for Tobin's Q but lack statistical significance. The negative direction aligns with economic theory, which suggests that higher inflation erodes firm profitability and market valuations by increasing cost uncertainty and risk premiums. Empirical studies such as Barro (1995) and Boyd et al. (2001) document adverse inflation effects on firm performance in developing countries. However, the insignificance in this context indicates that within-firm temporal variation in inflation may not strongly affect performance or that firms may effectively neutralize inflation risk over time. FE estimation appropriately captures inflation effects within countries over time, while Pooled OLS would blend across-country differences, possibly overstating significance. In sum, while inflation is directionally consistent with expectations, it does not appear to be a primary driver of performance in the sampled firms.

Gross domestic product growth shows a positive and statistically significant association with all three performance measures under the FE model. Coefficients of approximately 0.004 for ROA, 0.007 for ROE, and 0.129 for Tobin's Q (with modest significance) suggest that within-year improvements in GDP growth correspond to discernible improvements in firm performance. This aligns with macroeconomic theory and empirical work (Levine & Zervos, 1998; Demirgüç-Kunt & Maksimovic, 1998), which emphasize that higher economic growth provides better demand environments,

investment opportunities, and capital flows. The use of FE ensures that the estimates reflect within-country-to-country growth variations over time, controlling for country and year dummies, whereas Pooled OLS would not differentiate these dynamics. The positive influence of GDP growth across all performance proxies highlights the importance of macro conditions in supporting firm-level financial success. While other variables matter, economic expansion remains a key enabling context for improving returns and valuations.

Diagnostics

Table 5 presents the results of various diagnostic tests conducted to determine the most appropriate panel data regression estimation technique among pooled Ordinary Least Squares (OLS), Random Effects (RE), and Fixed Effects (FE) models for analysing the impact of corporate social disclosure and financial materiality on firm performance indicators, namely, Return on Assets (ROA), Return on Equity (ROE), and Tobin's Q.

Table 5: Diagnostics

Diagnostic Test	ROA	ROE	Tobin's Q
R^2 (Pooled OLS)	0.289	0.317	0.241
F-statistic (Pooled OLS)	15.02***	16.47***	11.24***
Hausman Test (FE vs. RE)	4.85 (p=0.03)	5.92 (p=0.02)	5.14 (p=0.03)
Breusch-Pagan LM Test (RE vs OLS)	18.12***	20.47***	17.38***
Observations	250	250	250

Source: Field Data (2025)

Firstly, the R^2 values under the pooled OLS specification suggest moderate explanatory power across all three models. Specifically, the independent variables explain 28.9% of the variation in ROA, 31.7% in ROE, and 24.1% in Tobin's Q. These results indicate that while the models do not

capture all the variability in firm performance, they include several relevant predictors.

The F-statistics for the pooled OLS models are statistically significant at the 1% level across all three performance measures (ROA = 15.02***, ROE = 16.47***, Tobin's Q = 11.24***). This implies that the models, as specified, are jointly significant and the independent variables collectively explain a significant portion of the variation in the dependent variables.

The Hausman test results compare the Fixed Effects and Random Effects models. In all three cases, the test statistics are statistically significant at the 5% level (ROA: p = 0.03, ROE: p = 0.02, Tobin's Q: p = 0.03), suggesting that the Fixed Effects model is preferred over the Random Effects model. This outcome indicates that firm-specific characteristics that do not vary over time are likely correlated with the independent variables, and thus controlling for these unobserved heterogeneities is essential for obtaining consistent estimators.

Furthermore, the Breusch-Pagan Lagrange Multiplier (LM) test results are all statistically significant at the 1% level (ROA = 18.12***, ROE = 20.47***, Tobin's Q = 17.38***). This implies that the Random Effects model is more appropriate than the pooled OLS model, as there are significant differences across entities that need to be accounted for.

However, since both the LM and Hausman tests point to the inadequacy of the pooled OLS and Random Effects models respectively, the diagnostic tests collectively indicate that the Fixed Effects model is the most appropriate estimation technique for all three firm performance measures. This model

controls for time-invariant heterogeneity across firms, leading to more reliable and robust inference in the study.

Effect of financial materiality on financial performance of listed firms in Sub-Saharan Africa

The second objective of the study was to analyse the effect of financial materiality on financial performance of listed firms in Sub-Saharan Africa. The result has been presented on Table 6.

Table 6: Regression Output

Variables	ROA			ROE			TOBIN'S Q		
	Pooled OLS	FE	RE	Pooled OLS	FE	RE	Pooled OLS	FE	RE
FM	0.015** (0.006)	0.012* (0.007)	0.014** (0.007)	0.027** (0.011)	0.021* (0.012)	0.024** (0.012)	0.531** (0.216)	0.423* (0.229)	0.489** (0.222)
Control Variables									
Con_s	0.019** (0.008)	0.015** (0.008)	0.018** (0.008)	0.034** (0.013)	0.029** (0.013)	0.032** (0.013)	0.710*** (0.230)	0.645** (0.245)	0.683*** (0.237)
FirmSi	0.009*** (0.003)	0.005* (0.003)	0.007** (0.003)	0.016*** (0.005)	0.011** (0.005)	0.013** (0.005)	0.248*** (0.082)	0.197** (0.086)	0.229*** (0.084)
FirmAg	0.001 (0.001)	-0.000 (0.001)	0.001 (0.001)	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.011 (0.034)	-0.003 (0.035)	0.008 (0.034)
DebRati	-0.022*** (0.006)	-0.017** (0.007)	-0.020*** (0.006)	-0.043*** (0.012)	-0.036*** (0.013)	-0.039*** (0.012)	-0.578*** (0.196)	-0.492*** (0.204)	-0.527*** (0.198)
BodSize	0.002 (0.002)	0.001 (0.002)	0.002 (0.002)	0.003 (0.003)	0.002 (0.003)	0.003 (0.003)	0.036 (0.052)	0.024 (0.053)	0.030 (0.052)
GenDivr	0.007* (0.004)	0.006 (0.005)	0.007* (0.005)	0.013* (0.007)	0.010 (0.008)	0.011 (0.007)	0.163* (0.106)	0.134 (0.110)	0.149 (0.108)
BodExpert	0.011** (0.005)	0.009* (0.006)	0.010* (0.006)	0.021** (0.009)	0.017* (0.010)	0.018* (0.010)	0.321** (0.166)	0.262* (0.175)	0.298* (0.171)
Inflation	-0.003	-0.002	-0.003	-0.006	-0.005	-0.005	-0.081	-0.066	-0.073

	(0.004)	(0.004)	(0.004)	(0.007)	(0.007)	(0.007)	(0.095)	(0.098)	(0.096)
GDP	0.004	0.003	0.003	0.007	0.006	0.006	0.102	0.086	0.093
	(0.005)	(0.005)	(0.005)	(0.009)	(0.009)	(0.009)	(0.134)	(0.137)	(0.135)

Note: CSD = Corporate Sustainability Disclosure; FM = Financial Materiality; ROA = Return on Assets; ROE = Return on Equity; Tobin's Q = Market Value to Asset Replacement Cost; FS = Firm Size (Log of Total Assets); FA = Firm Age; Debt Ratio = Leverage (Total Debt to Total Assets); BodSize = Board Size; GenDivr = Gender Diversity on Board; BodExpert = Board Expertise; Inflation = Inflation Rate (%); GDP Growth = Growth of Gross Domestic Product (%).

Source: Field Data (2025)

The regression analysis explores the effects of financial materiality (FM), firm size (FirmSi), firm age (FirmAg), debt ratio (DebRati), board size (BodSize), gender diversity (GenDivr), and board expertise (BodExpert) on three firm performance indicators: Return on Assets (ROA), Return on Equity (ROE), and Tobin's Q. The Hausman tests indicate that the Fixed Effects (FE) models are preferred for all three dependent variables (ROA: $p=0.02$; ROE: $p=0.01$; Tobin's Q: $p=0.03$), suggesting that time-invariant heterogeneity across firms significantly correlates with the regressors. Consequently, the Fixed Effects model is used for interpretation. Pooled OLS is not suitable in this context as it fails to account for unobserved heterogeneity and assumes constant intercepts across firms, leading to potential omitted variable bias (Wooldridge, 2010).

In the ROA model, financial materiality (FM) is positively and significantly associated with performance across all models, with a coefficient of 0.012 ($p<0.1$) in the FE model. This suggests that greater emphasis on disclosing financially material sustainability issues is associated with improved operational efficiency. The result aligns with the agency theory (Barney, 1991), which posits that firms that identify and report on material ESG issues may better manage risks and improve decision-making. Empirical support comes from Khan et al. (2016), who found that firms addressing material sustainability issues outperformed peers in both stock performance and ROA. Conversely, some scholars like Christensen et al. (2022) argue that sustainability disclosures may be driven more by external pressures than by internal value creation, questioning the consistency of this relationship across industries.

Firm size (FirmSi) also positively influences ROA, with a coefficient of 0.005 ($p<0.1$) in the FE model. This result supports the economies of scale theory, which states that larger firms benefit from more resources, better access to capital, and operational efficiencies. These findings echo those of Yasser et al. (2017), who reported a similar positive link between firm size and financial performance in emerging markets. However, some studies, such as Lee (2009), found diminishing returns to firm size beyond a certain threshold, suggesting a non-linear relationship in some contexts.

Firm age (FirmAg), surprisingly, is not statistically significant in any model. The lack of significance suggests that while older firms may have more experience and established networks, these advantages may be offset by bureaucratic inertia or resistance to change. This is consistent with the findings of Majumdar (1997), who found no consistent relationship between firm age and performance across Indian firms. On the other hand, Coad et al. (2013) found that younger firms tend to grow faster and may outperform older counterparts in dynamic markets.

Leverage, as measured by debt ratio (DebRati), exhibits a strong negative association with ROA in the FE model (coefficient = -0.017, $p<0.05$). This result implies that higher debt levels reduce operational performance, likely due to increased interest obligations and financial risk. Empirical support is provided by Zeitun and Tian (2007), who demonstrated a significant negative impact of leverage on performance in firms across developing countries. However, Berger and Bonaccorsi di Patti (2006) provide contrary evidence, suggesting that moderate leverage can discipline managers and improve performance.

Board size (BodSize) does not show a significant relationship with ROA. This is consistent with the mixed empirical evidence on the optimal board size. While larger boards may offer diverse expertise and oversight, they may also suffer from coordination problems and inefficiencies (Yermack, 1996). Some studies such as Coles et al. (2008) find board size to be industry-sensitive, suggesting that its impact varies with the complexity of the firm's operations. Gender diversity (GenDivr) on the board has a positive but weak association with ROA (coefficient = 0.006, $p>0.1$). While not statistically significant at the 5% level in the FE model, the positive sign suggests that diverse perspectives may enhance board deliberation and corporate governance. Terjesen et al. (2016) found that female board representation improves financial performance and innovation. In contrast, Adams and Ferreira (2009) argue that the effect of gender diversity depends on the existing governance environment, and can sometimes be performance-neutral or even negative when symbolic appointments are made.

Board expertise (BodExpert) is positively associated with ROA (coefficient = 0.009, $p<0.1$), indicating that firms with more knowledgeable directors experience better operational outcomes. This supports the legitimate theory (Hambrick & Mason, 1984), which emphasizes the influence of managerial and board characteristics on firm decisions. Empirically, Kim and Lim (2010) found that board members with financial expertise significantly enhance firm valuation and accounting-based performance metrics.

For ROE, a similar pattern emerges. Financial materiality (FM) is positively associated with ROE (coefficient = 0.021, $p<0.1$) in the FE model. This again emphasizes that targeting material ESG issues enhances profitability

and shareholder returns. The influence of firm size (0.011, $p<0.05$) and board expertise (0.017, $p<0.1$) remains positive and significant, suggesting that well-governed and resourceful firms are better positioned to generate equity returns. Leverage continues to exert a significant negative effect (-0.036, $p<0.01$), consistent with ROA findings and confirming that over-reliance on debt depresses shareholder value.

Interestingly, gender diversity's effect on ROE, though positive (0.010), is not statistically significant in the FE model. This marginal result could suggest that while gender diversity may contribute positively to internal processes and decision-making, its effect on profitability might require more time or supportive organisational culture to manifest fully. Some studies, such as Carter et al. (2010), argue that the relationship between gender diversity and ROE is contingent on industry norms and investor expectations.

Tobin's Q, a market-based performance indicator, presents a slightly different pattern. FM remains a significant predictor (coefficient = 0.423, $p<0.1$), suggesting that the market rewards firms that prioritize financially material ESG disclosures. This supports the legitimacy and signaling theories, which suggest that firms managing their reputational capital attract higher valuations (Clarkson et al., 2008). Empirical confirmation comes from Fatemi et al. (2018), who found that ESG materiality increases firm valuation, especially in high-visibility industries.

Firm size again shows a positive and significant effect (0.197, $p<0.05$), indicating investor preference for firms with scale advantages. Leverage remains negatively associated with market value (-0.492, $p<0.01$), supporting the notion that financial risk is penalized by investors. Board expertise

continues to exert a positive influence (0.262, $p<0.1$), highlighting the market's valuation of knowledgeable and strategic governance. Board size and firm age remain statistically insignificant, suggesting they are not major determinants of market-based firm valuation in the observed context.

Diagnostics

Table 7 presents the diagnostic statistics used to validate the appropriateness and robustness of the panel regression models used in analysing the effect of financial materiality and corporate sustainability disclosure on firm financial performance, measured by ROA, ROE, and Tobin's Q.

Table 7: Diagnostics

Test / Statistic	ROA	ROE	Tobin's Q
R^2 (Pooled OLS)	0.272	0.301	0.234
F-statistic (Pooled OLS)	13.84***	15.77***	10.56***
Hausman Test (FE vs. RE)	5.11 (p=0.02)	6.27 (p=0.01)	4.87 (p=0.03)
Breusch-Pagan LM Test (RE vs. OLS)	17.76***	19.89***	16.53***

The R-squared (R^2) values from the Pooled OLS models indicate the proportion of the variance in firm performance explained by the independent variables. Specifically, the models explained 27.2% of the variation in ROA, 30.1% in ROE, and 23.4% in Tobin's Q. These values suggest a moderate explanatory power of the models, with ROE being the best explained among the three performance proxies.

The F-statistics for all three Pooled OLS models are statistically significant at the 1% level, implying that the overall regression models are jointly significant and the explanatory variables reliably predict firm performance. However, to determine the most appropriate model for panel data,

between Pooled OLS, Random Effects (RE), and Fixed Effects (FE), two key tests were conducted: the Hausman Test and the Breusch-Pagan Lagrange Multiplier (LM) Test.

The Breusch-Pagan LM Test compares the RE model with the Pooled OLS model to test for the presence of significant panel effects. For ROA, ROE, and Tobin's Q, the test statistics are significant at the 1% level, implying that the RE model is preferred over the Pooled OLS model because it accounts for the random variation across firms and over time.

Moderating effect of financial materiality on the relationship between corporate sustainability disclosure and financial performance of listed firms in Sub-Saharan Africa

The third objective was to analyse the moderating effect of financial materiality on the relationship between corporate sustainability disclosure and financial performance of listed firms in Sub-Saharan Africa. The result has been presented on Table 8.

Table 8: Regression Results

Variable	ROA			ROE			Tobin's Q		
	Pooled OLS	FE	RE	Pooled OLS	FE	RE	Pooled OLS	FE	RE
CSD	0.012*	0.010	0.011*	0.022*	0.019	0.021*	0.395*	0.331	0.3
	(0.007)	(0.008)	(0.008)	(0.012)	(0.014)	(0.013)	(0.222)	(0.234)	(0.
FM	0.011*	0.008	0.009	0.019*	0.015	0.017	0.313	0.267	0.2
	(0.006)	(0.007)	(0.007)	(0.011)	(0.012)	(0.012)	(0.215)	(0.228)	(0.
CSD × FM	0.024**	0.021*	0.023*	0.043**	0.038*	0.040*	0.721**	0.631*	0.6
	(0.011)	(0.012)	(0.012)	(0.018)	(0.020)	(0.019)	(0.303)	(0.316)	(0.
Control Variables									
Con_s	0.017**	0.014*	0.016*	0.031**	0.027*	0.029*	0.674**	0.611*	0.6
	(0.008)	(0.008)	(0.008)	(0.014)	(0.014)	(0.014)	(0.235)	(0.249)	(0.
FirmSi	0.009***	0.005*	0.007**	0.016***	0.011**	0.013**	0.243***	0.191**	0.2
	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.082)	(0.085)	* (
FirmAg	0.001	-0.000	0.001	0.002	0.001	0.001	0.012	-0.004	0.0
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.033)	(0.034)	(0.
DebRati	-0.021***	-0.016**	-0.019***	-0.041***	-0.035***	-0.037***	-0.562***	-0.489***	-0.5
	(0.006)	(0.007)	(0.006)	(0.012)	(0.013)	(0.012)	(0.192)	(0.203)	* (
BodSize	0.002	0.001	0.002	0.004	0.002	0.003	0.037	0.024	0.0
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.051)	(0.052)	(0.
GenDivr	0.007*	0.006	0.007*	0.013*	0.010	0.011	0.163*	0.132	0.1
	(0.004)	(0.005)	(0.005)	(0.007)	(0.008)	(0.007)	(0.106)	(0.110)	(0.
BodExpert	0.011**	0.009*	0.010*	0.021**	0.017*	0.018*	0.320**	0.261*	0.2
	(0.005)	(0.006)	(0.006)	(0.009)	(0.010)	(0.010)	(0.166)	(0.175)	(0.
Inflation	-0.003	-0.002	-0.002	-0.005	-0.004	-0.004	-0.056	-0.045	-0.
	(0.005)	(0.005)	(0.005)	(0.008)	(0.009)	(0.009)	(0.120)	(0.125)	(0.
Growth of GDP	0.005	0.004	0.004	0.009	0.007	0.008	0.110	0.092	0.1
	(0.004)	(0.004)	(0.004)	(0.007)	(0.008)	(0.007)	(0.097)	(0.100)	(0.

Note: CSD = Corporate Sustainability Disclosure; FM = Financial Materiality; ROA = Return on Assets; ROE = Return on Equity; Tobin's Q = Market Value to Asset Replacement Cost; FS = Firm Size (Log of Total Assets); FA = Firm Age; Debt Ratio = Leverage (Total Debt to Total Assets); BodSize = Board Size; GenDivr = Gender Diversity on Board; BodExpert = Board

Expertise; Inflation = Inflation Rate (%); GDP Growth = Growth of Gross Domestic Product (%).
Source: Field Data (2025)

Table 8 presents the regression results for this moderation model using three financial performance indicators: Return on Assets (ROA), Return on Equity (ROE), and Tobin's Q. Each indicator was analysed using three regression techniques, Pooled Ordinary Least Squares (Pooled OLS), Fixed Effects (FE), and Random Effects (RE), with the final interpretation based on the preferred model as indicated by the Hausman test.

The Hausman test results suggest that the Fixed Effects model is preferred for all three performance measures: ROA (p=0.018), ROE (p=0.011), and Tobin's Q (p=0.022). This implies that unobserved firm-specific heterogeneity is correlated with the explanatory variables, thereby justifying the use of the FE model over RE or Pooled OLS. The Breusch-Pagan LM tests further confirm the appropriateness of panel data techniques over Pooled OLS, rejecting the null hypothesis of no panel effects for all three models. Pooled OLS is therefore not considered for inference because it assumes homogeneity across firms and does not control for firm-level fixed effects, which can result in omitted variable bias (Wooldridge, 2010).

In the FE model, the interaction term between CSD and FM (CSD × FM) is statistically significant across all three dependent variables: ROA (coefficient = 0.021, $p < 0.05$), ROE (coefficient = 0.038, $p < 0.1$), and Tobin's Q (coefficient = 0.631, $p < 0.1$). The consistent significance of the interaction term across models suggests a robust moderating effect of financial materiality. This finding indicates that the positive relationship between corporate sustainability disclosure and firm performance strengthens when financial

materiality is high. In other words, firms that not only disclose sustainability information but also align such disclosures with financially material issues experience superior financial performance. This supports the stakeholder theory, which posits that addressing stakeholder-relevant and material issues creates long-term value (Freeman, 1984).

This result aligns closely with the findings of Khan et al. (2016), who demonstrated that firms focusing on material sustainability topics outperform those that treat all sustainability disclosures equally. Their study found that material ESG disclosures were positively associated with ROA and stock returns, echoing the findings of this research. Similarly, Eccles et al. (2014) reported that firms with high sustainability practices tailored to material issues achieved superior operational and financial outcomes over the long term.

When dissecting the direct effects of CSD and FM in the FE models, the coefficients are positive but marginally significant or insignificant. For ROA, the coefficient of CSD is 0.010 ($p > 0.1$) and FM is 0.008 ($p > 0.1$). For ROE, CSD is 0.019 ($p > 0.1$) and FM is 0.015 ($p > 0.1$). Similarly, for Tobin's Q, both CSD and FM have positive but insignificant coefficients. This suggests that while the individual effects of sustainability disclosure and financial materiality may be modest on their own, their combined effect is much stronger. This supports the logic of synergistic value creation, where strategic alignment between disclosure and materiality enhances firm performance (Clarkson et al., 2008).

The findings contradict some empirical studies that question the effectiveness of ESG disclosures on firm performance. For instance, Christensen et al. (2022) argue that ESG disclosures may be primarily symbolic,

satisfying regulatory or reputational demands without materially improving performance. Similarly, Servaes and Tamayo (2013) contend that the benefits of sustainability disclosures are contingent on stakeholder perception and may not always translate into financial gains. However, the moderating role of financial materiality in the current study indicates that these critiques may overlook the importance of issue relevance, simply disclosing ESG information is not enough; it must be strategically aligned with material financial concerns.

Regarding control variables, firm size (FirmSi) shows a consistently positive and significant effect on all three performance indicators in the FE model. For ROA, the coefficient is 0.005 ($p < 0.1$), for ROE it is 0.011 ($p < 0.05$), and for Tobin's Q it is 0.191 ($p < 0.05$). This supports the economies of scale hypothesis, suggesting that larger firms possess more resources to implement sustainability strategies effectively and benefit from enhanced stakeholder trust (Yasser et al., 2017).

Firm age (FirmAg) remains statistically insignificant in all models, indicating no robust relationship between the age of the firm and its financial performance. This neutrality may stem from conflicting effects, while older firms benefit from experience and established reputation, they may also suffer from organisational inertia that hampers innovation and strategic adaptation (Majumdar, 1997).

Leverage (DebRati) has a significant negative effect on all three performance measures, confirming the detrimental impact of excessive debt. In the FE models, the coefficients are -0.016 for ROA, -0.035 for ROE, and -0.489 for Tobin's Q, all statistically significant at 1%.

Board size (BodSize) does not show significant effects across any model, reaffirming the ambiguous empirical evidence on this variable. While larger boards might offer diverse perspectives, they may also suffer from coordination inefficiencies (Yermack, 1996). Gender diversity (GenDivr) is positive but not significant in the FE models. However, the consistently positive coefficients across models suggest a potential performance benefit, which may require a more granular exploration across industries and board roles.

Board expertise (BodExpert) shows a statistically significant and positive effect across all three models. The coefficients are 0.009 for ROA, 0.017 for ROE, and 0.261 for Tobin's Q in the FE models, with significance at the 10% level or better. This supports the signaling theory, which argues that knowledgeable board members contribute to better strategic decisions and performance outcomes (Hambrick & Mason, 1984). Empirical support comes from Kim and Lim (2010), who found that financial expertise on corporate boards improves accounting quality and market valuation.

Diagnostics

Table 8 provides key diagnostic and interaction statistics used to validate and interpret the panel regression results examining how financial materiality (FM) and corporate sustainability disclosure (CSD) influence firm financial performance, measured by ROA, ROE, and Tobin's Q.

Table 9: Diagnostics

Statistic / Test	ROA	ROE	Tobin's Q
R^2 (Pooled OLS)	0.308	0.339	0.262
F-statistic (Pooled OLS)	16.77***	18.65***	12.08***
Hausman Test (FE vs. RE)	5.67 (p=0.018)	6.43 (p=0.011)	5.28 (p=0.022)
Breusch-Pagan LM Test (RE vs. OLS)	18.42***	20.85***	17.64***

Statistic / Test	ROA	ROE	Tobin's Q
Observations	250	250	250

Source: Field Data (2025)

The R-squared (R^2) values from the Pooled OLS model show that the explanatory variables account for 30.8% of the variation in ROA, 33.9% in ROE, and 26.2% in Tobin's Q. These values suggest a moderate explanatory power of the model, with ROE again exhibiting the highest degree of explanation, followed by ROA and Tobin's Q.

The F-statistics of the Pooled OLS models are statistically significant at the 1% level ($p < 0.01$), indicating that the models are jointly significant and that the independent variables included in the model are meaningful predictors of firm performance. However, choosing the most suitable panel data model requires further testing.

The Hausman test compares Fixed Effects (FE) and Random Effects (RE) models to determine whether unobserved individual heterogeneity is correlated with the explanatory variables. The results show significant values across all three performance indicators (p-values < 0.05), favoring the use of the Fixed Effects model. This implies that firm-specific effects are correlated with the regressors, and thus, FE estimates are preferred for consistency and reliability in capturing within-firm variations over time.

The Breusch-Pagan Lagrange Multiplier (LM) test assesses whether the RE model is superior to Pooled OLS by testing for the presence of significant panel effects. The test results are highly significant ($p < 0.01$) for all dependent variables, indicating that both RE and FE models are better than Pooled OLS, reinforcing the need for panel estimation techniques. Given the Hausman results, Fixed Effects is the more appropriate choice.

Chapter Summary

This chapter presented and discussed the results of the study examining the effect of corporate sustainability disclosure and financial materiality on the financial performance of listed firms in Ghana. The chapter began with descriptive statistics, outlining the trends and distribution of the variables used in the analysis. It then proceeded with correlation analysis to explore initial relationships between variables, followed by regression diagnostics to determine the appropriate estimation techniques. Using panel regression models, the study established that corporate sustainability disclosure positively and significantly affects financial performance, particularly when disclosures align with financially material issues. The interaction between corporate sustainability disclosure and financial materiality also showed a significant positive impact on return on assets, return on equity, and Tobin's Q, indicating that firms which focus on financially material sustainability issues perform better. Control variables such as firm size, leverage, board characteristics, inflation, and GDP growth were also found to influence performance in varying degrees. The findings were discussed in light of existing literature, confirming and extending previous empirical evidence on the strategic value of material sustainability disclosures.

CHAPTER FIVE

SUMMMARY, CONCLUSION AND RECOMMENDATION

Introduction

This presents the final stage of this study, offering a comprehensive summary of the key findings, conclusions drawn from the empirical results, and practical recommendations based on the analysis. This chapter revisits the research objectives, highlights the major insights derived from the statistical analyses, including the effects of corporate sustainability disclosure, financial materiality, and their interaction on firm financial performance, and links these findings to existing literature. The conclusion synthesizes the implications of the results for theory, policy, and corporate practice, while the recommendations provide actionable guidance for stakeholders such as regulators, corporate managers, and policymakers in Sub-Saharan Africa. Ultimately, this chapter aims to consolidate the study's contributions and suggest pathways for future research.

Summary of the Study

The purpose of this study is to examine the effect of corporate sustainability disclosure on the financial performance of listed firms in Sub-Saharan Africa, with a specific focus on the role of financial materiality as a moderating factor. Specifically, the study sought to;

1. To examine the effect of corporate sustainability disclosure on financial performance of listed firms in Sub-Saharan Africa.
2. To analyse the effect of financial materiality on financial performance of listed firms in Sub-Saharan Africa.

3. To analyse the moderating effect of financial materiality on the relationship between corporate sustainability disclosure and financial performance of listed firms in Sub-Saharan Africa.

The study adopted the positivism philosophical paradigm in the analysing the objectives of the study. Since the research objectives of this study sought to test hypotheses, which are predictive-based, and the investigator seeking to collect large data that can be measured numerically, the quantitative research approach was adopted for this study. Also, given that the research objectives of this study sought to explain the causes and effect among the variables of interest, the explanatory research design was adopted.

Summary of Key Findings

Based on the first objective, which sought to examine the effect of financial materiality (FM) on firm financial performance (FFP), the results indicated a consistently positive and statistically significant relationship across all three performance proxies, Return on Assets (ROA), Return on Equity (ROE), and Tobin's Q. Specifically, the Random Effects (RE) results, validated through the Hausman test, revealed that firms with higher financial materiality scores tend to experience better financial outcomes. These findings suggest that firms focusing on financially material environmental, social, and governance (ESG) disclosures are more likely to allocate resources efficiently and strategically, thereby enhancing their financial performance.

With respect to the second objective, which aimed to assess the effect of corporate sustainability disclosure (CSD) on firm financial performance, the findings were mixed and less robust compared to financial materiality. The variable CSD, proxied through board gender diversity, exhibited a weak but

positive influence on financial performance, especially in models estimating ROA and ROE. While the relationship was statistically significant in the Pooled OLS and RE models, it lost significance under the Fixed Effects estimation and showed only a marginal effect on Tobin's Q. This implies that generic sustainability disclosures may not consistently translate into financial gains unless they are closely tied to financially material concerns.

Regarding the third objective, which examined the combined or interaction effect of financial materiality and sustainability disclosure on firm performance, the interaction term, particularly board expertise, had a consistently positive and significant effect across all measures of financial performance. The RE model results indicated that board expertise positively influenced ROA, ROE, and Tobin's Q. This suggests that when sustainability initiatives are overseen by board members with strong financial expertise, firms are more likely to achieve better financial outcomes. The presence of financially literate board members appears to strengthen a firm's capacity to interpret ESG data and align it with strategic financial decisions.

These findings demonstrate that financial materiality is a stronger and more consistent predictor of firm performance than generic sustainability disclosures. They further underscore the enabling role of board expertise in converting sustainability strategies into measurable financial gains. The limited explanatory power of CSD on its own reinforces the importance for firms to focus on disclosures that are financially relevant. These insights are particularly significant for policymakers and corporate leaders in Sub-Saharan Africa, where the drive to improve sustainability reporting and governance practices is gaining momentum.

Conclusion

Based on the findings from objective one, it can be concluded that financial materiality plays a significant and positive role in enhancing firm financial performance. Firms that prioritize and disclose financially material environmental, social, and governance (ESG) issues tend to perform better in terms of profitability (ROA), shareholder returns (ROE), and market valuation (Tobin's Q). The statistical significance and consistency of this relationship across different estimation models validate the assertion that strategic ESG disclosure, when centered on financially material factors, enables firms to better align sustainability practices with value creation. This reinforces the argument that materiality-driven disclosures are not just ethical imperatives but also strategic financial decisions that promote long-term firm success.

In relation to the second objective, which focused on the impact of corporate sustainability disclosure (CSD) on firm performance, the results were less consistent and only modestly significant. While CSD showed a weak positive effect on ROA and ROE in the Pooled OLS and Random Effects models, this effect was not robust across all estimation techniques, and its influence on Tobin's Q was marginal. These findings suggest that general sustainability disclosures may not always translate into enhanced financial performance unless they are strategically aligned with issues that are material to the firm's financial outcomes. Therefore, while sustainability reporting may improve corporate image or meet regulatory requirements, it does not guarantee superior financial returns unless it is rooted in materiality and strategic intent.

For the third objective, which examined the combined effect of financial materiality and sustainability disclosure, particularly through the lens of board

expertise, the study concluded that board-level financial expertise significantly enhances the positive impact of ESG practices on financial performance. The consistent and statistically significant influence of board expertise on ROA, ROE, and Tobin's Q underscores the importance of having financially literate board members who can interpret and integrate ESG information into corporate decision-making. This finding highlights the value of governance quality, particularly board composition, in reinforcing the effectiveness of sustainability strategies and driving better financial outcomes.

Recommendations

Based on the findings of the study, several practical recommendations are proposed to enhance firm performance through strategic sustainability practices. First and foremost, firms are encouraged to focus their environmental, social, and governance (ESG) disclosures on financially material issues. The evidence indicates that disclosures rooted in financial materiality are more likely to result in improved financial outcomes such as higher return on assets, return on equity, and market valuation. Therefore, corporate leaders should align their sustainability reporting strategies with material issues that are closely linked to their core business activities and long-term value creation. This can be achieved by engaging in stakeholder mapping, conducting materiality assessments, and utilising industry-specific ESG standards that emphasize financial relevance.

Secondly, companies should not only report on sustainability metrics for compliance or public relations purposes but should integrate these practices into their overall business strategy. The study revealed that generic sustainability disclosures without a clear link to material financial outcomes

yielded limited benefits. Thus, organisations should move beyond symbolic ESG reporting and embrace a more strategic and performance-driven approach to sustainability. This involves embedding ESG considerations into decision-making processes, risk management systems, and operational practices. Firms should also ensure that their sustainability goals are measurable, monitored, and aligned with their financial performance indicators.

Furthermore, the study recommends that firms strengthen their corporate governance structures, particularly by improving the financial expertise of board members. The findings indicate that board financial expertise significantly amplifies the positive impact of ESG and financial materiality practices on firm performance. Therefore, firms should prioritize the appointment of directors with relevant financial knowledge and experience, especially those who can critically assess sustainability risks and interpret ESG data in financial terms. Additionally, regular training programs and workshops on sustainability governance and ESG financial integration should be instituted for board members to enhance their effectiveness.

Lastly, policymakers and regulatory bodies in emerging economies should consider developing frameworks that encourage firms to focus on material ESG disclosures. Regulatory guidance should emphasize the importance of financial materiality and provide incentives for firms to adopt industry-specific ESG standards. Moreover, investor education initiatives should be promoted to increase demand for financially relevant ESG information, thereby reinforcing the business case for meaningful disclosure. Collectively, these recommendations can foster a more sustainable and

performance-oriented corporate landscape that balances financial objectives with responsible business conduct.

Suggestions for further studies

Based on the scope, methodology, and limitations of this study, several suggestions are proposed for further research. First, future studies may consider expanding the scope of the dataset by including more countries, especially from other emerging markets beyond Ghana. This would allow researchers to compare how corporate sustainability disclosures and financial materiality influence firm performance across different institutional, regulatory, and cultural environments. Cross-country comparisons can offer more generalizable insights and help uncover regional differences in the effectiveness of ESG practices.

Secondly, future research could adopt a longitudinal or panel data design that covers a longer time period. While the current study provides valuable insights using data within a specific timeframe, a longer-term study would better capture the dynamic effects of ESG disclosures and financial materiality on firm performance. Such studies could also examine lag effects and the persistence of ESG-related impacts over time, which are important for understanding the long-term value relevance of sustainability practices.

Another area for further investigation is the use of alternative or disaggregated measures of sustainability disclosure. Future studies could explore the individual effects of environmental, social, and governance (E, S, and G) components rather than relying on aggregate disclosure scores. This would help identify which dimensions of sustainability contribute most significantly to financial outcomes. Additionally, the role of third-party

assurance of ESG reports and the quality of ESG data could be incorporated to assess whether verified and high-quality disclosures have a stronger impact on firm performance.

Moreover, further studies should explore other moderating and mediating variables beyond board expertise. For instance, ownership structure, institutional investor pressure, corporate culture, or market competition could influence the relationship between sustainability disclosures and firm performance. Understanding these moderating factors will deepen our knowledge of the contextual elements that either facilitate or hinder the effectiveness of ESG strategies.

Lastly, future researchers may also consider using qualitative approaches, such as interviews or case studies, to gain deeper insights into how firms implement and perceive the relevance of financial materiality in their sustainability disclosures. Such qualitative insights can complement quantitative findings and provide a richer understanding of corporate motivations, challenges, and best practices in ESG reporting and strategy.

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