

**THE EFFECT OF SUSTAINABILITY REPORTING PRACTICES ON THE
OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI,
KENYA, MEDIATING EFFECT OF FIRM CAPABILITIES:**



**A RESEARCH DISSERTATION SUBMITTED TO STRATHMORE UNIVERSITY
BUSINESS SCHOOL IN PARTIAL FULFILLMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN DEVELOPMENT FINANCE OF STRATHMORE
UNIVERSITY**

MAY 2024

DECLARATION

This dissertation is my original work and has not been submitted for examination in any other institution. Previously published or written material by another person that has been used, due reference was made.

© No part of this dissertation may be reproduced without the permission of the author and Strathmore University.

Nancy Oseko

Signature:NB0..... Date: ...31/05/2024.....

Supervisor Approval

This research dissertation has been submitted for examination with my approval as the university supervisor

Dr. Mumbi Maria Wachira

Faculty, Strathmore University Business School (SBS)

STRATHMORE UNIVERSITY



Signature Date31/05/2024.....

DEDICATIONS

I dedicate this project work to my family for their steadfast support and contributions that made this journey a success.



ACKNOWLEDGEMENTS

I acknowledge the Lord Almighty for his abundance and blessings that gave me the strength to complete this research work. I also have the utmost respect and thanks for my humble supervisor, Dr. Mumbi Maria Wachira whose supervisory role, words of encouragement and guidance made it possible to finalize the research work. To my three wonderful children; Mora, Ryan and Nathaniel this is for you all.



ABSTRACT

For years, the manufacturing sector has been at the cornerstone for supporting achievement of the country's economic goals and stimulating development. However, in the recent past the industry has seen a decline in its overall output as more companies shut down or scale down their operations in the local market. This is blamed on a myriad of changes in the business environment as well as regulatory/government policies. Studies have shown that in developed economies the uptake of sustainability reporting practices have been key to stimulating growth of industries. Locally, this has not been extensively studied hence this research sought to determine if sustainability reporting practices can impact the operational performance of manufacturing firms and whether firm capabilities moderate the relationship between the independent variables and the dependent variable. The research was informed by the triple bottom line framework, stakeholder theory and the dynamic capabilities theory. A positivism research philosophy was applied to guide the research with a descriptive approach supporting the statistical testing of the association between the variables. The study population was drawn from 950 manufacturing firms operating in Nairobi County that are registered with the association of manufacturers. A sample of 400 managers was considered in the research. The survey utilized structured questionnaires in the data collection with a combination of electronic methods and physical data collection utilized. Correlation results revealed that there was a moderate positive and significant relation between environmental reporting practices, social reporting practices and the operational performance of manufacturing firms in Nairobi, Kenya. The analysis indicated there was a strong positive and significant relation between, environmental, social and governance reporting practices and the operational performance of manufacturing firms in Nairobi, Kenya. The findings from the regression analysis revealed that there was a positive and significant relationship between sustainability reporting practices (ESG) and operational performance of manufacturing firms in Nairobi. Results on the moderator variable revealed a positive and significant effect of firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya. We recommend development industry-wide standards and guidelines for sustainable reporting practices tailored to the manufacturing sector in Nairobi, Kenya and strengthening customer feedback mechanisms and complaint resolution systems.

Key words: Sustainability, manufacturing firms, ESG reporting, firm Capabilities, Operational performance

TABLE OF CONTENTS

DECLARATION	ii
DEDICATIONS	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
OPERATIONAL DEFINITION OF TERMS	xii
LIST OF ABBREVIATIONS	xiii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background to the Study.....	1
1.1.1 Sustainability Reporting Practices	4
1.1.2 Operational Performance	6
1.1.3 Firm Capabilities.....	8
1.1.4 Manufacturing Firms in Nairobi	9
1.2 Statement of the Problem.....	10
1.3 General Objective	11
1.3.1 Specific Objectives	11
1.4 Research Questions.....	12
1.5 Scope of the Study	12
1.6 Significance of the Study	12
1.6.1 Policy Makers	13
1.6.2 The Manufacturing Sector	13

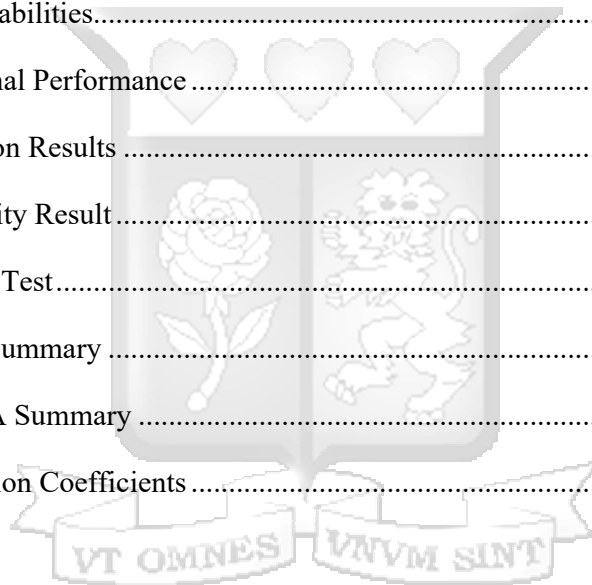
1.6.3 To academia	13
CHAPTER TWO	14
LITERATURE REVIEW	14
2.1 Introduction.....	14
2.2 Theoretical Framework.....	14
2.2.1 Triple Bottom Line Framework	14
2.2.2 Stakeholder Theory	15
2.2.3 Dynamic Capabilities Theory	17
2.3 Empirical Review.....	19
2.3.1 Environmental Reporting Practices on the Operational Performance	19
2.3.2 Social Reporting Practices on the Operational Performance	22
2.3.3 Governance Reporting Practices on the Operational Performance.....	23
2.3.4 Firm Capabilities and Operational Performance.....	26
2.4 Summary of Literature Review and research gaps	28
2.5 Conceptual Framework.....	33
2.6 Operationalization of Study Variables.....	35
2.7 Chapter summary	38
CHAPTER THREE	38
RESEARCH METHODOLOGY	38
3.1 Introduction.....	38
3.2 Research Philosophy.....	38
3.3 Research Design.....	38
3.5 Target Population.....	39
3.6 Sampling Design and Sample Size	39
3.7 Data Collection Instruments	40
3.8 Data Collection Procedures.....	40

3.9 Research Quality	40
3.9.1 Reliability Tests	41
3.9.2 Validity Tests	41
3.10 Data Analysis and Presentation	42
3.11 Ethical Considerations	42
CHAPTER FOUR.....	43
PRESENTATION OF RESEARCH FINDINGS.....	43
4.1 Introduction.....	43
4.2 Background Information.....	43
4.2.1 Response Rate.....	43
4.2.2 Profile of the Firms.....	44
4.3 Descriptive Analysis	45
4.3.1 Environmental Reporting Practices	45
4.3.2 Social Reporting Practices	47
4.3.3 Governance Reporting Practices.....	48
4.3.4 Firm Capabilities.....	49
4.3.5 Operational Performance	51
4.4 Correlation Analysis	53
4.5 Diagnostic Test	56
4.5.1 Normality Test	56
4.5.2 Collinearity Test.....	56
4.5.3 Heteroscedasticity Test	57
4.5.4 Linearity Test.....	58
4.6 Regression Analysis.....	59
CHAPTER FIVE	63
DISCUSSION, CONCLUSION AND RECOMMENDATIONS	63

5.1 Introduction.....	63
5.2 Summary	63
5.3 Discussion of Findings.....	64
5.3.1 Environmental Reporting Practices and Operational Performance	64
5.3.2 Social Reporting Practices and Operational Performance	65
5.3.3 Governance Reporting Practices and Operational Performance.....	65
5.3.4 Firm Capabilities and Operational Performance.....	66
5.4 Conclusions.....	67
5.5 Recommendations.....	69
5.5.1 Policy Recommendations.....	69
5.5.2 Practical Recommendations.....	69
5.6 Limitations of the Study.....	70
5.7 Areas for Further Research.....	71
REFERENCES.....	72
APPENDICES.....	82
Appendix I: Informed Consent Form.....	82
Appendix II: Research Questionnaire.....	83
Appendix III: List of Manufacturing Firms.....	88
Appendix IV: Introduction Letter:.....	97
Appendix V: Ethical Review Approval.....	98
Appendix VI: NACOSTI Research Licence.....	99

LIST OF TABLES

Table 2.1 Summary of Research Gap	30
Table 2.2 Operationalization of the Study Variables.....	35
Table 3.1 Reliability Results.....	41
Table 4.1 Background of the Firms	44
Table 4.2 Environmental Reporting Practices	46
Table 4.3 Social Reporting Practices	47
Table 4.4 Governance Reporting Practices.....	48
Table 4.5 Firm Capabilities.....	49
Table 4.6 Operational Performance	51
Table 4.7 Correlation Results	54
Table 4.8 Collinearity Result.....	56
Table 4.9 Linearity Test.....	59
Table 4.10 Model Summary	59
Table 4.11 ANOVA Summary	60
Table 4.12 Regression Coefficients	61



LIST OF FIGURES

Figure 2.1 Conceptual Framework	34
Figure 4.1 Response Rate	44
Figure 4.2 Normality Result	56
Figure 4.3 Heteroscedasticity Result	58



OPERATIONAL DEFINITION OF TERMS

Environmental Reporting: The preparation, presentation and communication of a firm's interaction with the environment detailing energy use, waste and pollution management, natural resource conservation and animal treatment.

Governance Reporting: The reporting on an organization's governance structures, policies and practices that direct board actions.

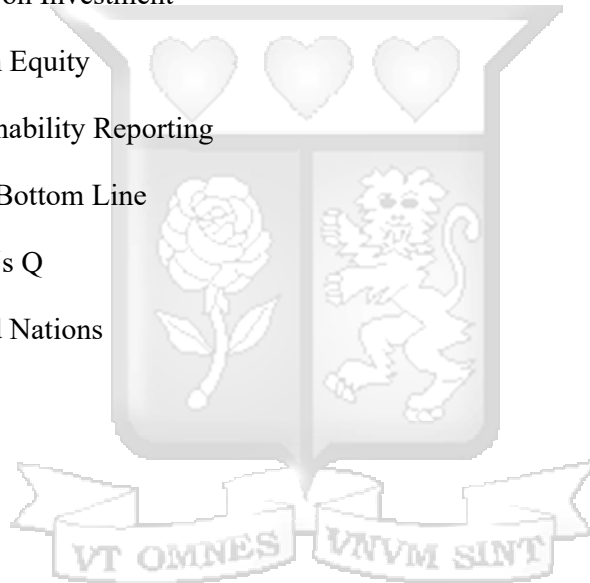
Operational Performance: The ability of an enterprise to deliver products or services to customers in an economical way by reducing management costs, order time, lead-time, and improving the effectiveness of raw material utilization.

Social Reporting: The preparation and presentation of reports on a firm's corporate responsibility indicating an organization's relationships, volunteer work, employees' health and safety.

Sustainability Reporting: The practice of issuing reports on the impact of a firms' activities on the economy, environment and social impacts.

LIST OF ABBREVIATIONS

CSR	Corporate Social Responsibility
CEO	Chief Executive Officer
ESG	Environmental, Social and Governance
IFRS	International Financial Reporting Standards
GRI	Global Reporting Initiative
ROA	Return on Assets
ROI	Return on Investment
ROE	Return Equity
SR	Sustainability Reporting
TBL	Triple Bottom Line
TQ	Tobin's Q
UN	United Nations





CHAPTER ONE

INTRODUCTION

This chapter presents the study's introduction, detailed definitions and conceptualizations of the study variables, the problem statement, the general and specific objectives, the scope and significance of the study to various stakeholders.

1.1 Background to the Study

Sustainability is important to global development and especially in the manufacturing sector which consumes numerous resources and generates tonnes of waste globally (Were, 2016). Aifuwa (2020) details that despite accounting for 16 percent of global GDP and 14 percent of employment, there has been growing attention to the environmental burdens associated with manufacturing from the producer and consumer perspectives. In a report done by UNCTAD, it was noted that one tonne of palm oil processed for exports in Kenya, for instance, generates 1.8 tonnes of dichlorobenzene pollutants, straining local soils. Globally, manufacturing activities have accelerated environmental degradation leading to significant changes in water consumption, freshwater eutrophication, and land-use (Eshikumo & Odock, 2017). Dealing with the negative effects of manufacturing requires the adoption of sustainable manufacturing practices which promote the manufacturing of goods through economically-sound processes that minimize negative environmental consequences and promote resources conservation (Fan, Yang, & Liu, 2020). Sustainability reporting is a means for manufacturers to measure and communicate their progress towards sustainability (Buallay, Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors, 2020).

Sustainability acknowledges that environmental wellbeing is vital to sustained business performance and that responsible business practices are key to sustained performance (Buallay, et al., 2020). Sustainability reporting (SR), the disclosure of an organization's economic, environmental and social impacts to internal and external stakeholders, is a means for businesses to reduce information asymmetry, increase transparency surrounding the impact of their daily business activities, and appeal to environmentally-conscious investors (Dincer, Keskin, & Dincer, 2023). This is because sustainability reports contain information about a firm's labour practices, ethics, environmental commitments, product responsibility and the effects of its activities on the environment and society at large (Al Hawaj & Buallay, 2022). Evidence from Buallay (2020) show some of the largest companies in the world leveraging sustainability reports as sources of competitive advantage, profiting from

increased efficiency outcomes of sustainable practices and the recognition from the reports they generate.

Laine et al. (2021) affirm that Nordic firms were the front-runners in sustainability reporting, generating the world's first sustainable report in 1989. The concept remained voluntary as the best practices became developed and permeated throughout different organizations (Al Hawaj & Buallay, 2022). However, from the stakeholder perspective, Grace (2021) argues that firms are supposed to be transparent about how their activities are impacting the society and the environment, making the preparation of detailed reports an important stakeholder satisfaction consideration. The Finnish Accounting Act of 1997 mandated that certain firms include non-financial issues in their annual reports and accordingly, environmental disclosure guidelines were provided in 2007 for state-owned firms and larger firms were encouraged to increase their reporting on socially responsible investment (Garg & Gupta, 2021). Iceland's National Regulation on Green Accounting 2002 mandated the largest polluters to report environmental issues and consequently, these, together with state-owned firms adopted GRI sustainability reporting guidelines in 2011 (Breliastiti, 2020).

The European Union has instituted new Corporate Sustainability Reporting Directives (CSRD) that introduce an array of ESG compliance rules that mandate more than 50,000 companies to report on ESG performance and their adherence to sustainability reporting standards (Breliastiti, 2020). However, while EU countries are introducing ESG's 2.0 era, much of the rest of the world uses a voluntary approach at sustainability (ESG) reporting (Khatri & Kjærland, 2023). Advocates of ESG reporting argue that reporting on internal processes and practices that promote efficiency, prioritize minimal waste generation and transparency benefits the organization by enhancing financial and operational stability. Indeed, evidence from Nordic countries reveals significant associations between sustainability reporting under GRI Standards and environmental performance (Khatri & Kjærland, 2023). Analysis by Buallay (2020) on manufacturers from 80 countries reveals a strong positive association between the quality of ESG reports and the firms' profitability and long-term value. The study compared sustainability practices in banks and manufacturing firms.

Developing countries are also embracing sustainable practices and consequently, voluntary reporting guidelines for climate impact, human rights, responsible investment, among other were provided under frameworks developed by the UN Principles of Responsible Investment (UNPRI), GRI guidelines, OECD, and other institutions. In China, Feng, et al. (2020) show

the adoption of sustainability certifications provided to guarantee stakeholders of the validity and legitimacy of released sustainable reports. In the study, certification of ESG reports enhanced companies' social acceptance, market value and stock prices, which is important to sustained competitiveness. Martínez et al. (2016) highlighted the use of sustainability reports by businesses to satisfy the increased demand for transparency from investors, consumers, the government and the society at large. Laskar and Maji (2016) were also of the opinion that companies which regularly report on their efforts, achievements and failures receive greater recognition than those which refuse to disclose the impact of their practices.

There is also increasing recognition among African companies that promoting sustainability practices is essential to the realization of organizational goals. Girón et al. (2021) evaluated the impact of sustainability disclosures on the financial performance of large companies in Asia and Africa and revealed that manufacturers are especially motivated to adopt sustainability reports due to its influence on external assurance, and that environmental disclosures have a positive impact on the firms' economic performance. In Nigeria, Nzekwe, Okoye and Amahalu's (2021) analysis revealed a significant positive effect of ESG reporting on financial performance of industrial goods companies as indicated by cash value added. Positive associations between corporate sustainability reports and the financial performance of listed firms in Kenya were also highlighted by (Mbutia & Gatauwa, 2022). In the study, customers were more appreciative of companies that made efforts to introduce green products.

Despite the significant research showing positive associations between SR and performance outcomes, there are still numerous questions regarding the actual effect of sustainability reports on business performance. Umar, et al. (2021) analysis revealed that there is no significant effect of social and environmental reports on firms' profit generation and in India, Garg and Gupta (2021) demonstrated a destructive element of negative sustainability reports on firms' attractiveness and shareholder value. Adedeji et al. (2020) also argued that sustainability reporting is a costly endeavour for smaller firms which lack adequate tools to address stakeholders' environmental concerns. Furthermore, Buallay (2020) demonstrated sectoral differences in the impact of sustainability practices across industries, with the practices having less impact on financial firms and more on resource-intensive firms. Further still, Tanui (2023) suggests that organizational support is necessary to ensure companies consistently submit truthful reports.

As a practice, SR has not sufficiently gained popularity in African countries, with Kinyua (2020) reporting that SR is yet to be fully incorporated into enterprises' accounting frameworks. There are also no regulatory requirements for firms to report on their sustainability practices (Wachira & Bendt, 2019). However, there is evidence that more and more organisations are embracing SR as a means to improve their reputation, brand discernibility, show affection to the surrounding communities and demonstrate fairness and protection of the environment and employee welfare (Were, 2016). Kenyan companies use guidelines provided by the Global Reporting Initiative (GRI) when preparing sustainability reports. Jinga (2021) avers that these firms generate numerous wastes and are the main contributors of greenhouse gases, hence can use sustainability reports to show how they are addressing consumers' and regulators' environmental concerns. There is however limited information on the impact of these sustainability reports in the Kenya manufacturing context. This study will therefore assess the impact of SRs on manufacturers' operational performance in Kenya.

1.1.1 Sustainability Reporting Practices

Sustainability reporting blends sustainability and reporting (Aifuwa, 2020). While according to Brundtland (1987), sustainability entails meeting present needs without compromising the ability of future generations to meet their own needs, reporting entails the disclosure of an organization's information to different stakeholders. Elkington (2004) defines sustainability reporting (SR) as the integration of and accounting for economic, environmental and social initiatives into corporate reports. SR information demonstrates a company's ability to consider social and environmental concerns in their operations and interactions with its stakeholders (Grace, 2022). The Global Reporting Initiative (GRI) (2019) defines sustainability reporting as the practice of communicating the economic, environmental and social impacts of daily operations.

Sustainability reports have evolved significantly since the 1980's, starting as environmental reports then evolving to employee reporting, social reporting and finally to SR. While SR has been recognized and realized a high degree of acceptance, many developing countries are yet to initiate this reporting (Al Hawaj & Buallay, 2022). In the study by Johari and Komathy (2019), European firms had a sustainability disclosure rate of about 49 percent while African firms had a disclosure rate of only four percent. However, KPMG (2017) reports that 90 percent of the largest firms all provide SRs and utilize the GRI reporting standards when developing their sustainability reports. The GRI Standards provides a framework that

incorporates the environmental, social, and governance (ESG) aspects of an organisation's footprint in SRs (GRI, 2015). The governance pillar specifies retention of ordinary capital, the social pillar encapsulates human capital and the surrounding community, while the environmental pillar deals with environmental protection, highlighting efforts directed towards resource conservation and efficiency in utilization as well as sourcing (Garg & Gupta, 2021). ESG aspects were also used by (Buallay, 2020).

Environmental reporting (ER) is a sustainability dimension that addresses concerns regarding the impact of the organization's activities on the environment and how it conserves the resources it has access to (Wang, et al., 2020). Hussain, Rigoni and Cavezzali (2018) add that environmental reporting also reports on the impacts of a firms' products and services on the environment and its expenditure on environmental wellbeing. Environmental data disclosure is important and has proved useful as a means of regulating pollution behaviour as Cao et al. (2018) report that increased adoption of environmentally responsible behaviours has led to a significant drop in environmental accidents. Cao et al. (2018) show reporting of companies' use of renewable energy sources, efforts at reducing energy waste and progress towards becoming a net zero organisation. Shad, et al. (2019) on evaluating SR confirmed that environmental reporting promotes resource efficiency, reduces cost, enables businesses to improve energy efficiency, and produce less waste. Environmental indicators provide details on resources utilization, emission reduction, responsible product development and environmental conservation, all which promote sustainability.

Social sustainability reporting evaluates an organization's impact on the social systems within which it exists, and encompasses aspects of product responsibility, labor practices and human rights preservation (Alghababsheh & Galleary, 2021). Social sustainability reporting helps companies to better evaluate the impact of their activities on its employees, players within its sector's value chain, consumers and the local communities. Social sustainability aims to improve the relationship between an organization and the community within which it exists to ensure that the two can thrive and exist in a healthy, fair, and equal way. The researchers Almashhadani and Almashhadani (2023) associate credible, transparent, and complete social reporting with improved relationships, trust among members and acceptance among the community. Costa and Goulart da Silva (2019) opine that reporting on social sustainability accomplishments such as proper labor management, occupational health and safety, and providing equal employment opportunities has significant positive impacts on firm value. Social reporting indicators include employment quality, health and safety,

diversity and inclusion as well as product responsibility (Asuquo, Dada, & Onyeogaziri, 2018).

Governance refers to those structures and processes designed to enforce the rule of law and safeguard accountability, transparency and responsiveness (Alrayyes & Al Khaldy, 2019). They identify and define the rights and responsibilities of various corporate stakeholders and governance reports show the level of commitment of corporate boards to honesty, integrity and fairness. According to the researchers, governance structures help enforce the board's commitment to high standards of decision-making which stakeholders consider critical to business integrity and to maintaining investors' trust. Taliento, Favino and Netti (2019) confirm that governance reports indicate appointment requirements, compensation packages and tenure which significantly affect the organization's strategic orientation, while Mbir, Agyemang, Tackie and Abeka (2020) reports that governance standards have a significant impact on compliance and the quality of financial reports. Governance indicators incorporate elements of board structure, shareholder rights, compensation, vision and mission.

1.1.2 Operational Performance

Organizations have responsibility towards suppliers, government agencies, customers, and competitors, all stakeholders who have different expectations from the firms (United Nations Conference on Trade and Development., 2021). Customers, for instance, expect quality products and services while the government expects minimal environmental impacts of business activities. Therefore, firms have to aspire to meet multiple goals. Tarigan and Siagian (2021) aver that operational performance is the firm's ability to deliver quality goods and services at current economic bounds and with minimal waste generation. Indeed, Gazzola, et al. (2021) confirm that businesses can only be operationally sustainable when they demonstrate that they can use natural resources at the current rate without exhausting the sources of the resources. It is an indicator of an organization's ability to perform against standard or prescribed indicators of effectiveness, efficiency, and environmental responsibility such as cycle time, efficiency of raw materials' utilization and meet delivery expectations (Richard, et al., 2009).

As evidenced, there are multiple definitions of operational performance. Greene (2021) consider operational performance to be the degree of synergy between different units in a business to work towards important business goals and confirms that operational performance results in less defects, errors, and rework, ensuring firm resources are used efficiently,

products and services meet customer expectations, and waste generation minimized. Kitonga (2016) confirms that companies use operational performance indicators to monitor and evaluate the efficiency of day-to-day operations. Papoutsi and Sodhi (2020) add that operational performance indicators help managements to identify ineffective strategies and underperforming departments and teams which is key to making strategic improvements. Richard et al. (2009) confirm that operational performance provides information about financial performance (profit, ROA, or ROE), product performance (sales, or market share), and shareholder value generation (shareholder profits, or economic value-added). As such, it covers multiple organization-specific factors such as processes, people and technology (Richard, et al., 2009).

Papoutsi and Sodhi (2020) consider operational performance to be a product of good planning and control, and evaluated operational performance in terms of increasing profits, reduction in investment risks, and competitiveness in a particular market. Buallay (2018) expressed operational performance using financial terms and established a significant relationship between adoption of sustainable practices, ESG disclosures and total value of firms' assets. Romania's Achim and Borlea (2015) used market measures (Tobin's Q) while Kitonga (2016) used the balanced score card and measured operational performance using the level of productivity (ROA), number of defections and production costs.

In order to be operationally sustainable, Abdelrazek (2019) affirms that firms have to excel on economic, environmental, and social dimensions of sustainability. According to Abdelrazek (2019) incorporating sustainability indicators into the balanced scorecard increases the tool's comprehensiveness in measuring environmental, and social, performance. In the study, reduction in emissions and energy waste, recycling and promoting health through sustainable materials were associated with operational sustainability. This study focuses on manufacturers who can transform their operations, reduce operational costs and increase efficiency by adopting sustainable practices and technologies. Therefore, this study will measure operational performance by including environmental (resource consumption, waste generation, reuse) and social dimensions (employee responsibility, supplier's sustainability performance) of performance into the measures used by Kitonga's (2016) analysis which used production cost (efficiency) ROA (shareholder value), number of defections (customer perspective).

1.1.3 Firm Capabilities

Firms use resources to meet their objectives and the ability to use resources to improve performance is referred to as organizational capabilities. Firm capabilities were defined by Wernerfelt (1984) as key organizational aspects such as experience, reputation and ability that determine an organization's ability to take innovative actions and create value to consumers and according to Feng, et al. (2020) they refer to the collective skills, abilities, and expertise generated through strategic recruitment, development and compensation. The concept of firm characteristics emerges from Barney's (1991) RBV theory which assumes that firms are a collection of unique resources and capabilities that they acquire and combine in unique ways to generate competitive advantage. Capabilities such as strategic and technological capabilities, knowledge and trade secrets are a type of valuable, rare, and inimitable resource that managements use improve value offering (Liang, Lee, & Jung, 2022).

Firm capabilities refer to the unique combination of skills, resources, processes, and attributes that enable a company to achieve its objectives and maintain a competitive advantage (Feng, Lai, & Zhu, 2020). For manufacturing firms, these capabilities are critical in driving operational performance and responding effectively to market demands and challenges (Ngunjiri, 2023). Capabilities are important resources since they are usually developed over time and difficult to replicate that technology and production processes as they are specific to the organization that possesses them. Liang et al. (2022) categorizes firm capabilities into technical and social dimensions, affirming that technical capabilities highlight an individual's functional competence or an organization's core competencies while social capabilities refer to an individual's leadership ability or to an organization's capabilities. Individually, technical capabilities reflect functional competence such as an employee's marketing ability while social capabilities refer to an individual's leadership ability. Technically, an organization's core competencies refer to firms' ability to meet its core goals while social capabilities refer to their unique identity, culture, and personality (Liang, et al., 2022).

According to Odiko et al., (2018), unique capabilities are a sustainable source of competitive advantage and this study will examine how leadership capabilities influence sustainability reporting and its relationship with manufacturers' operational performance. Ren, Tang and Jackson (2021) show how leaders can champion green practices and according to Singh, Del Giudice, Chierici and Graziano (2020) innovative leadership is key to the generation of more impactful ways to meet sustainability goals and communicating one's sustainable progress.

Therefore, leaders are key to the adoption of sustainable practices, and have especially significant impacts on firms' adaption of sustainable practices. Leadership capabilities can be measured the leader's individual capacity to set a strategy, communicate a vision, and motivate others towards a shared vision (Singh, et al. 2020). In this study, the management's green leadership should have a significant impact on manufacturer's sustainability initiatives, including their reporting proprieties and practices. This study will examine whether leader's green orientation can influence the link between SR and the operational performance of manufacturing firms in Nairobi County, Kenya.

1.1.4 Manufacturing Firms in Nairobi

Manufacturing is the processing of raw materials into useful goods for consumption. The manufacturing sector is important globally and locally, contributing to about 7 percent of the country's GDP in 2021 (KNBS, 2022). Manufacturing sector firms fall under the umbrella of the Kenya Association of Manufacturers (KAM) which then grouped the firms into 14 sectors according to the product they manufacture (Were, 2016). Despite the 7% contribution, the sector has been in decline since 2013 where it contributed 13 % of the country's GDP (KNBS, 2022). In contrast, Kenya's biggest contributor, the agricultural sector creates 40% of jobs and contributes 22% to the country's GDP. The sector has been plagued by challenges such as high cost of production, pervasion of counterfeit goods, reduced demand for local products, inadequate government support and poorly negotiated trade agreements (Willy, 2012).

The country aims to increase the sector's contribution to the GDP to 20% percent by 2030 and aims to accomplish this through the 'Kenya Manufacturing 20by30' plan which adopts four pillars with the aim to driving global competitiveness, promoting export-led growth, industrialization of agriculture and SME development. Regarding competitive positioning, Mwangi (2022) affirms that the ability to sustainably produce goods and services at an affordable cost is key. However, the country ranks poorly in the World Bank's Ease of Doing Business Index and the 2020 UNIDO Competitive Industrial Performance (CIP) Index ranks Kenya's industrial competitiveness at position 115 out of 152. Mwangi (2022) of the KAM reports that improving the country's competitiveness requires policies and sustainable frameworks that boost production and attract investments. Among these are sustainable reporting practices.

Manufacturing firms in Kenya have been increasingly focusing on environmental sustainability including enhancing efforts to minimize pollution, manage waste effectively, and adopt green energy solutions (Ngunjiri, 2023). Firms have started implementing environmental management systems and obtaining certifications like ISO 14001 to ensure adherence to environmental standards. According to KAM (2023), KAM and the Ministry of Energy and Petroleum have worked together for the past eighteen years to enhance energy efficiency in manufacturing. The primary goal was to improve industrial profitability, competitiveness, and cost effectiveness while fostering a clean and healthy environment. Nearly 1,800 energy efficiency audits have been carried out by the CEEC since it was founded by KAM and the Ministry of Energy and Petroleum saving nearly 2,000 GWH of energy or electricity (KAM Directory , 2023). The study will therefore seek to find out how reporting of these practices impacts organizational performance among the manufacturing sector in Nairobi.

1.2 Statement of the Problem

There are increasing concerns regarding the impact of firms on the environment and their role in promoting environmental sustainability (Abdelrazek, 2019). Indeed, Ganda and Milondzo (2018) argue that exhibiting irresponsible behaviour has significant negative effects on firms' long-term value. To this end, organizations are embracing sustainability practices and communicating this to their stakeholders through sustainability reports (Aifuwa, 2020). Currently, the Alrayyes and Al Khaldy (2019) confirm that 90% of the largest companies in the world have adopted some sustainability reporting framework with the goal of reducing information asymmetry regarding the impact of the company's activities and increasing transparency. Considering these advantages, companies adapt sustainable practices and use sustainability reports to disclose how they are faring on a wide range of sustainability areas, attracting environmentally conscious investors in the process. Feng, Lai and Zhu (2020) linked SR with increased legitimacy. However the exact impact of these reporting practices on organizational performance is yet to be determined. The study will therefore seek to examine the effect of sustainable reporting practices and firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya.

The relationship between reporting practices and organizational performance has been researched extensively but researchers are yet to establish the exact relationship. There is evidence that sustainability reporting improves organizational performance (Khatri & Kjærland, 2023; Buallay, 2020), that SR has an inverse relationship with performance

(Duque-Grisales & Aguilera-Caracuel, 2019; Landi & Sciarelli, 2019) or an inconclusive relationship between the two factors (Brooks & Oikonomou, 2018; Atan, et al. 2018). Khatri and Kjærland (2023) examined Nordic countries, Duque-Grisales and Aguilera-Caracuel (2019) was from South America, while Landi and Sciarelli (2019) presented data from Italian firms. Moreover, Dincer, et al. (2023) note sectoral differences in terms of ESG adoption, reporting and performance outcomes. For instance, environmental reports improved manufacturers' performance but had negative influences on banks' performance according to Buallay's (2020) findings. Javed et al. (2020) evaluated sustainability from one perspective (social reporting and firm image) and ascertained that while beneficial, responsible leadership can lead to excessive CSR that hurts performance. These studies have focused on the international context therefore creating a contextual gap which the study sought to fill.

Locally, Musau's (2019) analysis was on how green manufacturing impacts the operational performance of manufacturers in Mombasa, Mbithi and Wasike (2019) focused on banks and Ngunjiri (2023) only evaluated the impact of SR on manufacturer's financial performance. Many of the studies evaluated single elements of SR and there are methodological differences in the studies, with some using a literature review and secondary data. These studies also fail to highlight whether organizational capabilities can influence the relationship between ESG reporting and firm performance, with larger firms having demonstrated greater competency in reporting according to Hermundsdottir and Aspelund (2022). This study will advance these conceptual and methodological gaps by evaluating the impact of ESG reporting practices on manufacturer's performance in the presence of sustainability reporting capabilities.

1.3 General Objective

The general objective of this study is to examine the effect of sustainable reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.

1.3.1 Specific Objectives

- i. To determine the effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.
- ii. To evaluate the influence of social reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.
- iii. To assess the impact of governance reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.

- iv. To evaluate the moderating effect of firm capabilities on the relationship between sustainability reporting practices and operational performance of manufacturing firms in Nairobi, Kenya.

1.4 Research Questions

- i. What is the effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya?
- ii. To what extent do social reporting practices influence the operational performance of manufacturing firms in Nairobi, Kenya?
- iii. What is the impact of governance reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya?
- iv. What is the moderating effect of firm capabilities on the relationship between adoption of sustainable reporting practices and operational performance of manufacturing firms in Nairobi, Kenya.

1.5 Scope of the Study

This empirical study seeks to examine the relationship between SR and operational performance, moderated by firm capabilities and will thus adopt a descriptive design. The study will be guided by the Triple Bottom Line framework, the stakeholder theory and the dynamic capabilities theory, and will collect both primary and secondary data. The study's target population will be manufacturing firms registered and active in Nairobi County as per the listing obtained from the Kenya Association of Manufacturers (2021). The study will target top managers of the manufacturing firms and also collect sustainability reports from the various manufacturers. The study will use a quantitative approach in answering the research problem. The study aims to be conducted between March and May 2024 and will cover a period of 5 years(2019 to 2023).

1.6 Significance of the Study

Sustainability is a matter of global concern and ESG reporting is gaining fresh momentum in Kenya, as investor interest and activism rises globally. However, despite more companies including sustainability reports in their annual statements, the reporting has been inconsistent. This study focuses on sustainability reporting specific to manufacturing firms. It will be significant to

1.6.1 Policy Makers

Sustainability reporting in Kenya is mostly voluntary. This study will provide important information regarding how mandated sustainability reporting impacts the performance outcomes of manufacturing firms. This will be useful in guiding policy on how consistently these companies can produce sustainable reports. Policy guidelines can complement the guidance manual provided by the Nairobi Securities Exchange (NSE). This will enable the companies to align disclosure practices to internationally accepted standards.

1.6.2 The Manufacturing Sector

The manufacturing sector has a unique relationship with the environment and is facing more pressures to guarantee sustainability in their operations than other sectors that are less resource intensive. This study will highlight the importance of sustainability reporting and the advantages that these firms stand to gain from adopting sustainable practices. This will in turn, improve internal policy formulation and help the firms identify the disclosures that are of significance to the specific sector. It will also delineate the disclosures of material importance to the manufacturing sector.

1.6.3 To academia

This study contributes to the Triple Bottom Line concept and its application in the manufacturing sector and with regards to sustainability reporting. The study will also be valuable to researchers as it explores a field that has received little attention. It will contribute to the existing body of knowledge by providing a platform through which future researchers can explore sustainability issues in the manufacturing sector. Additionally, the study will identify gaps in literature and make suggestions that these researchers should explore to advance the study topic. Further, this study will be used as an item of reference and a source of data on sustainability practices engaged by Kenyan manufacturers.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents theories of sustainability reporting and the literature that informs the study. Further it contains the conceptual framework and the operationalization of study variables.

2.2 Theoretical Framework

This section highlights the theories that guide the relationship between ESG reporting and operational performance. This research is anchored on the triple bottom line framework, the stakeholder theory and the Dynamic Capabilities theory.

2.2.1 Triple Bottom Line Framework

The triple bottom line is a business concept that was introduced by Elkington (1997) and it proposes that firms, in addition to their financial performance, evaluate their social and environmental impact under a comprehensive “bottom line”. TBL concepts emerge from the recognition that business performance is over time reliant on how well a company positions itself in terms of the three main pillars sustainable development, that is, balancing financial, environmental, and human development (Bobby, 2016). Bobby (2016) proposes that firms use this model to conceptualize their environmental responsibility and to determine whether their actions have any negative social and environmental impacts. Sustainability refers to a set of practices aimed at meeting present needs with little to no compromise to the ability of future generations’ ability to meet theirs (Abdelrazek, 2019). Abdi, Li and Càmara-Turull (2022) aver that the sustainability element entails firms expand the financial bottom line into a triple bottom line, which includes major considerations on environmental and social aspects of corporate performance.

Elkington (1997) breaks the TBL into three P’s; profit, people, and the planet. The profit pillar considers the shareholders and is expressed in terms of financial returns the organization generates, the people pillar presents an organization’s commitment to members of the society and the planet pillar encompasses the organization’s effect on the environment. This model considers the cost of adopting sustainable practices and recognizes the importance of oversight in organizational decision making to ensure firms achieve an optimal

balance between social and financial objectives (Aroul, Sabherwal, & Villupuram, 2022). According to Brooks and Oikonomou (2018), firms can show responsibility to people through the adoption of fair hiring practices, proper remuneration, conservation initiatives, forming strategic partnerships with community-development NGOs, among others. Mohammad and Wasiuzzaman (2021) add that firms can show responsibility towards the planet by minimizing pollutants, reducing carbon footprints and cutting down on energy consumption and wastage.

Despite the value offered by the TBL, Norman and MacDonald (2004) critique the TBL for being impractical and invalid, given it does not specify how firms should measure social and environmental performance. Srivastava, Dixit and Srivastava (2022) argue that TBL only explains corporate social responsibility (CSR) and a sustainability measurement tool. However, the TBL is especially useful in this case given it seeks to determine the relationship between sustainable reporting practices and firm's operational performance. The TBL has played a key role in mainstreaming the agenda of sustainability and according to Elkington (1997), is a means for organizations to justify the advancement financial alongside social and environmental objectives, while reaping the financial benefits by committing to sustainable business practices. As a strategic tool, TBL promotes reporting, enabling firms to leverage sustainable business strategies that can increase firm attractiveness to investors (Liang, Lee, & Jung, 2022). Evidence points to a positive association between environmental certification, for instance, and market value resulting from increased legitimacy.

El Fallahi, Ibenrissoul and El Amri (2023) confirm that it promises improved operational efficiency and effectiveness, and supports the stakeholder theory in that it posits that firms can broadcast their achievements and progress towards social, environmental and financial sustainability through ESG practices and reports (Aifuwa, 2020). This model will anchor operational performance metrics which stipulate effectiveness, efficiency, and environmental responsibility. This approach will thus anchor financial performance, customer satisfaction, internal control, and learning and growth perspectives all which ensure firms meet the expectations of shareholders as well as stakeholders.

2.2.2 Stakeholder Theory

Stakeholders' theory emerges from Freeman (1984) as per (Fontaine, 2006) and it considers a stakeholder to be any individual or group who can be affected by an organization's approaches at achieving its strategic objectives. Freeman (1984) considers stakeholders to

include anyone with whom an organization has an implied social contract, implying employees, suppliers, customers, the government and the society as a whole. Freeman (1984) proposes that firms have the responsibility to meet stakeholder expectations and to promote their wellbeing, failure of which may result in external stakeholder pressure or negative firm reputation.

Manufacturing firms are responsible to a host of stakeholders including its employees, its customers, the society and environment within which it exists, the government, and its investors (Hongming, et al., 2020). They have to demonstrate that each stakeholder is important and included in decision making and that the organization is doing more to ensure it minimizes the negative impacts of its operations. Freeman (1984) asserts that responsible practices are key to enhancing the relationship between firms and their stakeholders and leans on principles of justice, fairness and equity in decision making. Stakeholder expectations as per Tu and Huang (2015) can be met through the institution of a corporate governance framework and governance systems evidenced by shareholder voting right, controlled CEO tenure and the provision of independent and non-executive directors.

Alshehhi, Nobanee and Khare (2018) maintain that the stakeholder theory operates on the basis that aligning relationships with other interest parties' eases businesses' ability to meet their objectives. The theory contributes to the corporate sustainability concept by bringing supplementary business arguments as to why companies should advance sustainable development goals. Critics of the theory label it a public relations tool. However, Alrayyes and Al Khaldy (2019) affirm that engaging all stakeholders would eliminate this bias by integrating sustainability issues into organisational processes and decision making. Alshehhi, Nobanee and Khare (2018) used the theory in analysis of the impact of sustainability practices on financial performance and (Buallay, Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors, 2020) used the theory in analysis of the effect of SR on firm performance.

Among the key drivers that drive business sustainability is the stakeholder needs and this theory confirms its importance (Wu & Li, 2023). The researchers aver that focusing on stakeholders is important to addressing some of the disclosure challenges highlighted such as greenwashing of sustainability reports. This is because it calls for the management to provide governance guidelines that would address the principal-agent conflicts due to the nature of their relationship. The stakeholder theory calls for managements to ensure they minimize any exposure to potential risks and costs, maximize returns and generate value to the firm in an

ethical manner (Jinga, 2021). The government, consumers and employees expect businesses to do more, be responsible regarding ESG, and to partner with companies that support sustainability issues. This theory therefore, recognizes the importance of ESG reporting and governance frameworks as a means for companies to demonstrate their responsibility. This study uses the stakeholder theory to establish the expected relationship between ESG reporting and firm performance.

2.2.3 Dynamic Capabilities Theory

The Dynamic Capabilities Theory was postulated by Teece (1990) who considered dynamic capabilities to refer to an organization's potential to extend, build and modify existing resources in response to environmental demands. Dynamic capabilities (DCs) are a class of higher order capabilities that influence a firms' speed and efficiency at responding to environmental changes (Katkalo, Pitelis, & Teece, 2010). DCs are influential competencies that enable firms to create, reconfigure, and integrate internal and external resources towards the realization of superior performance. According to Teece (1990), DCs provide firms with new capabilities that enable them to attain new kinds of competitive advantage in a timely fashion. These can be in the form of improved decision making, planning, sensing, seizing and reconfiguration (Vu, 2020).

Reid and Castka (2023) defined sensing capabilities as firms' ability to observe the physical environment and identify opportunities emerging in the market before their competitors. According to Dias and Renato (2017), sensing capabilities enable businesses to gather and use the information to sense an environmental gap through investigation and learning. Vu (2020) opines that sensing capabilities are key in customer-centric firms as it enables them to find innovative ways to anticipate and monitor customer needs, providing new ways to refine existing processes. Sensing capabilities are evaluated through an analysis of firms' ability to recognize opportunities and threats in the environment, as well as the firms' ability to monitor internal capabilities. Searcy et al. (2022) associates remote sensing capabilities with increased transparency, veracity and timeliness to environmental monitoring and reporting. Reid and Castka (2023) add that sensing technologies improve firms' ability to monitor their environmental impact and report on factors such as energy consumption, water quality, biodiversity well-being, among others.

Seizing capabilities refer to firms' ability to act on the sensed opportunities (Teece, 2007). Seizing relates to firms' ability to capture the value presented by opportunities through the

creation of new products or processes, or through the improvement of existing products and processes (Wagner, et al. 2017). According to Teece (2007), while many firms can identify or sense opportunities, a high percentage fail to seize the opportunities for various reasons including insufficient capital, limited commitment or the risk. Confirming that seizing capabilities are typically evokes firms' ability to utilize knowledge, Ellström et al. (2021) opine that seizing capabilities can be measured through their ability to acquire, share and apply knowledge over time. Bornay-Barrachina, et al. (2023) aver that seizing has significant impacts on business model design, investment decisions as well as organizational loyalty and commitment. Companies operating in green sensitive environments use green reports to enhance customer loyalty and Min and Kim (2022) affirm that opportunity–seizing capabilities are key sources of competitiveness in uncertain environments.

Reconfiguration capabilities refer to firms' ability to rebuild, recombine and reconfigure internal assets and structures to match the current environment and seized opportunities. Reconfiguration is a result of learning and institution of incremental improvements in routines and organizational competencies and enable firms to reconstitute their capabilities with newly acquired capabilities or replace obsolete competencies. Resource reconfiguration enables firms to respond appropriately to environmental changes by enabling them to be used in new, innovative ways. Min and Kim (2022) opine that reconfiguration capabilities can be measured using two scales- capabilities creation and integration. Yeow et al. (2018) avers that firms' ability to reconfigure tangible and intangible assets enables them to access and build new resources and maintain competitive advantage after seizing an opportunity. Businesses constantly change their processes and competencies in response to market uncertainty and demand, and sustainability reporting enables firms to communicate more effectively in markets with high ESG demands.

The DC perspectives developed challenging assertions from the Barney's (1991) Resource Based view of the firm that unique resources are the main sources of competitive advantage. Instead, DC proponents argue that the ability of firms to sense, seize and reconfigure key resources is the main factor that determines their performance. In this sense, Yang and Yang (2022) affirm that DCs can either mediate or moderate the relationship between resources and performance. Accordingly, evidence from Vu (2020) suggests that developing innovative capabilities enables firms to achieve superior performance and enhance product, process and marketing performance outcomes. Empirical evidence suggests that DCs do not directly affect corporate performance, but improve performance in areas such as innovation speed,

market response speed, production efficiency and flexibility. Yang and Yang (2022) consider DCs to be complementary competencies that have an indirect impact on organizations' ability to excel in identifying opportunities and responding to them in more effective ways.

While valuable, critics argue that it is difficult to empirically measure dynamic capabilities as well as the exact relationship between dynamic capabilities and firm performance (Kurtmollaiev, 2020). Despite this, there is evidence that specific capabilities are associated with successful organizations. With regards to sustainability reporting, Liang, Lee and Jung (2022) aver that DCs embedded in ESG management, and firms' absorptive capability and adaptive capability can either act as catalysts or discourage the achievement of sustainability through implementation of the ESG strategy (Liang, Lee, & Jung, 2022). In the research, firms with the ability to meet the expectations of stakeholders through proper coordination of internal and external resources were more profitable.

Indeed, Lavin and Montecinos-Pearce (2021) avers that in developing economies, sustainable reporting is a function of factors such as board diversity and ownership, with diverse firms with foreign board members having more visible sustainability reports. Elsewhere, Musciano (2022) opines that managerial competencies determine firms' ability to create consistent ESG data that can minimize greenwashing claims and inform stakeholders more effectively. This study will evaluate whether the management's competencies, the firms' research and development capabilities, as well as their orientation capabilities have an impact on the relationship between ESG reporting and organization performance.

2.3 Empirical Review

This section presents previous researchers' findings on the relationship between ESG reporting, as well as firm capabilities to report on the same on manufacturer's operational performance. The literature review will be presented in line with the research objectives and will identify the gaps emerging in the reviewed literature.

2.3.1 Environmental Reporting Practices on the Operational Performance

All businesses have to interact with the environment within which they exist and the way they interact is vital for their survival as it determines their self-sufficiency and sustainability. According to Pham and Tran (2020), organizations seeking to achieve maximum sustainability in their business operations have to ensure they utilize the resources they possess efficiently, minimize negative impacts of their actions on the environment, and contribute to natural wellbeing. Wu and Li (2023) aver that environmental disclosures can be

achieved through reporting on pollutant discharge standards, payment on pollution costs, the occurrence of major environmental problems, environmental public welfare projects, state of emission reduction, waste disposal, and the implementation of green sourcing and production.

Brooks and Oikonomou (2018) opine that environmental disclosure practices are becoming more important due to increased stakeholder demand for companies to show their environmental impact. Empirical literature suggests that environmental disclosures offers a means for firms to legitimize their reputation and image which is central to improving their financial performance outcomes. Singh et al. (2020) add that it is a means for firms to conserve resources and ensure their operations are socially responsible and environmentally sustainable. However, while the practice is encouraged, environmental disclosures are not universal and not all companies are mandated to report on their environmental performance (Jinga, 2021; Longoni & Cagliano, 2018). This section provides evidence on the effect of different environmental disclosure practices.

Longoni and Cagliano (2018) confirmed that little research has been done on the effect of inclusive environmental disclosure on firm outcomes in the presence of firm practices (green supply chain management). The study sought data disclosed to suppliers, distributors, consumers and other shareholders by Italian food firms to measure the degree of inclusivity and used a series of hierarchical regression models. Findings were that inclusive environmental disclosure practices do impact financial performance but have no effect on the firms' environmental performance. Green supply chain management practices reinforces the effectiveness of environmental disclosures showing the importance of leveraging internal processes with effective disclosures.

These observations were also made in China where Malik et al. (2023) revealed that environmental disclosures have a significant direct impact on firms' financial performance. The study used data reported between 2005 and 2016 from listed firms in the Shanghai and Shenzhen stock exchange and specified green disclosures in the presence of green innovation practices. Descriptive and correlation analysis results were that environmental disclosure promotes green innovation practices which lead to increased visibility, legitimacy and a greater competitive edge. The study findings also agreed with the foundations of the signalling theory that green innovation improves the disclosure-performance relationship. This study used the number of green patents as a measure of green innovation-a measure which has limitations and will not be included in the current study.

On the other hand, Wu and Li (2023) opines that information penetration has a more significant effect on firm performance than environmental reporting. The study focused on heavy polluting companies in China and used hierarchical linear models in analysis of reports made between 2008 and 2019. Findings were that while both mandatory and voluntary environmental disclosures have a positive impact on financial performance, in developed regions, a high degree of information penetration weakens the relationship between environmental reporting and financial performance. This means that stakeholders' access to high quality firm information significantly impacts their investment decisions.

Ganda and Milondzo (2018) explored the impact of minimising carbon emissions on corporate financial performance of South African Firms. The study used Return on Equity (ROE), Return on Investment (ROI), and Return on Sales (ROS) as financial indicators and multiple regression techniques in analysis. Findings were that carbon emissions reporting has significant negative effects on corporate financial performance. The research observed that companies adopt policies designed to reduce carbon emissions but observed that firms experience negative returns due to a high cost of cutting emission of green-house gasses. This study only focused on the effect of carbon emissions on firm performance.

Miah, Hasan and Usman (2021) also provided evidence that carbon emissions do have a significant negative impact on firm performance in terms of ROA and Tobin's Q. The study analysed data reported between 2011-2020 from 22 emerging economies across six continents and relied on OLS and 2SLS regression methods. The study concluded that the carbon emissions have a more significant negative effect on the earnings per share and credit score of non-financial firms than financial firms. The study confirmed that managers can adopt energy efficient construction and carbon-cutting strategies to help firms increase their credit score. The focus was on carbon-intensive firms while the current specifies manufacturers.

Mbole et al. (2021) sought to establish the effect of environment initiatives on the financial performance of cement manufacturers in Kenya. The study used a descriptive research in its data collection, relying on SEM in analysis. The analysis results revealed that engaging in activities such as engaging in environment protection, energy saving, adopting green energy, using green packaging, mine rehabilitation, waste recycling and researching on green products has significant impacts on the manufacturers' returns and firm value.

2.3.2 Social Reporting Practices on the Operational Performance

Organisation's social engagements including initiatives such as community investment, employees' work conditions and social support can have both positive and negative effects. These social aspects requires detailed disclosures. Social reporting is a means for organizations to demonstrate responsibility to internal and external stakeholders and social reports evaluate organizations' ethical, environmental, philanthropic and economic impact. Alabdullah, Ahmed and Muneerali (2019) argue that social reporting can be an important means for firms to be accountable their employees, suppliers and customers through promoting stakeholder accountability. Indeed, in the study, firms with large independent boards are more transparent and have a high degree of corporate governance. Adedeji et al. (2020) showed how corporate governance reporting improves decision making with board diversity being associated with improved performance as a result of improved decision-making capability.

Gunarsih and Ismawati (2018) explored the impact of Sustainability Reporting (SR) on firm performance in terms of ROA and Tobin's Q. The research specified economic, environmental and social reporting practices adopted by firms in the mining, metal and food processing industries. The study used regressions in analysis which revealed that economic and social reporting affect market value (Tobin's Q) but not on return on assets. This study was from firms from different sectors; the current specifies manufacturers.

In the pharmaceutical industry, López-Toro et al. (2021) revealed that all ESG indicators have a positive outcome on ROE, ROA and Tobin's Q. The study focused on 30 international companies and used SEM-PLS in analysis. The study findings were also that among pharmaceuticals, the controversy indicator has a positive relationship with Tobin's Q meaning that companies should ensure they avoid controversies and generate positive press to boost visibility and increase market value. This study was in the pharmaceutical sector.

On the other hand, Hongming, et al. (2020) were of the opinion that it is social and environmental reporting practices that impact firm performance while governance reporting had no impact. The study used data from non-financial firms in Pakistan and used a 2-step regression model in analysis. Conclusions were that inculcating culture of sustainability reporting is key to sustainable development, resources conservation, and legitimization of firm operations. This study focused on all non-financial firms and in Pakistan.

Moreover, Buallay's (2020) analysis established a significant negative effect of social performance on bank's profitability and value. The study collected data reported from 59 banks listed in stock exchanges of MENA countries and used ROA, ROE and Tobin's Q to measure performance. The evidence questions the role of social reporting and conclusions were that the institutions consider the type and quantity of information they disclose about their social activities. This study evaluated listed banks in MENA countries where sustainability reporting includes both mandatory and voluntary activities.

Shabbir and Wisdom (2020) used descriptive analysis in research into the relationship between CSR and environmental performance, and the financial performance of listed manufacturers in Nigeria. The study used panel regression analysis and revealed that investment in employee benefits, staff training and donations to the public community are ways for firms to increase the attractiveness of their products. Conclusions observed that profitability was higher among environmentally conscious firms.

Muthoni and Kinyua (2020) employed a cross-sectional descriptive research design in analysis of the impact of the corporate reputation on the performance of motor vehicle assemblers in Kenya. The study targeted the firms' employees and used simple linear regression analysis. The study found a positive and significant effect of corporate reputation management practices on the firms' performance. The study observes that manufacturers have to promote fairness, diversity and equality in pay and career development. These practices are considered responsible and important to internal stakeholders. This study specified motor vehicle assemblers.

King'wara's (2020) study contest the assertions that social disclosures have a positive impact on organizational performance. The study focused on firms listed at the Nairobi Securities Exchange and used regressions in analysis of secondary CSR disclosure reports made between 2008 and 2016. The study findings were that among the firms, CSR disclosure has no statistically significant impact on the firms' financial outcomes. The study implication from the finding was that NSE listed firms may not provide comprehensive reports on their CSR activities.

2.3.3 Governance Reporting Practices on the Operational Performance

Corporate governance (CG) refers to the rules, practices and processes through which an organization executes its decisions (Guluma, 2021). Guluma (2021) states that governance reporting involves the provision of disclosures on an organization's prudential governance

policies and practices, detailing how board's decision-making impacts shareholders, promoting long-term shareholder interest. Proponents of governance reporting consider it a means to reduce agency costs and risks and according to (Pham & Tran, 2020), governance reporting has become a more pressing issue with recent spate of corporate downturns. Firms use governance reports to demonstrate their commitment to integrity and companies use governance mechanisms to ensure their directors and employees act with honesty, integrity and fairness. Adedeji et al. (2020) opine that governance frameworks provide guidelines which promote internal principles and beliefs to ensure the highest standards of corporate governance are observed. Bui and Krajcsák (2023) opines that there are three main elements of a governance framework: the organisational structure, the internal controls and independent assurance.

CG reports contain details about the organization's culture, board roles, responsibilities and accountabilities, responsibility towards the environment, investors and stakeholders, brand identity, risk management and accountability and openness. Governance reporting is supported by the signalling theory as a means for organizations to signal their dedication to the sustainability agenda and through governance reports, organizations can provide assurance to their stakeholders that the company is well-managed and responsible. According to Pham and Tran (2020), managers with a high degree of integrity are committed to high CG standards since they consider good CG to be central to the realization of organizational goals and maximization of shareholder value. Bui and Krajcsák (2023) confirm that previous research into the relationship between CG practices and corporate performance has yielded inconsistent results.

Bui and Krajcsák (2023) examined the impacts of corporate governance on firms' performance in Vietnam and focused on reports generated between 2019 and 2021. The study used the generalized system methods of moments in analysis in analysis and the findings were that transparency disclosures have significant positive impacts on firm's value, ROE and ROA. The study established a significant association between board meetings and governance report accuracy and timeliness as reports delayed due to the COVID-19 pandemic that prevented meetings. However, this study established no significant association between shareholder rights and the responsibilities of the board of directors on financial performance. The study called on firms to contact competent authorities to certify the transparency of the nonfinancial information they report since this has a significant impact on shareholders' trust of the information.

Tao (2023) researched on the impact of ESG performance on firm performance, using independent board, ownership and dual board leadership as the governance indicators. The study collected data reported between 2012 and 2021 and used regression in analysis. Findings were that companies with high ESG scores are more profitable and successful. Moreover, ESG scores were more impactful on manufacturing firms than on non-manufacturers and these managers were recommended to ensure they invest in reporting practices that would provide economic benefits. This study investigated all listed firms while the current specifies ESG reporting by manufacturers.

Guluma (2021) investigated the impact of CG measures on the performance of Chinese listed firms operating between 2010 and 2018. The study included the influence of the manager's confidence on the relationship between CG and firm performance and employed a Generalized Method of Moments estimation model. The results revealed a significant association between CG measures and firm performance, with board independence having no effect on ROA and Tobin's Q, CEO duality having a negative significant effect on firm value, and shareholder ownership concentration having a positive effect on ROA and Tobin's Q. However, overconfident managers may damage firms, implying that lack of board independence can have a negative impact on firm value when the CEO is overconfident. Powerful CEOs were singled out as the main cause of agency problems between management and ownership. This study did not specify ESG reporting, instead focusing on one ESG practice.

Şeker and Şengür (2021) provided evidence that governance scores have a significant influence on financial reporting quality in research that collected data from 35 countries. The study collected data reported between 2010 to 2017 and applied panel regressions in analysis. Findings were that high quality reports are provided with companies that have high ESG performance scores. Specifically, the environmental and governance pillars were more impactful than the social pillar, implying that firms do not use ESG for misleading purposes but use the reports to provide genuine information and signal to their stakeholders. The impact of good reporting scores on firm performance was however not ascertained by this study.

Mohammad and Wasiuzzaman (2021) also found a positive association between ESG reporting practices and organizational performance, confirming that responsible business conduct enhance firm performance. The study sampled data reported by more than 600 SMEs listed in Malaysia between 2012 and 2017 and relied on regression analysis. The findings

were that ESG disclosures significantly improve firm performance and transparency. The study ascertained that while Malaysian companies have weak oversight due to a weak number of independent non-directors, increasing their number would improve organizational performance as it would increase the reliability of the financial reports. Ethical management was associated with stronger market acceptance and greater public trust.

2.3.4 Firm Capabilities and Operational Performance

Firms transform their operations to adjust to the business environment and these changes often require radical changes to both firm strategy and capabilities. Firm capabilities are collective competences (skills, abilities and expertise) that an organization amasses over time. Capabilities comprise individuals' technical and social skills and are results of strategic investments in knowledge acquisition, development and retention and depend on firms' decisions with regard to staffing, communication, training, remuneration, among other strategic human resource decisions. Technical competences, such as marketing, finance, or planning techniques, can be termed as functional, while social competencies refer to an individual's leadership ability such as their communication, strategic planning, and motivation. Capabilities can be a form of competitive advantage when they make firms to be more efficient in achieving desired results. The DC view explains that DCs can either mediate or moderate the relationship between resources and performance. This study seeks to assess whether DCs moderate the relationship between ESG reporting as a strategic resource and organizational performance.

There is increasing investor appetite for firms that adhere to ESG reporting standards and Almashhadani and Almashhadani (2023) highlight that firms adopt reporting mechanisms to ensure they enhance their legitimacy and at the same time achieve financial performance (FP). The researcher affirms that sustainability reporting is the management's way of demonstrating their willingness to contribute to the public good, beyond what the law requires. However, not all firms produce sustainability reports and given the range of measures available, the reporting quality depends on a set of internal decisions (Hongming, et al., 2020). Javed et al. (2020) also attribute ESG scoring system inconsistency to firm's ability and knowhow of the sustainability reports. Firms committed to green energy, for instance, leverage green reports to appeal to their consumers while social reporting has been associated with increased customer retention (Javed, et al. 2020).

Reporting standards stipulate that firms provide actionable, material reporting data. Al Hawaj and Buallay (2022) opine that quality data should reflect importance to the organization (financial materiality), comparable, accessible and reliable. In and Schumacher (2021) add that ESG data can only be actionable if it is current, accurate, transparent, and timely. While reporting CSR initiatives such as how a business treats its employees and associates, and their dedication to environmental sustainability is applauded, managements are often accused of publishing selective information to paint a positive image of the firms' operations (Pham & Tran, 2020). Pham and Tran (2020) call this 'greenwashing', confirming that it encompasses a spectre of acts that range from improving social performance for purely presentational reasons to the deliberate publishing of falsified reports to hide poor performance aspects such as pollution and emission scores, environmental degradation, or workplace injury. The researchers affirm that firm capacity to compel managements to publish accurate information in sustainability reports is important to sustained customer satisfaction.

Longoni and Cagliano (2018) show how in the mining and manufacturing sectors, increased demand for ethical sourcing has resulted in a new dimension of green supply chain management and reporting which many companies are reluctant to adopt. Pham and Tran (2020) link the quality of corporate reports to the chief executive officer (CEO's) integrity in research that used two-stage least square regressions in analysis of data from Fortune World Most Admired firms. According to the study findings, the integrity of the CEO has a significant effect on CSR initiatives and the quality of CSR disclosures, which can affect the firms' performance. This study concluded that CEO integrity strengthens the disclosure-performance relationship.

In this relation, Khan et al. (2021) established a significant link between CEO tenure and the quality of corporate social and environmental disclosures in China. The study utilized a fixed-effect panel data regression model in analysis of data reported between 2008 and 2016 by all listed non-financial firms and findings were that the quality of social and environmental disclosures declines as the tenure increases, signifying a non-linear inverted U-shaped association. These findings suggest that attaining sustainable development goals requires the mitigation of the managers' career-concerns. This study specified the effect of CEO-tenure on their environmental disclosure decisions which can either improve or reduce performance.

While Khan et al. (2021) and Pham and Tran (2020) establish the importance of CEO tenure and integrity on the quality of ESG disclosures, Fan, Yang and Liu (2020) present new media as a driving factor. The study drew data reported between 2014 and 2017 by Chinese listed

firms and used descriptive and correlation analyses which ascertained that while the average quality of corporate reporting is low, regular scrutiny complements government regulation and promotes the disclosure of relevant environmental information. Specifically, new media promotes the quality of environmental disclosures by state-owned enterprises and this significantly influences the firm value in the long-term. This study is based in China and specified the factors that impact the quality of environmental reports.

With regard to institution-specific factors, Alkhawaja et al. (2023) established that the quality of ESG disclosure is significantly influenced by gender dynamics factors. The study carried out analysis involving 8262 firms listed across 48 countries and collected data on the firms' board composition and reporting intention, frequency and quality. The study used ordinary least squares (OLS) regressions in analysis and revealed that gender diversity within corporate boards increases organizational sensitivity to accountability issues and promotes the integration of ESG policies and practices into a firm's strategy and daily operations, which includes factors such as the frequency of sustainability reporting. This study did not ascertain whether the increased ESG disclosure resulted in improved organizational performance.

Tanui (2023) also found a positive association between gender diversity and adherence to the all-inclusive principles of sustainability reports. The study collected data reported by 62 listed firms in Kenya and used multiple regressions in analysis. The study findings were that while managerial ownership has a negative effect on sustainability disclosures, board gender diversity enriches the quality of sustainability disclosure even under managerial and institutional ownership structure. The study, thus, concludes that ESG practices such as progressing gender diversity complement disclosures quality and ultimately firm performance.

2.4 Summary of Literature Review and research gaps

The studies reviewed provide insights into the relationship between different reporting practices and organizational performance. While insightful, however, the studies present gaps that motivate the current research. From the review, it is clear that most of the evidence is based in developed and large economies (Şeker & Şengür, 2021; Wu & Li, 2023). Moreover, some of the studies are directed at multiple countries (Alkhawaja, Hu, Johl, & Nadarajah, 2023, Şeker & Şengür, 2021), hence use panel datasets while the current study relies on data

from one country and one sector. Despite using data from multiple countries, gaps also emerge in the studies' conceptualization of firm performance.

Some studies explore performance in terms of ROA (Miah, Hasan, & Usman, 2021), others look at the firm's value and others combine multiple measures of organizational performance such as (López-Toro et al. 2021) (ROE, ROA and Tobin's Q). In addition to different measures, the designs and data collected vary significantly from what this study seeks to explore (Alkhawaja, Hu, Johl, & Nadarajah, 2023; Singh, Del Giudice, Chierici, & Graziano, 2020). Javed et al. (2020) for instance, used an exploratory design while Mbole (2021) used secondary data analysis. This study will rely purely on primary sources of data. It is also unique in its approach in that it will incorporate the firm capabilities into the equation to understand how firm's capacity to adapt sustainable reporting impacts the relationship between sustainable reporting and operational performance.

The evidence that emerges from the research reviewed indicates that firms select the components to include in their ESG reports and that different organizational factors such as the CEO integrity and tenure, as well as green orientation have significant impacts on reporting decisions. ESG reporting was also noted to affect firm performance in positive or negative ways depending on the investor's trust of the reports and other factors such as the timeliness of reporting and its inclusiveness. Moreover, it was demonstrated that firms can combine environmental and social reporting to reduce the impact of negative publicity emerging from environmental accidents, and that larger firms are better placed to adapt sustainable technologies. The managements' capacity and understanding of ESG reports were also reported to influence consumer trust as well as firm standards and expectations which demonstrates that firm capabilities are key in influencing the outcomes of sustainability reports.

Evidence shows that while the adoption of environmental practices and its consequent reporting activities, may be costly, manufacturers who demonstrate their environmental concern benefitted through positive firm perception and their products were more in demand. The concept of sustainability reporting is still new in developing economies such as Kenya and many firms are yet to adopt ESG reports. This study seeks to examine the degree to which manufacturing firms have embraced ESG reporting standards in Kenya and evaluate its impact on their corporate performance. The findings from this study will be specific to the manufacturing sector owing to the resources it consumes and the waste it generates both in and off-site. Table 2.1 below presents a summarized version of the study gaps.

Table 2.1 Summary of Research Gap

Study	Topic of Study	Findings	Research Gap	The focus of current Research
Wu and Li (2023)	The relationship between environmental disclosure and financial performance: Mediating effect of economic development and information penetration	Environmental disclosures have a positive impact on financial performance in strict corporate environments such as China where the government calls for mandatory reporting and that EDs are sources of legitimacy	This study relied on panel data in its analysis and examined the impact of mandated reporting	The study will use only primary data and will examine more than environmental disclosures
Ganda and Milondzo (2018)	The impact of carbon emissions on corporate financial performance: Evidence from the South African firms	Carbon emissions have significant negative effects on corporate financial performance but integrating green investment initiatives can effectually manage financial performance.	This study looked at one aspect of ESG reporting	The current study evaluates environmental, social and governance reporting practices and on operational rather than financial performance
Mbole et al. (2021)	Environmental Initiatives and Financial Performance: A Study of Cement Manufacturing Companies in	Engaging in environment protection, energy-saving initiatives, green energy, and producing degradable product packaging, as	The study investigated SMEs and used a cross-sectional design	This study will evaluate different types of manufacturers to determine how SR affects the different types of

	Kenya	well as waste recycling, and reporting on it has a significant positive effect on cement manufacturer's returns and firm value		manufacturers.
Gunarsih and Ismawati (2018)	Sustainability report and firm performance: Study in mining and metal and food processing industry Indonesia Stock Exchange 2014-2017	Economic and social reporting have an impact on market value (Tobin's Q) but not on return on assets suggesting that SR enhances market performance but not book value firm performance.	This study presents a geographical gap and used data from the mining, metal and food processing sectors in Indonesia	The current study will enhance these findings in Kenyan manufacturers
López-Toro et al. (2021)	Influence of ESGC indicators on financial performance of listed pharmaceutical companies	ESG reporting is important to pharmaceuticals who pay attention to controversies to boost their visibility. However, while controversies positively impact market value positively, it has a negative effect on ROA and ROE.	This study's population was 30 international companies and financial performance.	The current study evaluates Kenyan manufacturers and will use a descriptive design employing regressions in analysis of operational rather than financial performance
Buallay	Sustainability	ESG improves	The study	The current

(2020)	reporting and firm's performance: Comparative study between manufacturing and banking sectors	operational, financial and market performance in the manufacturing sector negatively affect firms in the banking sector.	compared SR from firms in two different sectors in the MENA region	study emphasises on SR in one sector
Tao (2023)	Study on the impact of ESG performance on firm performance	ESG scores were more impactful on manufacturing firms than on non-manufacturers and the better the ESG performance the higher the firm performance	The study evaluated all listed firms in the Shanghai Stock Exchange	The current study will focus on all manufacturers, whether listed or not
Şeker and Şengür (2021)	The impact of environmental, social, and governance (esg) performance on financial reporting quality: International evidence	The environmental and governance pillars have more significant impacts on performance than the social pillar. However, the financial reporting quality has statistically significant effects on environmental and governance pillars.	This study collected data from 35 countries	This study focuses on firms from one country to establish uniformity in the data and reporting standards
Khan et al. (2021)	How does CEO tenure affect corporate social	CEO tenure has a significant effect on the quality of	This study provides evidence	These findings will be enhanced through an

	and environmental disclosures in China? Moderating role of information intermediaries and independent board	corporate social and environmental disclosures, with a high degree of independent boards increasing the quality of ESG reports	from non-financial firms and only evaluated corporate governance factors	analysis of social and environmental reporting
Tanui (2023)	Ownership Structure and Corporate Sustainability Disclosure in Kenya: Interaction Effect of Board Gender Diversity	Gender diversity and inclusion have a significant impact on reporting frequency and volume of data provided in ESG reports which can positively or negative impact performance	This study specified the impact of ownership structure on all listed firms in Kenya	This study will enhance these findings by focusing on all ESG practices adopted by manufacturers, whether listed or not

Source: Researcher (2023)

2.5 Conceptual Framework

A conceptual framework is a diagrammatical representation of the interaction between the study main variables with the research problem/phenomenon. These include the Dependent, independent, and control variables which in this study will be ESG reporting, operational performance and firm capabilities.

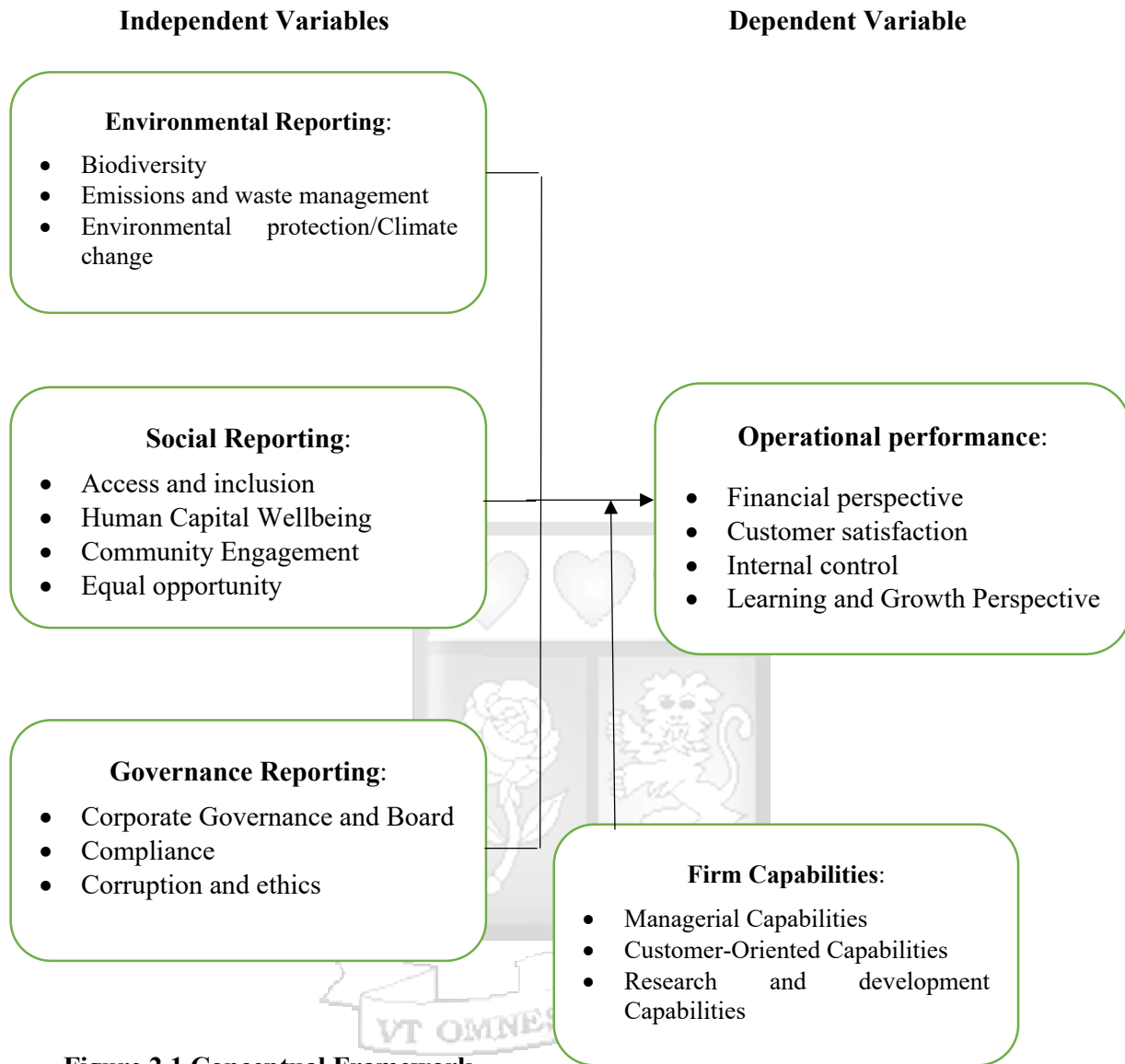


Figure 2.1 Conceptual Framework

Source: Researcher (2023)

2.6 Operationalization of Study Variables

Table 2.2 Operationalization of the Study Variables

Variable	Construct	Variable definition	Measurement Scale	Indicators	Source(s)
Independent	Environmental Reporting	Conscious production and dissemination of reports on an organisation's environmental performance	5-point Likert scale	<ul style="list-style-type: none"> • Biodiversity protection • Emissions and waste management • Environmental protection 	Brooks and Oikonomou (2018), Malik et al. (2023)
	Social Reporting	The preparation and dissemination of reports on the firm's social performance.	5-point Likert scale	<ul style="list-style-type: none"> • Access and inclusion • Human Capital Wellbeing • Community Engagement • Equal opportunity 	Hongming, et al. (2020), Muthoni and Kinyua (2020)
	Governance Reporting	The communication of a firm's corporate governance standards,	5-point Likert scale	<ul style="list-style-type: none"> • Stakeholder rights • Transparency and accountability • Corruption and 	Bui and Krajcsák (2023), Tao (2023)

		policies and practices including board composition, procedures and compliance		ethics	
Moderating Variable	Firm Capabilities	Those unique skills, competencies and experiences that enable staff to reliably and consistently meet organizational goals	5-point Likert scale	<ul style="list-style-type: none"> • Managerial Capabilities • Customer-Oriented Capabilities • Research and development Capabilities 	Al Hawaj and Bualay (2022), Longoni and Cagliano (2018)
Dependent Variable Operational Performance	Financial Perspective	Financial perspective depict the economic results of the company.	5-point Likert scale	<ul style="list-style-type: none"> • Financial outcome of the firm 	(Kaplan, 2009)
	Customer Perspective	The customer perspective is the customer's perception about the	5-point Likert scale	<ul style="list-style-type: none"> • Customer satisfaction • Feedback • Communication 	(Kaplan, 2009)

		tangible and intangible costs and benefits from the particular relationship with an organization			
	Internal Perspective	The measure of the ability of an organization's processes to produce products that meet customer needs and expectations	5-point Likert scale	<ul style="list-style-type: none"> • Employee satisfaction • Internal control and risk management • Employee working relationships 	(Kaplan, 2009)
	Learning and Growth perspective	A perspective that reflects an organization's ability to take in new information and advance strategic goals.	5-point Likert scale	<ul style="list-style-type: none"> • Training • Mentoring • Appraisal 	(Kaplan, 2009)

Source: Researcher (2023)

2.7 Chapter summary

This chapter presented the theoretical underpinnings of the study, a review of previous research's findings on the relationship between the study variables and a critique of the gaps identified in the studies. This section also presented a conceptual framework and operationalized the variables of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section focuses on presenting the methodological plan that was adopted in solving the research problem. The main areas of the chapter are research philosophy, research design, population and the sampling design. Further, the data collection and data analysis and presentation were provided. Lastly, the various research guidelines that were followed in conducting the survey are presented.

3.2 Research Philosophy

Sekaran and Bougie (2013) defined the research philosophy as the systems of beliefs and assumptions that are integral in the development of knowledge. Selecting an appropriate research philosophy is ideal to ensure the goals of the research are met. The main research philosophy adopted by this study is positivism as the study is premised on existing theories, at the same time link the conceptualisation of the variables by explaining the causality therein. However, there are other philosophies as cited by (Teo, 2014). Positivism research focuses on the replicability of the survey depending on the general patterns and deductive reasoning to test the relations between independent and dependent variables of the survey (Abell, Appleton, & Hanuscin, 2013). This research philosophy was critical to the study as it allowed for the application of quantitative analysis in determining the relationship between the variables adopted in the study.

3.3 Research Design

Sekaran and Bougie (2013) defined the research design as the selected logical plan or methodology that allows the conduct of the study from point A to B and is based on defined set of questions that are set to achieve specific answers. Of the two main research approaches (quantitative design and qualitative), this study used quantitative approach with the most appropriate research design being descriptive research design (Rovai, Baker, & Ponton,

2013). The descriptive research design was selected due to the data volume that was collected to help in answering the study problem. As such, this research design was ideal for this study as it helped to quantitatively establish the relation between sustainability reporting practices, firm capabilities and the operational performance of manufacturing firms in Nairobi County, Kenya.

3.5 Target Population

The target population for a survey consists of the finite or infinite elements, items or individuals that are of interest to the study (Abell, Appleton, & Hanuscin, 2013). Selecting the appropriate population of the study is key to ensure the inquiry is conducted among individuals who have the requisite information that is being sought to achieve the aims of the research (Patten, 2017). The research targeted all registered manufacturing firms in Nairobi County. The study considered all firms under the Kenya Association of Manufacturers. According to KAM Directory (2023), there are atleast 950 manufacturing firms in Nairobi County. All were considered in the study survey. The study chose the finance, operations or the strategy manager from each of the firms as the unit of observation drawn from the registered manufacturing firms to respond to the study. The management personnel were considered for the research as they have information on how sustainability reporting practices have influenced the performance of the organizations.

3.6 Sampling Design and Sample Size

Sampling is a method employed to statistically pick individual cases /information to represent the larger group of data as being studied by the researcher (Abell, Appleton, & Hanuscin, 2013). The study utilized random sampling in selecting the manufacturing firms participated in the survey as this eliminated bias and ensured that all participating organizations have an equal chance of being selected in the research (Rovai, Baker, & Ponton, 2013). The sample frame for the research was 950 manufacturing fully registered under KAM and active in Nairobi County (KAM Directory , 2023). The sample size for the study was determined using the formula shown below;

the formula below;

$$n = \frac{N}{1 + N (e)^2}$$

where; n is the sample size, N is the total population, and e is the level of precision.

Thus; $n = \frac{950}{1+950(.05 \times .05)} = 400$ respondents

3.7 Data Collection Instruments

This study relied on primary research data that was collected from the unit managers drawn from the manufacturing firms in Nairobi County. Primary data was utilized since it is up-to-date, reflecting the current practices and perceptions and is particularly important in operational performance, where practices and external conditions can change rapidly. Structured questionnaire as a survey was used. According to Cooper and Schindler (2012), structured questionnaire guarantees uniformity of questions asked resulting into consistence in the answers from the respondents (Patten, 2017). The questionnaire was developed in line with the reviewed empirical studies and operationalization of the variables with a 5-point Likert scale used in the instrument. The data collection instrument was divided into 5 main sections capturing the demographic data, the independent variables and the dependent variable of the study.

3.8 Data Collection Procedures

The research utilized two main approaches in the data collection process; one physical questionnaires were dropped to accessible manufacturing firms and secondly where not accessible Google forms were used in the data collection. The use of a multiple approach in the data collection was to enhance the response by reaching more participants. The study got approvals from the assigned supervisor and the Institutional Ethics Review Committee before embarking on the field work. Further, research permit from the National Commission for Science Technology and Innovation was granted to enable data collection.

3.9 Research Quality

Conducting pilot tests is necessary during the study as it supports tests on the quality of the research instrument using reliability and validity tests (Ghauri, Grønhaug, & Strange, 2020). The research adopted pilot testing of the instrument with 10% (n= 40) of the sample respondents to help in refining the research instrument and ensuring it meets quality thresholds. The pilot test was be conducted with SMEs -manufactures and they were excluded from the final research.

3.9.1 Reliability Tests

Reliability in research methods can be described as to the degree to which conclusions from a research study can be applied to other context, settings, time periods among others (Sürücü & Maslakçi, 2020). It measures the degree to which an instrument produces similar score even when administered in different populations, location, and time. Cronbach's alpha (coefficient alpha) was used to evaluate internal consistency reliability of the instrument using data from the pilot study through SPSS. Components of the questionnaire were checked against each other to determine internal consistency within the data collection instrument. Cronbach's alpha is a correlation coefficient whose values range from 0 to 1. The conventionally accepted alpha is greater or equal to 0.70 (Patten, 2017); and this will be applied in reliability check of the instrument. The pilot test results supported the adoption of the questionnaire for the main research as the variables had Cronbach score of above 0.7

Table 3.1 Reliability Results

Variable	Cronbach Alpha	Decision Rule
Environmental reporting	.755	The items were included in main data collection
Social reporting	.775	The items were included in main data collection
Governance reporting	.850	The items were included in main data collection
Firm capabilities	.815	The items were included in main data collection
Operational performance	.710	The items were included in main data collection

3.9.2 Validity Tests

Validity focuses on as set out in the research tools are well understood by the participants and answered as intended by the researcher (Sürücü & Maslakçi, 2020). The construct validity of the questionnaire was checked against the operationalized indicators of the study

variables. Further content validity was used to assess whether the research instrument was complete and incorporated all the objectives of the study.

3.10 Data Analysis and Presentation

The data obtained from this study was analyzed using the software program Statistical Package for Social Science (SPSS) version 24. Descriptive statistics was adopted to summarize and describe the raw sample data in order to help to make data readily comprehensive. The descriptive tests used percentages, means, standard deviation and sum values. The study applied correlation tests to establish the relationship between the study variables. Further, a linear regression was selected to estimate the strength of the relationship between the research variables. The study employed the following diagnostic tests to ensure the collected research data met the standard for applying regression analysis; normality tests, collinearity tests, heteroscedasticity and linearity test. The analyzed study data is presented using charts and tables. The following regression model was employed in the tests;

$$OP = \alpha + \beta_1 ERP + \beta_2 SRP + \beta_3 GRP + \beta_4 FC + \epsilon \quad \text{.....Equation 3.1}$$

Where,

OP is the operational performance of manufacturing firms in Nairobi County

ERP is the environmental reporting practices of manufacturing firms in Nairobi County

SRP is the social reporting practices of manufacturing firms in Nairobi County

GRP is the governance reporting practices of manufacturing firms in Nairobi County

FP is the firm capabilities of manufacturing firms in Nairobi County

$\beta_1 - \beta_4$ is coefficients of the independent variables

ϵ is the error term

3.11 Ethical Considerations

Since the study involved human participants, various ethical guidelines were observed within the course of the research work. The participants were presented with informed consent form which detailed the aims of the research, risks and rights of the respondents. The research made sure that all the participants were informed of the voluntary nature of their participation and this can be voided at any point during the research. Further, the study ensured that the collected research data is only utilized for the stated academic aims. Research Ethical

approval was obtained from Strathmore University Institutional Ethics Review Committee, while the research licence was granted by the National Commission for Science Technology and Innovation.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The chapter focused on presentation of the outcome of the study on the effect of sustainable reporting practices and firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya. The chapter primarily provided the response rate, background of the firms, the descriptive analysis and the inferential tests that were conducted. The findings were presented using figures and tables.

4.2 Background Information

The background section presented both the response rate and the profile of the firms that were involved in the survey.

4.2.1 Response Rate

The research distributed 400 questionnaires to manufacturing firms across the county within the month of April 2024. The survey was able to obtain responses from 338 firms representing 84.5% response rate which was deemed sufficient for conducting the analysis and drawing conclusions that are representative of the unit of analysis.

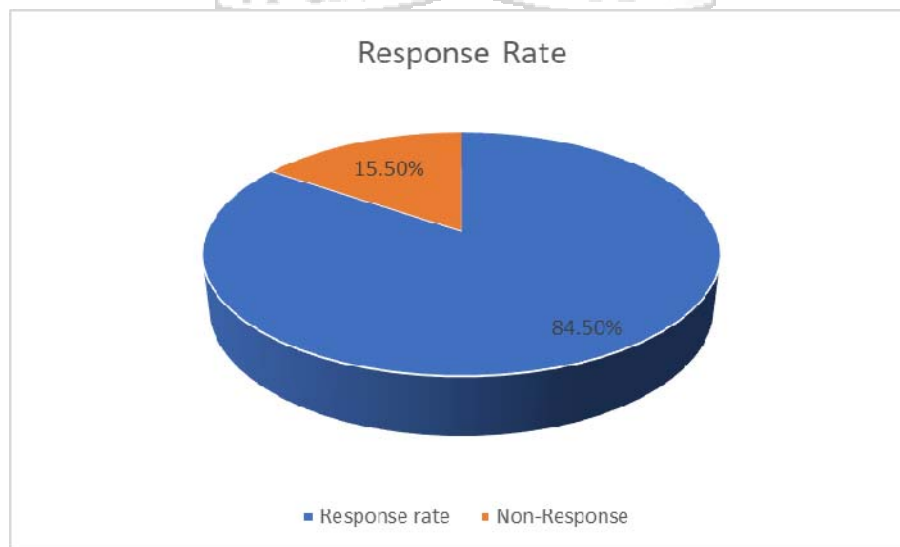


Figure 4.1 Response Rate

4.2.2 Profile of the Firms

The participants were queried on various aspects of the firms they represent and a summary of the responses is shown in table 4.1

Table 4.1 Background of the Firms

		Frequen	
		cy	Percent
Years of registration with KAM	Less than 3 years	29	8.6
	4-6 years	98	29.0
	7-10 years	146	43.2
	11-14 years	49	14.5
	Over 15 years	16	4.7
	Total	338	100.0
Number of employees	Less than 20 employees	40	11.8
	21-50 employees	153	45.3
	51-100 employees	117	34.6
	Over 101 employees	28	8.3
	Total	338	100.0
Does firm undertake ESG reporting	Yes	299	88.5
	No	39	11.5
	Total	338	100.0
Sustainability practices reported	Environmental practices only	42	12.4
	Social reporting practices only	87	25.7
	Governance reporting practices only	45	13.3
	All of them	125	37.0
	Total	299	88.5

How long firm has been reporting ESG practices	Less than a year	23	6.8
	1-3 years	156	46.2
	4-6 years	71	21.0
	Over 7 years	49	14.5
	Total	299	88.5

The findings on Table 4.1 showed that most of the firms ,43% (n = 146) were registered with KAM for at least 7-10 years, 29% (n = 98) for 4- 6 years with only 5% having been members for over 15 years. This indicates firms considered have operated in the manufacturing industry for a lengthy period thus can provide the required research information. Analysis established that most of the firms (45%, n = 153) had 21-50 employees, 34% had 51-100 employees with only 8% having over 101 employees showing diversity in the size of the firms considered in the survey.

The research revealed that majority of the firms (89%), were undertaking ESG reporting with 37% of them conducting reporting practices on the three dimensions. Further, 25% of the firms were undertaking social reporting only, 12% environmental reporting and 13% governance reporting showing there is disparity in the adoption of ESG with firms not fully undertaking the practice. The study indicated that at least 46% (n = 156) of the firms have been doing ESG reporting for 1-3 years, 21% for 4-6 years and 14% for over 7 years implying the firms involved in the survey have knowledge on ESG reporting and thus can provide adequate information for this study.

4.3 Descriptive Analysis

The summary of the Likert scale statements was presented using descriptive statistics such as means and standard deviation. The mean was interpreted as follows; over 4.20 = to very great extent, 3.50-4.19 = great extent, 2.50-3.49 = moderate extent, 1.50-2.49 = little extent, below 1.50 = not at all.

4.3.1 Environmental Reporting Practices

The research sought to understand the environmental reporting practices among manufacturing firms and the findings are shown in Table 4.2

Table 4.2 Environmental Reporting Practices

	N	Mean	Std. Deviation
The firm ensures chemicals used in the production process are biodegradable to minimize destruction of biodiversity	3 3 8	4.10 06	.86915
The firm has guidelines in place to ensure that conservations of habitats is ensured in our operations	3 3 8	4.26 63	.63066
The firm ensures there is minimal waste generation in the undertaking of our operations	3 3 8	4.17 8	.6702
The firm continuously repurposes and recycles waste material to reduce waste production	3 3 8	4.01 18	.82245
The firm has instituted and integrate climate change policy to ensure we meet our sustainable goals	3 3 8	4.01 78	.83665
The firm ensures that we monitor and track our impact on the environment to ensure we meet our protection targets	3 3 8	4.10 36	.63380
The firm supports local communities that are involved in cleaning landfills and dumpsites which reduces negative effect on the environment	3 3 8	3.89 05	1.0934 8

A mean of 4.2663 showed to a very great extent the firms have guidelines in place to ensure that conservations of habitats is ensured in our operations. To great extent respondent noted the firm ensures there is minimal waste generation in the undertaking of our operations (mean

= 4.178). The results showed to a great extent the respondents noted the firm ensures that we monitor and track our impact on the environment to ensure we meet our protection targets (mean = 4.1036). Further, to a great extent the analysis revealed the firm supports local communities that are involved in cleaning landfills and dumpsites which reduces negative effect on the environment (mean = 3.8905).

4.3.2 Social Reporting Practices

The second goal of the study was to determine the social reporting practices among manufacturing firms and results are presented in Table 4.3

Table 4.3 Social Reporting Practices

	N	Mean	Standard Deviation
The firm has in place a disability policy to ensure employees with disabilities are assimilated in workforce	38	3.9379	.87106
The firm routinely undertakes training on policies and procedures regarding inclusion and diversity in our workforce	38	4.0621	.73022
The firm supports employees in conducting career development reviews to enhance their competencies	38	4.0178	.70162
The firm ensures employees are provided with performance review feedback and annual satisfaction surveys	38	3.8373	.82262
The firm has put in place a community complaints system in place to ensure all grievances are acted upon	38	3.8047	.94211
The firm ensures community engagement is incorporated in social impact assessment of our activities	38	3.9586	.82868

The firm has integrated a gender-policy in the hiring process to ensure there is diversity in the team	3	4.02	.72638
	3	37	
	8		
The firm has implemented a non-discrimination policy to ensure employees are able to air their complaints freely	3	4.02	.64168
	3	66	
	8		

The mean value (4.0621) indicated to a great extent the firms routinely undertake training on policies and procedures regarding inclusion and diversity in our workforce. Respondents showed to a great extent (mean = 4.0237) the firm has integrated a gender-policy in the hiring process to ensure there is diversity in the team. Findings revealed to great extent the firm has put in place a community complaints system in place to ensure all grievances are acted upon (mean = 3.8047). Analysis showed to great extent (mean = 3.8373) the firm ensures employees are provided with performance review feedback and annual satisfaction surveys.

4.3.3 Governance Reporting Practices

The research further sought to examine the current governance reporting practices across the manufacturing firms and results are shown in Table 4.4

Table 4.4 Governance Reporting Practices

	N	Mean	Std. Deviation
The firm ensures that stakeholders are furnished with relevant information on our operations whenever requested	33	4.20	.79485
	8	41	
The firm engages stakeholders routinely to ensure there are rights and wealth maximization goals are met	33	4.19	.62991
	8	82	
The firm ensures there is strict adherence to compliance and regulatory requirements to minimize risk to stakeholders' wealth	33	4.21	.72928
	8	60	
The firm complies with all internal mechanism on reporting violations and any conflicts of interests thus enhancing accountability	33	3.78	.80075
	8	99	

The firm engages with all stakeholders (internal and external) to hear their views which help shape and improve policies and systems	33 8	4.10 95	.71223
The firm has a strict internal control systems to help minimize cases of corruption and fraud	33 8	4.15 38	.72677
The firm has a whistleblower policy in place as mechanism of promoting responsible resource utilization	33 8	3.85 80	.72918
The firm has developed a clear ethical standard that guides the internal operations	33 8	4.21 01	.59694
The firm requires employees to uphold moral behaviour and sign code of conducts that ensures ethical behaviour in the workplace	33 8	4.07 40	.65175

Findings on Table 4.4 showed to a very great extent (mean = 4.216) the firm ensures there is strict adherence to compliance and regulatory requirements to minimize risk to stakeholders' wealth. Further to a very great extent (mean = 4.2101) the firm has developed a clear ethical standard that guides the internal operations. Participants noted to a great extent (mean = 3.858) the firm has a whistleblower policy in place as mechanism of promoting responsible resource utilization. The mean of 3.7899 showed the firm complies with all internal mechanism on reporting violations and any conflicts of interests thus enhancing accountability.

4.3.4 Firm Capabilities

The research further reviewed the capabilities of the firms and the responses obtained are summarized in Table 4.5

Table 4.5 Firm Capabilities

	Mea n	Std. Deviati on
N		

The management team routinely delegates duties to subordinate staff to help enhance morale and productivity	3	4.20	2.3228
	3	12	4
	8		
The management team consults with other departmental heads to help improve problem solving and decision making	3	4.19	.63643
	3	23	
	8		
The management team is concerned with the employee welfare hence have instituted empowerment programmes	3	3.80	.72779
	3	77	
	8		
The firm ensures there rely on customer feedback to meet the needs of our customers	3	4.12	.72427
	3	43	
	8		
The firm has put in place a feedback system that ensure quick resolution of customer complaints	3	4.08	.72131
	3	88	
	8		
The firm has allocated adequate financial capital to support adoption of new technologies that can support research and development activities	3	4.05	.68215
	3	92	
	8		
The firm encourages employees to be innovative in undertaking their roles thus fostering the creation of new ideas	3	3.94	.77408
	3	38	
	8		

Results showed to a very great extent (mean = 4.2012) the management team routinely delegates duties to subordinate staff to help enhance morale and productivity. The analysis revealed to a great extent the firm has allocated adequate financial capital to support adoption of new technologies that can support research and development activities (mean = 4.0592). The findings revealed that to a great extent (mean = 4.0888) the firm has put in place a feedback system that ensure quick resolution of customer complaints. Further, to a great extent (mean = 3.8077) the management team is concerned with the employee welfare hence have instituted empowerment programmes.

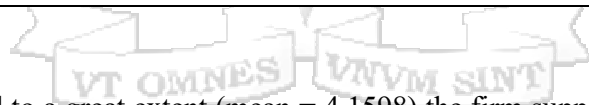
4.3.5 Operational Performance

The research also queried the respondents on the operational performance of their firms and the summary of the analysis is provided in the Table 4.6

Table 4.6 Operational Performance

	N	Mean	Std. Deviation
The firm effectively meets the financial obligation of all stakeholders and our beneficiaries	338	3.9941	.83326
The firm has witnessed enhanced efficiency in the undertaking of our operations	338	4.1302	.65430
The firm relies on market reviews to meet the expectations of our customers	338	3.9408	.78717
The firm utilizes feedback from our stakeholders to enhance their satisfaction levels with our service provision	338	3.9556	.80121
The firm has put in place a clear communication system that enhances efficiency and effectiveness in undertaking our operations	338	4.1657	1.77246
The firm has seen a growth in our corporate image among our partners and beneficiaries	338	4.0089	.76063
The firm is able to routinely meet the quality standards in the provision of our services	338	4.1036	.75358

The firm workforce has improved their productivity in the execution of their duties	3 3 8	4.13 91	.68573
The firm has deployed an elaborate internal control and risk systems that minimizes exposure to internal and external shocks that could negatively impact firm performance	3 3 8	4.03 85	.73185
The firm supports programs to foster better working relationship between employees which stimulates productivity	3 3 8	4.15 98	.61959
The firm regularly supports staff training which enhances the competencies which are key to better performance	3 3 8	3.96 75	.75213
The firm has put in place mentorship programmes that are key to motivation and improving professional development of our employees	3 3 8	3.96 15	.83417
The firm regularly undertakes appraisal of employees to help identify performance gaps and address them for better productivity	3 3 8	4.06 80	.61009



The analysis indicated to a great extent (mean = 4.1598) the firm supports programs to foster better working relationship between employees which stimulates productivity. Findings revealed to a great extent the firm has witnessed enhanced efficiency in the undertaking of our operations (mean = 4.1302). The respondents noted to a great extent (mean = 4.0089) the firm has seen a growth in our corporate image among our partners and beneficiaries. The research showed to a great extent (mean = 3.9556) the firm utilizes feedback from our stakeholders to enhance their satisfaction levels with our service provision. A mean of 3.9615 revealed to a great extent the firm has put in place mentorship programmes that are key to motivation and improving professional development of our employees.

4.4 Correlation Analysis

The study utilized Spearman rank correlation to establish the direction of the relation between the research variables. The matrix is shown in Table 4.7



Table 4.7 Correlation Results

			Operati onal Perfor mance	Environ mental Reporting	Social Repo rting	Govern ance Reporti ng	Firm Capabi lities
Spear man's rho	Operation al Performan ce	Correl ation Coeffi cient	1.000				
		Sig. (2- tailed)	.				
		N	338				
Environm ental Reporting	Correl ation Coeffi cient	.481**	1.000				
		Sig. (2- tailed)	.000	.			
		N	338	338			
Social Reporting	Correl ation Coeffi cient	.434**	.479**	1.000			
		Sig. (2- tailed)	.000	.000	.		
		N	338	338	338		

Governance Reporting	Correlation Coefficient	.578**	.502**	.322**	1.000	
	Sig. (2-tailed)	.000	.000	.000	.	
	N	338	338	338	338	
Firm Capabilities	Correlation Coefficient	.570**	.425**	.417**	.538**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	338	338	338	338	338

** . Correlation is significant at the 0.01 level (2-tailed).

Findings on the first objective showed there was a moderate positive and significant relation between environmental reporting practices ($r = .481^{**}$, $\text{sig} = .000$) and the operational performance of manufacturing firms in Nairobi, Kenya. The results further showed there was moderate positive and significant relation between social reporting practices and the operational performance of manufacturing firms in Nairobi, Kenya ($r = .434^{**}$, $\text{sig} = .000$). The analysis indicated there was a strong positive and significant relation between governance reporting practices ($r = .578^{**}$, $\text{sig} = .000$) and the operational performance of manufacturing firms in Nairobi, Kenya. Lastly, findings confirmed there was strong positive and significant relation between firm capabilities and the operational performance of manufacturing firms in Nairobi, Kenya ($r = .570^{**}$, $\text{sig} = .000$).

4.5 Diagnostic Test

The research conducted the following diagnostic tests to ensure the collected research data meets the standard for applying regression analysis; normality tests, collinearity tests and heteroscedasticity test.

4.5.1 Normality Test

The normality test was conducted using the normal p-p plot. The results confirmed the data was from a normally distributed data set as the observations fitted along the normality line thus confirming no normality violation in the data.

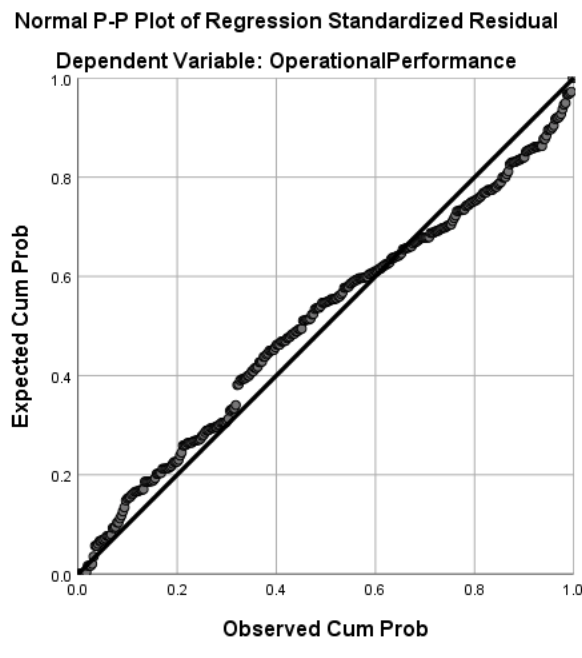


Figure 4.2 Normality Result

4.5.2 Collinearity Test

Multicollinearity check was conducted in the study to ensure there was no strong linear relation between the independent variables. Both variance inflation factor (VIF) and tolerance values were used.

Table 4.8 Collinearity Result

Model	Collinearity Statistics	
	Tolerance	VIF

1	(Constant)		
	Environmental Reporting	.699	1.431
	Social Reporting	.818	1.222
	Governance Reporting	.751	1.332
2	(Constant)		
	Environmental Reporting	.697	1.434
	Social Reporting	.774	1.293
	Governance Reporting	.682	1.465
	Firm Capabilities	.767	1.303

a. Dependent Variable: Operational Performance

The findings showed that in both models adopted in the study the variance inflation factors were below 10 thus indicating there was no collinearity violation in the study. Further, the tolerance values were all above 0.1 thus further affirming there was no multicollinearity problem.

4.5.3 Heteroscedasticity Test

The aim of the test is to check whether the variance of the errors varies across observations utilized in the regression. For there to be no heteroscedasticity there is need for equal variance and this was confirmed in this study using a scatterplot which showed there was evenly distribution of the observations in the data set across the plot as shown in Figure 4.3

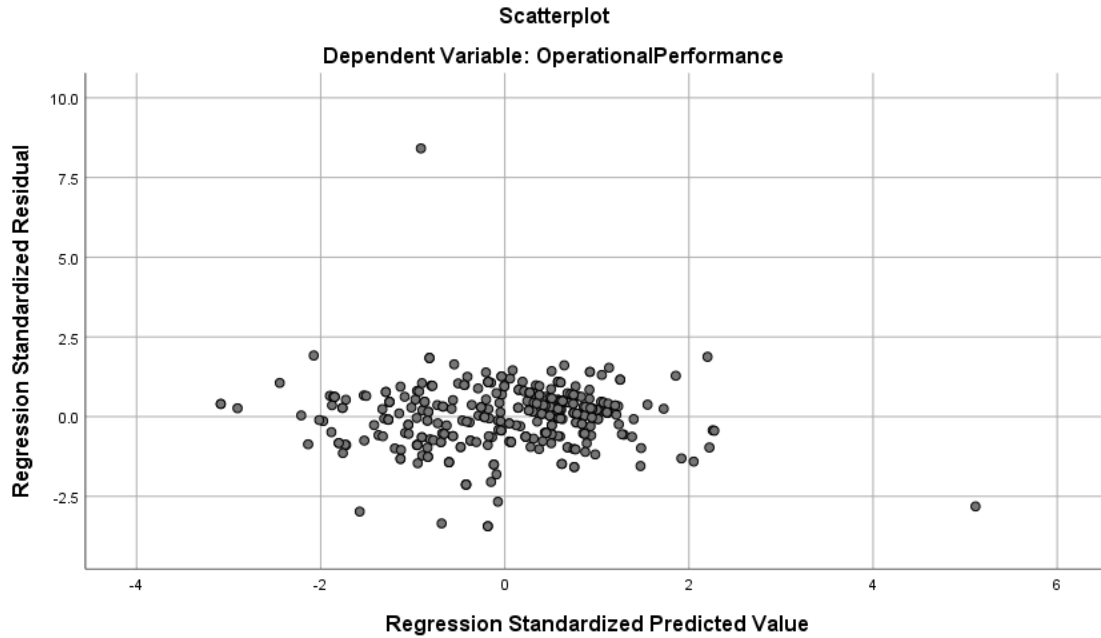


Figure 4.3 Heteroscedasticity Result

4.5.4 Linearity Test

The research further conducted linearity tests to establish whether the association between the independent and dependent variables is linear or not. The findings are shown in Table 4.9 below.

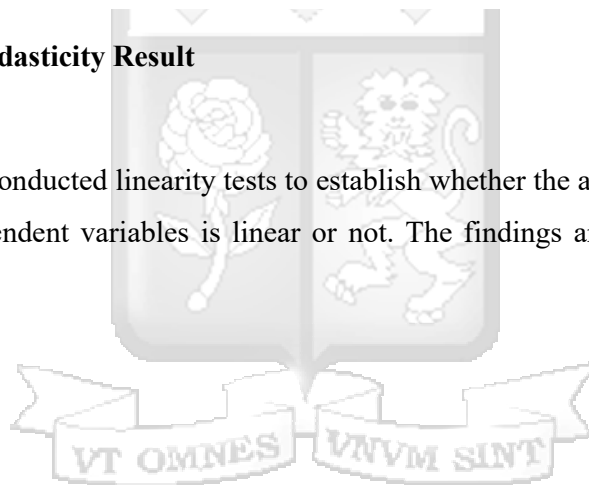


Table 4.9 Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Operational Performance * Environmental Reporting	Between Groups	(Combined)	8.349	13	.642	6.978	.000
		Linearity	6.381	1	6.381	69.334	.000
		Deviation from Linearity	1.968	12	.164	1.782	.051
			Sum of Squares	df	Mean Square	F	Sig.
Operational Performance * Social Reporting	Between Groups	(Combined)	7.512	19	.395	4.101	.000
		Linearity	5.237	1	5.237	54.324	.000
		Deviation from Linearity	2.275	18	.126	1.311	.178
			Sum of Squares	df	Mean Square	F	Sig.
Operational Performance * Governance Reporting	Between Groups	(Combined)	11.177	15	.745	8.889	.000
		Linearity	9.672	1	9.672	115.383	.000
		Deviation from Linearity	1.505	14	.108	1.283	.216

The findings of the linearity check showed that the deviation from linearity significance value showed all the variables had a sig-value that was above .05 thus indicating there was linear relationship between the selected independent variables and the dependent variable.

4.6 Regression Analysis

The research estimated two multiple regression tests (Model 1 without moderator and Model 2 with the moderator). The findings are presented in this section.

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.565 ^a	.320	.314	.27883	
2	.596 ^b	.355	.347	.27194	2.023

a. Predictors: (Constant), Governance Reporting, Social Reporting, Environmental Reporting

b. Predictors: (Constant), Governance Reporting, Social Reporting, Environmental Reporting, Firm Capabilities

c. Dependent Variable: Operational Performance

The findings above show a r-square of .320 which implied that holding all factors constant 32% of changes in the operational performance of manufacturing firms in Nairobi can be determined by the sustainability reporting practices (*Governance Reporting, Social Reporting, Environmental Reporting*). The results of the second regression model indicated that firm capabilities positively moderated the relationship between sustainability reporting practices and operational performance as shown by improvement in the r-square = .355 showing 35.5% of the changes can be predicted by the firm capabilities and sustainability reporting practices jointly.

Table 4.11 ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.201	3	4.067	52.309	.000 ^b
	Residual	25.968	334	.078		
	Total	38.169	337			
2	Regression	13.543	4	3.386	45.782	.000 ^c
	Residual	24.626	333	.074		
	Total	38.169	337			

a. Dependent Variable: Operational Performance

b. Predictors: (Constant), Governance Reporting, Social Reporting, Environmental Reporting

c. Predictors: (Constant), Governance Reporting, Social Reporting, Environmental Reporting, Firm Capabilities

The ANOVA findings on the first model yielded a f-value = 52.309, sig = .00<.05 thus establishing there was a positive and significant relationship between sustainability reporting practices and operational performance of manufacturing firms in Nairobi. The analysis of the moderating variable showed a f-value = 45.782, sig = .000<.05 thus affirming there is a positive and significant moderating effect of firm capabilities on the relationship between

sustainability reporting practices and operational performance of manufacturing firms in Nairobi.

Table 4.12 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.260	.225		5.613	.000
	Environmental Reporting	.133	.046	.155	2.863	.004
	Social Reporting	.177	.046	.192	3.840	.000
	Governance Reporting	.378	.053	.368	7.075	.000
2	(Constant)	1.188	.220		5.410	.000
	Environmental Reporting	.123	.045	.143	2.717	.007
	Social Reporting	.131	.046	.142	2.834	.005
	Governance Reporting	.308	.055	.300	5.630	.000
	Firm Capabilities	.143	.034	.214	4.260	.000

a. Dependent Variable: Operational Performance

To determine the effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.

On the first objective; the findings ($B_1 = .133$, $sig = .004 < .05$) revealed a positive and significant effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. This means that per unit reporting on sustainable environmental practices, operational performance increases by 13.3%.

To evaluate the influence of social reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.

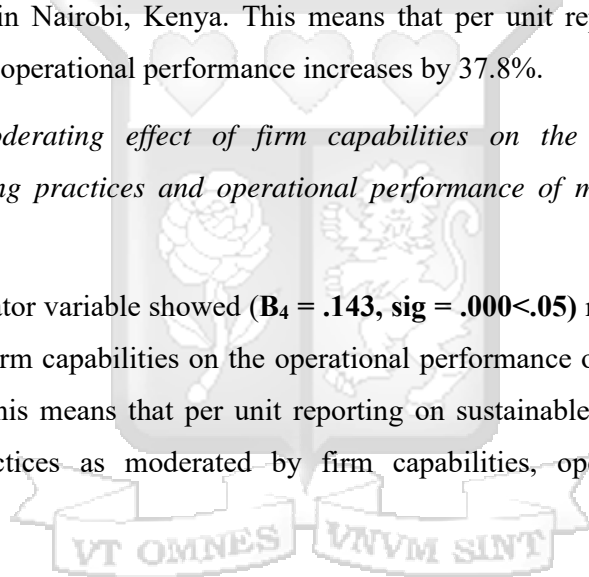
The analysis of the second objective; the findings ($B_2 = .177$, $sig = .000 < .05$) revealed a positive and significant effect of social reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. This means that per unit reporting on sustainable social practices, operational performance increases by 17.7%.

To assess the impact of governance reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya.

On the third objective; the findings ($B_3 = .378$, $sig = .000 < .05$) revealed a positive and significant effect of governance reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. This means that per unit reporting on sustainable governance practices, operational performance increases by 37.8%.

To evaluate the moderating effect of firm capabilities on the relationship between sustainability reporting practices and operational performance of manufacturing firms in Nairobi, Kenya.

Results on the moderator variable showed ($B_4 = .143$, $sig = .000 < .05$) revealed a positive and significant effect of firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya. This means that per unit reporting on sustainable environmental, social and governance practices as moderated by firm capabilities, operational performance increases by 14.3%.



CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the study results and highlights a summary of these results. Based on the results, the study generates conclusions and recommendations towards policy and practice. The study also suggests various areas for further research.

5.2 Summary

The general objective of this study was to examine the effect of sustainability reporting practices and firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya. The specific objectives were to establish the effect of environmental, social and governance reporting practices on the operational performance. Further, the study reviewed whether or not firm capabilities moderate the relationship between the independent variables and the dependent variable.

Correlation results revealed that there was a moderate positive and significant relation between environmental reporting practices, social reporting practices and the operational performance of manufacturing firms in Nairobi, Kenya. The analysis indicated there was a strong positive and significant relation between governance reporting practices and the operational performance of manufacturing firms in Nairobi, Kenya. The findings also confirmed there was strong positive and significant relation between firm capabilities and the operational performance of manufacturing firms in Nairobi, Kenya.

The findings from the regression analysis revealed that there was a positive and significant relationship between sustainability reporting practices and operational performance of manufacturing firms in Nairobi. The findings also revealed a positive and significant effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The analysis of the second objective revealed a positive and significant effect of social reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The findings further revealed a positive and significant effect of governance reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. Results on the moderator variable revealed a positive and significant effect of firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya.

5.3 Discussion of Findings

5.3.1 Environmental Reporting Practices and Operational Performance

On the first objective, the study sought to determine the effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The findings revealed a positive and significant effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The findings of the current study align with several previous studies that emphasize the importance of environmental reporting practices in enhancing the operational performance of manufacturing firms. Pham and Tran (2020) and Wu and Li (2023) both highlight the significance of efficient resource utilization and minimizing negative environmental impacts for achieving sustainability in business operations. Additionally, Brooks and Oikonomou (2018) and Singh et al. (2020) note the role of environmental disclosures in improving firms' reputation, image, and financial performance, which resonates with the positive effect observed in the current study.

Moreover, Longoni and Cagliano (2018) and Malik et al. (2023) provide further support by demonstrating the positive impact of environmental disclosures on financial performance, particularly when combined with green supply chain management practices and green innovation initiatives. These findings reinforce the idea that leveraging internal processes, such as green practices and innovation, can enhance the effectiveness of environmental disclosures in driving operational performance improvements. In Kenya, the current study's focus on environmental reporting practices aligns with the findings of Mbole et al. (2021), who found that engaging in environment initiatives, such as environment protection, energy saving, and waste recycling, has significant positive impacts on the financial performance of cement manufacturers in Kenya. This supports the notion that proactive environmental management practices contribute to improved operational performance outcomes.

However, the current study's findings may diverge from the perspectives presented by Wu and Li (2023), who argue that information penetration has a more significant effect on firm performance than environmental reporting. While both mandatory and voluntary environmental disclosures are found to have a positive impact on financial performance, the study suggests that a high degree of information penetration weakens the relationship between environmental reporting and financial performance, particularly in developed regions. This difference in findings could be attributed to variations in the regulatory

environment, stakeholder preferences, and market dynamics between Nairobi and the regions studied in Wu and Li's research.

5.3.2 Social Reporting Practices and Operational Performance

The study evaluated the influence of social reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The analysis of the second objective revealed a positive and significant effect of social reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The study findings are corroborated by Alabdullah, Ahmed, and Muncerali (2019) who argue that social reporting enhances accountability to internal and external stakeholders, promoting stakeholder engagement and fostering transparency. Similarly, López-Toro et al. (2021) found that environmental, social, and governance (ESG) indicators positively impact financial performance indicators such as return on equity (ROE), return on assets (ROA), and Tobin's Q in the pharmaceutical industry. Although the study focused on a different sector, the positive relationship between ESG indicators and financial performance supports the idea that social reporting practices contribute to overall firm performance.

However, some previous studies present contradicting perspectives on the relationship between social reporting practices and firm performance. Hongming et al. (2020) found that social and environmental reporting practices positively impact firm performance, while governance reporting had no significant impact. Additionally, Buallay's (2020) analysis revealed a significant negative effect of social performance on bank profitability and value in MENA countries. This contradicts the notion that social reporting practices inherently lead to positive financial outcomes and underscores the complexity of the relationship between social initiatives and firm performance, which may vary across industries and regions.

In Kenya, King'wara's (2020) study contested the notion that social disclosures have a positive impact on organizational performance, specifically among firms listed at the Nairobi Securities Exchange. The findings suggested that CSR disclosure had no statistically significant impact on financial outcomes, indicating potential limitations or inconsistencies in the reporting practices of listed firms.

5.3.3 Governance Reporting Practices and Operational Performance

The third objective sought to assess the impact of governance reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya. The findings revealed a positive and significant effect of governance reporting practices on the operational

performance of manufacturing firms in Nairobi, Kenya. The findings of the current study align with previous research by Pham & Tran, (2020) who highlight that governance reporting is considered crucial for promoting transparency, accountability, and responsible business conduct, as it provides stakeholders with insights into an organization's governance policies, practices, and decision-making processes. Bui and Krajcsák (2023) also found that transparency disclosures in governance reports have significant positive impacts on firm value, return on equity (ROE), and return on assets (ROA) in Vietnam. This supports the notion that governance reporting enhances stakeholders' trust and confidence in the organization, thereby contributing to improved financial performance.

Similarly, Şeker and Şengür (2021) demonstrated that high-quality governance reports are associated with better financial reporting quality, indicating that firms use governance reporting to provide genuine information and signal their commitment to stakeholders. Tao (2023) also found a positive association between environmental, social, and governance (ESG) performance and firm profitability, particularly in the manufacturing sector. This suggests that investment in governance practices, such as independent board oversight and ownership structure, can lead to economic benefits for manufacturing firms. Additionally, Mohammad and Wasiuzzaman (2021) confirmed that responsible business conduct, as reflected in ESG reporting practices, enhances firm performance and transparency, contributing to stronger market acceptance and public trust.

However, some previous studies present contrasting perspectives on the relationship between governance reporting practices and firm performance. Guluma (2021) found that CEO duality and shareholder ownership concentration have mixed effects on firm value, suggesting that certain governance practices may have varying impacts on financial performance. Additionally, while Şeker and Şengür (2021) demonstrated the positive influence of governance scores on financial reporting quality, they did not establish a direct effect on firm performance, indicating potential limitations in the scope of their analysis.

5.3.4 Firm Capabilities and Operational Performance

Finally, the study sought to evaluate the moderating effect of firm capabilities on the relationship between sustainability reporting practices and operational performance of manufacturing firms in Nairobi, Kenya. Results on the moderator variable revealed a positive and significant effect of firm capabilities on the operational performance of manufacturing firms in Nairobi, Kenya. The study findings were corroborated by Almashhadani and

Almashhadani (2023) who highlight the role of ESG reporting mechanisms in enhancing firms' legitimacy and achieving financial performance. They argue that sustainability reporting is a means for management to demonstrate their commitment to contributing to the public good, which aligns with the idea that firm capabilities, including reporting practices, can positively impact operational performance.

The study was also in line with Longoni and Cagliano (2018)'s findings which emphasize the growing demand for ethical sourcing and green supply chain management, particularly in sectors like mining and manufacturing. This suggests that firms with enhanced capabilities to adopt ethical and sustainable practices are better positioned to improve operational performance, as supported by the current study's findings. Pham and Tran (2020) and Khan et al. (2021) also highlight the influence of CEO integrity and tenure on the quality of ESG disclosures, indicating that strong leadership and governance play a crucial role in driving sustainable practices and reporting. This aligns with the idea that firm capabilities, including leadership integrity and governance structures, contribute to the effectiveness of ESG reporting practices, ultimately impacting operational performance positively.

Additionally, Alkhawaja et al. (2023) and Tanui (2023) demonstrate the influence of gender dynamics and board diversity on ESG reporting quality, suggesting that inclusive practices within organizations enhance the quality of sustainability disclosures. This reinforces the notion that firm capabilities, such as diversity and inclusivity efforts, contribute to the effectiveness of ESG reporting, which in turn affects operational performance.

5.4 Conclusions

Based on the findings from the first objective, which show a positive and significant effect of environmental reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya, it can be concluded that adopting environmental reporting practices can lead to improved operational performance in the manufacturing sector. The study notes that manufacturing firms in Nairobi seem to prioritize the use of biodegradable chemicals, habitat conservation, waste minimization, and recycling. Additionally, the integration of climate change policies and monitoring of environmental impact further demonstrate a proactive approach towards sustainability. The study therefore concludes that firms that prioritize environmental sustainability through the adoption of such practices are likely to experience improved operational efficiency and contribute positively to environmental conservation efforts in Nairobi, Kenya.

The study determined that social reporting practices significantly contribute to the operational performance of manufacturing firms in Nairobi, Kenya. The study also concludes that practices such as having a disability policy, conducting diversity training, supporting career development, and implementing non-discrimination policies indicate a strong commitment to promoting diversity, equality, and inclusion within the workforce. These practices not only enhance employee satisfaction and well-being but also contribute to a more productive and cohesive work environment. Moreover, the integration of community complaints systems and engagement in social impact assessments demonstrates a proactive approach to addressing community concerns and fostering positive relationships with stakeholders outside the organization. However, there seems to be some room for improvement in terms of providing performance review feedback and addressing employee grievances.

Based on the analysis of governance reporting practices, it's evident that these practices significantly contribute to the operational performance of manufacturing firms in Nairobi, Kenya. The study noted that practices such as furnishing stakeholders with relevant information, engaging stakeholders to ensure rights and wealth maximization, and ensuring strict adherence to compliance and regulatory requirements reflect a proactive approach towards stakeholder management and risk mitigation. These practices not only enhance trust and credibility among stakeholders but also contribute to the overall sustainability and resilience of the firm's operations. Additionally, the presence of internal mechanisms for reporting violations, engaging stakeholders in policy improvement processes, and implementing internal control systems to minimize corruption and fraud underscores a commitment to accountability and responsible resource utilization.

The study also revealed that firm capabilities significantly influence the operational performance of manufacturing firms in Nairobi, Kenya. The study concluded that practices such as delegating duties to enhance morale and productivity, consulting with departmental heads for problem-solving, and relying on customer feedback to meet customer needs reflect a proactive approach towards employee empowerment and customer-centricity. These practices indicate a management team that values collaboration, innovation, and responsiveness to customer demands, which are crucial for achieving operational excellence and maintaining competitiveness in the market. Moreover, the allocation of adequate financial capital to support the adoption of new technologies and the encouragement of employee innovation further demonstrate a commitment to continuous improvement and adaptation to changing market dynamics.

5.5 Recommendations

Based on the conclusion that governance reporting practices had a strong positive and significant effect on the operational performance of manufacturing firms in Nairobi, Kenya, the study suggested various recommendations based on policy and practice.

5.5.1 Policy Recommendations

The study recommends that the government should enhance its support through policies and incentives that promote sustainable reporting practices, social responsibility, and governance transparency within manufacturing firms. This could include tax incentives for manufacturing firms implementing sustainable initiatives and regulatory frameworks that promote ethical conduct and stakeholder engagement (as seen in the draft Green Taxonomy). These incentives could also include recognition awards, grants for sustainability projects, or preferential treatment in government procurement processes for manufacturing firms that demonstrate exceptional performance in sustainable reporting practices. The study also recommends strengthening of the regulatory frameworks to ensure compliance with environmental, social, and governance (ESG) standards within the manufacturing sector. This may involve updating existing regulations, implementing stricter enforcement mechanisms, and conducting regular audits to monitor compliance.

The study further suggests that the relevant policy makers should develop industry-wide standards and guidelines for sustainable reporting practices tailored to the manufacturing sector in Kenya. This is in addition to the current Green Fiscal Incentives Policy Framework currently in review? These standards can provide a framework for firms to follow and ensure consistency in reporting and implementation. The study further recommends development and facilitation of platforms for multi-stakeholder engagement involving government agencies, industry associations, civil society organizations, and research institutions to foster collaboration and knowledge sharing on best practices for sustainable business operations. This will foster collaboration between public and private sectors to support sustainable initiatives and address common challenges faced by manufacturing firms.

5.5.2 Practical Recommendations

The study recommends provision of training and capacity-building programs for manufacturing firms to enhance their understanding and implementation of sustainable reporting practices, social responsibility initiatives, and governance transparency measures. Additionally, the study recommends strengthening customer feedback mechanisms and

complaint resolution systems to ensure quick response and resolution of customer concerns. Firms should also proactively solicit feedback from customers to better understand their needs and preferences, driving product and service improvements. Firms should also collaborate with suppliers to promote sustainability throughout the supply chain by encouraging responsible sourcing practices, reducing environmental impact, and improving labor conditions. The study also recommends an enhancement of community engagement efforts by manufacturing firms to build trust, foster positive relationships, and address community concerns. This can include community development projects, stakeholder consultations, and transparent communication about the firm's social and environmental impact.

The study also suggests that firms should invest in employee empowerment programs that promote innovation, collaboration, and continuous improvement within the organization. This can include leadership development, skills training, and opportunities for employee involvement in decision-making processes. The study also recommends provision on easier access to financial resources for manufacturing firms to invest in new technologies that support research and development activities, improve operational efficiency, and enhance sustainability performance. The study also recommends development and enforcement of clear ethical standards and codes of conduct within manufacturing firms to promote integrity, transparency, and accountability at all levels of the organization. This can include whistleblower policies, conflict of interest guidelines, and mechanisms for reporting violations of ethical standards.

5.6 Limitations of the Study

The research was only limited to manufacturing firms registered by KMA and did not incorporate listed firms that have undertaken ESG for a longer period. The survey further did not examine how the various ESG components affect the financial performance of the firms using historical financial data due to limitations in availability of the research. The study was further limited to Nairobi County thus did not consider how other regions within the country have adopted ESG practices hence there is need for further investigation. The research was further limited by long response time from the participants leading to limitations in completion of the research work.

5.7 Areas for Further Research

The study assessed the effect of sustainable reporting practices on the operational performance of manufacturing firms. Further research could be conducted on various other industries. Additionally, further research work could be conducted in other parts of the country allowing for comparison on how sustainable reporting practices affects operational performance in different contexts. Other researchers may also conduct longitudinal studies to assess the long-term impact of sustainable reporting practices on the operational performance of manufacturing firms. These studies can provide insights into the sustainability trajectory of firms over time and identify key factors influencing sustained performance improvement.



REFERENCES

- Abdelrazek, A. F. (2019). Sustainability Balanced Scorecard: a comprehensive tool to measure Sustainability performance. *International Journal of Social Science and Economic Research*, 4(2), 948-962.
- Abdi, Y., Li, X., & Càmara-Turull, X. (2022). Exploring the impact of sustainability (ESG) disclosure on firm value and financial performance (FP) in airline industry: the moderating role of size and age. *Environment, Development and Sustainability*, 24(4), 5052-5079.
- Abell, S. K., Appleton, K., & Hanuscin, D. L. (2013). *Handbook of research on science education*. Routledge.
- Adedeji, B. S., Ong, T. S., Uzir, M. U., & Abdul Hamid, A. B. (2020). Corporate governance and performance of medium-sized firms in Nigeria: does sustainability initiative matter? *The International Journal of Business in Society*, 20(3), 401-427.
- Aifuwa, H. O. (2020). Sustainability reporting and firm performance in developing climes: A review of literature. . *Copernican Journal of Finance & Accounting*, 9(1), 9-29.
- Al Hawaj, A. Y., & Buallay, A. M. (2022). A worldwide sectorial analysis of sustainability reporting and its impact on firm performance. *Journal of Sustainable Finance & Investment*, 12(1), 62-86.
- Alabdullah, T. T., Ahmed, E. R., & Muneerali, M. (2019). Effect of board size and duality on corporate social responsibility: what has improved in corporate governance in Asia? *Journal of Accounting Science*, 3(2), 121-135.
- Alghababsheh, M., & Gallear, D. (2021). Socially sustainable supply chain management and suppliers' social performance: The role of social capital. *Journal of Business Ethics*, 173(4), 855-875.
- Alkhawaja, A., Hu, F., Johl, S., & Nadarajah, S. (2023). Board gender diversity, quotas, and ESG disclosure: Global evidence. *International Review of Financial Analysis*, 102823.
- Almashhadani, M., & Almashhadani, H. A. (2023). The Impact of Sustainability Reporting on Promoting Firm performance. *International Journal of Business and Management Invention*, 12(4), 101-111.

- Alrayyes, Y., & Al Khaldy, N. (2019). The impact of governance rules on earnings management: Applied study on industrial and service companies listed on Palestine stock exchange. *International Journal of Business Ethics and Governance*, 2(3), 104-138.
- Alshehhi, A., Nobanee, H., & Khare, N. (2018). The impact of sustainability practices on corporate financial performance: Literature trends and future research potential. *Sustainability*, 10(2), 494.
- Aroul, R. R., Sabherwal, S., & Villupuram, S. V. (2022). ESG, operational efficiency and operational performance: evidence from Real Estate Investment Trusts. *Managerial Finance*, 48(8), 1206-1220.
- Asuquo, A. I., Dada, E. T., & Onyeogaziri, U. R. (2018). The effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. *International Journal of Business & Law Research*, 6(3), 1-10.
- Atan, R., Alam, M., Said, J., & Zamri, M. (2018). The Impacts of Environmental, Social, and Governance Factors on Firm Performance: Panel Study of Malaysian Companies. *Manag. Environ. Qual. Int. J.*, 29, 182–194.
- Bornay-Barrachina, M., López-Cabrales, Á., & Salas-Vallina, A. (2023). Sensing, seizing, and reconfiguring dynamic capabilities in innovative firms: Why does strategic leadership make a difference? *BRQ Business Research Quarterly*.
- Breliastiti, R. (2020). Development of mandatory & voluntary instruments of sustainability reporting (SR) according to carrots & sticks 2006-2016. *The Indonesian Accounting Review*, 10(1), 71-81.
- Brooks, C., & Oikonomou, I. (2018). The effects of environmental, social and governance disclosures and performance on firm value: A review of the literature in accounting and finance. *The British Accounting Review*, 50(1), 1-15.
- Brooks, C., & Oikonomou, I. (2018). The effects of environmental, social and governance disclosures and performance on firm value: A review of the literature in accounting and finance. *Br. Account. Rev.*, 50, 1–15.
- Buallay, A. (2020). Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors. *International Journal of Productivity and Performance Management*, 69(3), 431-445.

- Buallay, A., Fadel, S. M., Al-Ajmi, J. Y., & Saudagaran, S. (2020). Sustainability reporting and performance of MENA banks: is there a trade-off? *Measuring Business Excellence*, 24(2), 197-221.
- Bui, H., & Krajcsák, Z. (2023). The impacts of corporate governance on firms' performance: from theories and approaches to empirical findings. *Journal of Financial Regulation and Compliance*.
- Dias, Á., & Renato, P. (2017). Dynamic capabilities and marketing capabilities in Portugal. *Academia Revista Latinoamericana de Administración*, 30(3), 417-430.
- Dincer, B., Keskin, A. İ., & Dincer, C. (2023). Nexus between Sustainability Reporting and Firm Performance: Considering Industry Groups, Accounting, and Market Measures. *Sustainability*, 15(7), 5849.
- Duque-Grisales, E., & Aguilera-Caracuel, J. (2019). Environmental, Social, and Governance (ESG) Scores and Financial Performance of Multilatinas: Moderating Effects of Geographic International Diversification and Financial Slack. *J. Bus. Ethics*, 168, 315–334. .
- El Fallahi, F., Ibenrissoul, A., & El Amri, A. (2023). Defining and Measuring Overall Performance In Emerging Countries: A Comprehensive Financial Perspective Review.
- Ellström, D., Holtström, J., Berg, E., & Josefsson, C. (2021). Dynamic capabilities for digital transformation. *Journal of Strategy and Management*, 15(2), 272-286.
- Eshikumo, S. M., & Odock, S. O. (2017). Green manufacturing and operational performance of a firm: Case of cement manufacturing in Kenya. *International Journal of Business and Social Science*, 8(4), 106-120.
- Fan, L., Yang, K., & Liu, L. (2020). New media environment, environmental information disclosure and firm valuation: Evidence from high-polluting enterprises in China. *Journal of Cleaner Production*, 277, 123253.
- Feng, Y., Lai, K. H., & Zhu, Q. (2020). Legitimacy in operations: How sustainability certification announcements by Chinese listed enterprises influence their market value? *International Journal of Production Economics*, 224, 107563.
- Ganda, F., & Milondzo, K. S. (2018). The impact of carbon emissions on corporate financial performance: Evidence from the South African firms. *Sustainability*, 10(7), 2398.

- Garg, A., & Gupta, P. K. (2021). Does CSR Expenditure and Sustainability Reporting Improve Firm Performance? Mandatory CSR Regimes in India. *Indonesian Journal of Sustainability Accounting and Management*, 5(1), 150-161.
- Ghauri, P., Grønhaug, K., & Strange, R. (2020). *Research methods in business studies*. Cambridge University Press.
- Girón, A., Kazemikhasragh, A., Cicchiello, A. F., & Panetti, E. (2021). Sustainability reporting and firms' economic performance: Evidence from Asia and Africa. *Journal of the Knowledge Economy*, 12, 1741-1759.
- Grace, O. A. (2022). Green Product Development and Environmental Reporting Practices of Listed Manufacturing Firms in Nigeria. *Amity Journal of Management Research*, 678-692.
- GRI. (2015). *Sustainability Reporting Guidelines*. Global Reporting Initiative.
- Guluma, T. F. (2021). The impact of corporate governance measures on firm performance: the influences of managerial overconfidence. *Future Business Journal*, 7(1), 1-18.
- Gunarsih, T., & Ismawati, Y. (2018). Sustainability report and firm performance: Study in mining and metal and food processing industry Indonesia Stock Exchange 2014-2017. *Journal of Governance and Integrity*, 2(1), 4-11.
- Hermundsdottir, F., & Aspelund, A. (2022). Competitive sustainable manufacturing-Sustainability strategies, environmental and social innovations, and their effects on firm performance. *Journal of Cleaner Production*, 370, 133474.
- Hongming, X., Ahmed, B., Hussain, A., Rehman, A., Ullah, I., & Khan, F. U. (2020). Sustainability reporting and firm performance: The demonstration of Pakistani firms. *SAGE Open*, 10(3), 2158244020953180.
- In, S. Y., & Schumacher, K. (2021). Carbonwashing: ESG data greenwashing in a post-Paris world. *Settling climate accounts: Navigating the road to net zero*, 39-58.
- Javed, M., Rashid, M. A., Hussain, G., & Ali, H. Y. (2020). The effects of corporate social responsibility on corporate reputation and firm financial performance: Moderating role of responsible leadership. *Corporate Social Responsibility and Environmental Management*, 27(3), 1395-1409.

- Jinga, P. (2021). The increasing importance of environmental, social and governance (ESG) investing in combating climate change. *Environmental Management-Pollution, Habitat, Ecology, and Sustainability*.
- KAM Directory . (11th de October de 2023). *Membership Directory*. Obtenido de Kenya Association of Manufacturers: <https://directory.kam.co.ke/>
- Kamble, S., Gunasekaran, A., & Dhone, N. C. (2020). Industry 4.0 and lean manufacturing practices for sustainable organisational performance in Indian manufacturing companies. *International journal of production research*, 58(5), 1319-1337.
- Kaplan, R. S. (2009). Conceptual foundations of the balanced scorecard. . *Handbooks of management accounting research*, 3, 1253-1269.
- Katkalo, V. S., Pitelis, C. N., & Teece, D. J. (2010). Introduction: On the nature and scope of dynamic capabilities. *Industrial and corporate change*, 19(4), 1175-1186.
- Khan, T. M., Gang, B., Fareed, Z., & Khan, A. (2021). How does CEO tenure affect corporate social and environmental disclosures in China? Moderating role of information intermediaries and independent board. *Environmental Science and Pollution Research*, 28, 9204-9220.
- Khatri, I., & Kjærland, F. (2023). Sustainability reporting practices and environmental performance amongst nordic listed firms. *Journal of Cleaner Production*, 418, 138172.
- King'wara, R. (2020). Corporate Social Responsibility Disclosure and Financial Performance of Firms in Kenya: A Stakeholder Approach. *Business and Economic Research*, 2162-4860.
- Kinyua, S. M. (2020). Impact of Corporate Sustainability Reporting on Stock Returns of Firms Listed At the Nairobi Securities Exchange. *Mba, University of Nairobi*.
- Kurtmollaiev, S. (2020). Dynamic capabilities and where to find them. *Journal of Management Inquiry*, 29(1), 3–16.
- Landi, G., & Sciarelli, M. (2019). Towards a More Ethical Market: The Impact of ESG Rating on Corporate Financial Performance. *Soc. Responsib. J*, 15, 11–27.

- Lavin, J. F., & Montecinos-Pearce, A. A. (2021). ESG disclosure in an emerging market: an empirical analysis of the influence of board characteristics and ownership structure. *Sustainability*, 13(19), 10498.
- Liang, Y., Lee, M. J., & Jung, J. S. (2022). Dynamic Capabilities and an ESG Strategy for Sustainable Management Performance. *Frontiers in Psychology*, 13, 887776.
- Longoni, A., & Cagliano, R. (2018). Inclusive environmental disclosure practices and firm performance: The role of green supply chain management. *International Journal of Operations & Production Management*, 38(9), 1815-1835.
- López-Toro, A. A., Sánchez-Teba, E. M., Benítez-Márquez, M. D., & Rodríguez-Fernández, M. (2021). Influence of ESGC indicators on financial performance of listed pharmaceutical companies. *International Journal of Environmental Research and Public Health*, 18(9), 4556.
- Maganha, I., Silva, C., & Ferreira, L. M. (2020). The impact of reconfigurability on the operational performance of manufacturing systems. *Journal of Manufacturing Technology Management*, 31(1), 145-168.
- Malik, F., Wang, F., Li, J., & Naseem, M. A. (2023). Impact of Environmental Disclosure on Firm Performance: The Mediating Role of Green Innovation. *Revista de Contabilidad-Spanish Accounting Review*, 26(1), 14-26.
- Mbole, U. C., Arasa, R., & Mang'anyi, E. E. (2021). Environmental Initiatives and Financial Performance: A Study of Cement Manufacturing Companies in Kenya. *Journal of African Interdisciplinary Studies*, 5(8), 40-58.
- Mbuthia, J. N., & Gatawa, J. M. (2022). Corporate sustainability practices and financial performance of firms listed in the Nairobi Securities Exchange, Kenya. *International Academic Journal of Economics and Finance*, 3 (7), 89, 112(2).
- Miah, M. D., Hasan, R., & Usman, M. (2021). Carbon emissions and firm performance: evidence from financial and non-financial firms from selected emerging economies. *Sustainability*, 13(23), 13281.
- Min, S., & Kim, J. (2022). Effect of opportunity seizing capability on new market development and small and medium-sized enterprise performance: Role of environmental uncertainty in the IT industry. *Asia Pacific Management Review*, 27(2), 69-79.

- Mohammad, W. M., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. *Cleaner Environmental Systems*, 2, 100015.
- Musau, E. M. (2019). Effect of green manufacturing on operational performance of manufacturing firms in Mombasa County, Kenya. *Mba, University of Nairobi*.
- Musciano, C. B. (2022). Is Your Socially Responsible Investment Fund Green or Greedy? How a Standard ESG Disclosure Framework Can Inform Investors and Prevent Greenwashing. *Ga. L. Rev.*, 57, 427.
- Muthoni, D. M., & Kinyua, G. M. (2020). Corporate reputation and firm performance: An empirical analysis of motor vehicle assemblers in Nairobi city county, Kenya. *Journal of Business and Economic Development*, 5(2), 73-81.
- Mwangi, A. (1 de 10 de 2022). *How Manufacturing Can Contribute 20% To The GDP By 2030*. Obtenido de capitalfm.co.ke: <https://www.capitalfm.co.ke/news/2022/11/how-manufacturing-can-contribute-20-to-the-gdp-by-2030/>
- Ngunjiri, N. (2023). The Green Revolution: How Sustainable Reporting Fuels Financial Performance for Kenya's Manufacturers. *Journal of the Kenya National Commission for UNESCO*.
- Norman, W., & MacDonald, C. (2004). Getting to the bottom of “triple bottom line”. . *Business ethics quarterly*, 14(2), 243-262.
- Nzekwe, O. G., Okoye, P. V., & Amahalu, N. N. (2021). Effect of sustainability reporting on financial performance of quoted industrial goods companies in Nigeria. *International Journal of Management Studies and Social Science Research*, 3(5), 265-280.
- Odiko, S. Y., Ogutu, M., Yabs, J., & Omar, M. (2018). International Marketing Strategy, Information Communication Technology and Performance of Tour Firms in Kenya. . *Journal of Information and Technology*, 2(1), 39-64.
- Ogoun, I. S., & Ekpulu, G. A. (2020). Environmental reporting and operational performance: A study of listed manufacturing firms in Nigeria. *International Journal of Intellectual Discourse*, 3(1), 381-396.
- Papoutsis, A., & Sodhi, M. S. (2020). Does disclosure in sustainability reports indicate actual sustainability performance? *Journal of Cleaner Production*, 260, 121049.

- Patten, M. L. (2017). *Understanding research methods: An overview of the essentials*. . Routledge.
- Pham, H. S., & Tran, H. T. (2020). CSR disclosure and firm performance: The mediating role of corporate reputation and moderating role of CEO integrity. *Journal of Business Research*, 120, 127-136.
- Reid, J., & Castka, P. (2023). The impact of remote sensing on monitoring and reporting-The case of conformance systems. *Journal of Cleaner Production*, 393, 136331.
- Ren, S., Tang, G., & Jackson, S. E. (2021). Effects of Green HRM and CEO ethical leadership on organizations' environmental performance. *International Journal of Manpower*, 42(6), 961-983.
- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of management*, 35(3), 718-804.
- Rovai, A. P., Baker, J. D., & Ponton, M. K. (2013). *Social science research design and statistics: A practitioner's guide to research methods and IBM SPSS*. . Watertree Press LLC.
- Sekaran, U., & Bougie, R. (2013). *Research Methods for Business*. Sage Publications.
- Şeker, Y., & Şengür, E. D. (2021). The impact of environmental, social, and governance (esg) performance on financial reporting quality: International evidence. *Ekonomika*, 100(2), 190-212.
- Shabbir, M. S., & Wisdom, O. (2020). The relationship between corporate social responsibility, environmental investments and financial performance: evidence from manufacturing companies. *Environmental Science and Pollution Research*, 27, 39946-39957.
- Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological forecasting and social change*, 150, 119762.
- Srivastava, A. K., Dixit, S., & Srivastava, A. A. (2022). Criticism of triple bottom line: TBL (with special reference to sustainability). *Corporate reputation review*, 1-12.

- Tanui, P. J. (2023). Ownership Structure and Corporate Sustainability Disclosure in Kenya: Interaction Effect of Board Gender Diversity. *International Journal of Finance Research*, 3(4), 312 - 334.
- Tao, J. (2023). Study on the impact of ESG performance on firm performance. *SHS Web of Conferences*, 1-5.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13), 1319-1350.
- Teo, T. (. (2014). *Handbook of quantitative methods for educational research*. . Springer Science & Business Media.
- United Nations Conference on Trade and Development. (2021). *Manufacturing Pollution in Sub-Saharan Africa and South Asia*. United Nations Conference on Trade and Development, UNCTAD.
- Vu, H. M. (2020). A review of dynamic capabilities, innovation capabilities, entrepreneurial capabilities and their consequences. *The Journal of Asian Finance, Economics and Business*, 7(8), 485-494.
- Wagner, D., Wenzel, M., Wagner, H. T., & Koch, J. (2017). Sense, seize, reconfigure: online communities as strategic assets. *Journal of Business Strategy*, 38(5), 27-34.
- Wang, S., Wang, H., Wang, J., & Yang, F. (2020). Does environmental information disclosure contribute to improve firm financial performance? An examination of the underlying mechanism. *Science of the Total Environment*, 714, 136855.
- Were, A. (2016). Manufacturing in Kenya: Features, challenges and opportunities. *International Journal of Science, Management and Engineering*, 4(6), 15-26.
- Willy, O. C. (2012). Macroeconomic fluctuations effects on the financial performance of listed manufacturing firms in Kenya. *International journal of social sciences*, 21(1), 26-40.
- Wu, H., & Li, J. (2023). The relationship between environmental disclosure and financial performance: Mediating effect of economic development and information penetration. *Economic research-Ekonomska istraživanja*, 36(1), 116-142.

Yang, B. M., & Yang, O. S. (2022). Assessing the Effect of Dynamic Capabilities on the ESG Reporting and Corporate Performance Relationship With Topic Modeling: Evidence From Global Companies. *Frontiers in Psychology*, 13, 898935.



APPENDICES

Appendix I: Informed Consent Form

My name is *Nancy Oseko Bochaberi*, and I am a graduate student pursuing Master of Science, Development Finance degree in the Strathmore University Business School. As a part of my graduation requirements, I am to complete a research thesis. My thesis supervisor is Dr. Mumbi Maria. In case of any questions or comments, please contact my thesis supervisor (through the school) or me on bochaberinancy50@gmail.com or oseko.nancy@strathmore.edu

The study aims to ascertain the *effect of sustainable reporting practices on the operational performance of manufacturing firms in Nairobi, Kenya*. Your participation will be highly appreciated in advance. Your identity and information will be kept confidential. You will be free to decline to participate or withdraw at any point where you do not feel comfortable. The information may help in identifying areas of improvement in the manufacturing industry in Kenya. Upon your written consent to participate in this research below, the researcher will give you a questionnaire with five parts and should take about 10 to 15 minutes of your valuable time to complete.

My consent to participate:

“I understand that my participation is voluntary, and I am free to withdraw my participation at any time during the study without any consequence.”

Signature of respondent _____

Date: _____

Nancy Oseko _____

MDF Student

Thesis Researcher

SBS

Appendix II: Research Questionnaire

Hello,

Kindly help fill the attached questionnaire in the provided spaces. I appreciate your involvement in the survey and no personally identifiable information will be required in the survey.

Thanks.

Part A: Background Data

1. How long has the firm been fully registered with the Kenya Association of Manufacturer?

Less than 3 years ()

4-6 years ()

7-10 years ()

11-14 years ()

Over 15 years ()

2. How many employees are within your manufacturing firm?

Less than 20 employees ()

21-50 employees

51-100 employees ()

Over 101 employees ()

3. Does your manufacturing firm undertake sustainability reporting?

Yes ()

No ()

4. Which of the following sustainability practices does the firm report on?

Environmental practices only ()

Social reporting practices only ()

Governance reporting practices only ()

All of them ()

5. How long has the firm been reporting on sustainability practices?

Less than a year ()

1-3 years ()

4-6 years ()

Over 7 years ()

PART B: EFFECT OF SUSTAINABLE REPORTING PRACTICES ON THE OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI, KENYA

Kindly indicate your extent of agreement with the following statements using the shown scale below.

1= Not extent at all, 2= To little extent, 3 = To a moderate extent, 4= To a great extent and 5 = To a very great extent.

	Environmental reporting practices	1	2	3	4	5
1.	The firm ensures chemicals used in the production process are biodegradable to minimize destruction of biodiversity					
2.	The firm has guidelines in place to ensure that conservations of habitats is ensured in our operations					
3.	The firm ensures there is minimal waste generation in the undertaking of our operations					
4.	The firm continuously repurposes and recycles waste material to reduce waste production					
5.	The firm has instituted and integrate climate change policy to ensure we meet our sustainable goals					
6.	The firm ensures that we monitor and track our impact on the environment to ensure we meet our protection targets					
7.	The firm supports local communities that are involved in cleaning landfills and dumpsites which reduces negative effect on the environment					

	Social reporting practices	1	2	3	4	5
--	-----------------------------------	---	---	---	---	---

1.	The firm has in place a disability policy to ensure employees with disabilities are assimilated in workforce					
2.	The firm routinely undertakes training on policies and procedures regarding inclusion and diversity in our workforce					
3.	The firm supports employees in conducting career development reviews to enhance their competencies					
4.	The firm ensures employees are provided with performance review feedback and annual satisfaction surveys.					
5.	The firm has put in place a community complaints system in place to ensure all grievances are acted upon					
6.	The firm ensures community engagement is incorporated in social impact assessment of our activities					
7.	The firm has integrated a gender-policy in the hiring process to ensure there is diversity in the team					
8.	The firm has implemented a non-discrimination policy to ensure employees are able to air their complaints freely					

Governance reporting practices		1	2	3	4	5
1.	The firm ensures that stakeholders are furnished with relevant information on our operations whenever requested					
2.	The firm engages stakeholders routinely to ensure there are rights and wealth maximization goals are met					
3.	The firm ensures there is strict adherence to compliance and regulatory requirements to minimize risk to stakeholders' wealth					
4.	The firm complies with all internal mechanism on reporting violations and any conflicts of interests thus enhancing accountability					
5.	The firm engages with all stakeholders (internal and external) to hear their views which help shape and improve policies and systems					
6.	The firm has a strict internal control systems to help minimize cases of corruption and fraud					

7.	The firm has a whistleblower policy in place as mechanism of promoting responsible resource utilization					
8.	The firm has developed a clear ethical standard that guides the internal operations					
9.	The firm requires employees to uphold moral behavior and sign code of conducts that ensures ethical behavior in the workplace					

Firm Capabilities		1	2	3	4	5
1.	The management team routinely delegates duties to subordinate staff to help enhance morale and productivity					
2.	The management team consults with other departmental heads to help improve problem solving and decision making					
3.	The management team is concerned with the employee welfare hence have instituted empowerment programmes					
4.	The firm ensures there rely on customer feedback to meet the needs of our customers					
5.	The firm has put in place a feedback system that ensure quick resolution of customer complaints					
6.	The firm has allocated adequate financial capital to support adoption of new technologies that can support research and development activities					
7.	The firm encourages employees to be innovative in undertaking their roles thus fostering the creation of new ideas					

PART C: OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS

Kindly indicate your extent of agreement with the following statements using the shown scale below.

1= Not extent at all, 2= To little extent, 3 = To a moderate extent, 4= To a great extent and 5 = To a very great extent.

Operational Performance		1	2	3	4	5
1.	The firm effectively meets the financial obligation of all					

	stakeholders and our beneficiaries					
2.	The firm has witnessed enhanced efficiency in the undertaking of our operations					
3.	The firm relies on market reviews to meet the expectations of our customers					
4.	The firm utilizes feedback from our stakeholders to enhance their satisfaction levels with our service provision					
5.	The firm has put in place a clear communication system that enhances efficiency and effectiveness in undertaking our operations					
6.	The firm has seen a growth in our corporate image among our partners and beneficiaries					
7.	The firm is able to routinely meet the quality standards in the provision of our services					
8.	The firm workforce has improved their productivity in the execution of their duties.					
9.	The firm has deployed an elaborate internal control and risk systems that minimizes exposure to internal and external shocks that could negatively impact firm performance					
10.	The firm supports programs to foster better working relationship between employees which stimulates productivity					
11.	The firm regularly supports staff training which enhances the competencies which are key to better performance					
12.	The firm has put in place mentorship programmes that are key to motivation and improving professional development of our employees					
13.	The firm regularly undertakes appraisal of employees to help identify performance gaps and address them for better productivity					

Thank you for taking part in the research.

Appendix III: List of Manufacturing Firms

1. Synresins Limited
2. Desbro Kenya
3. Alliance Garment
4. Pipe Manufacturers
5. Repelectric Kenya
6. KJ Industrial Machinery & Equipment
7. Fusion Concepts LTD
8. Keep It Promo K Ltd
9. Line Plast
10. Plast Packaging Industries
11. Fine Blendz
12. Palamco company
13. Edarns Enterprises Ltd
14. Peafoods Processing Co
15. Roof Arts Limited
16. Paperbags Limited
17. Kamili Packers Ltd
18. Edkan enterprises
19. F And B Solutions
20. Unity Makers
21. Exen limited
22. Mountain View Conservation
23. Qualitybiz Kenya, Njuca Limited
24. Ecobag Suppliers Ltd
25. Cempack Solutions Limited,
26. Pak Space Ltd, ECO Packaging
27. Alpha Fine Foods
28. Electric Fences Kenya,
29. Shade Systems
30. Identisys Ltd
31. Proteam Movers Kenya
32. Safety Equipment PPE
33. Holman Brothers (EA) Ltd
34. Spectra Chemicals Kenya Limited



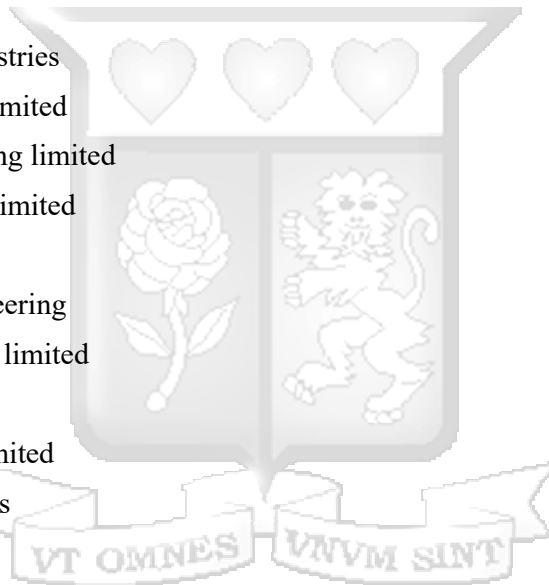
35. Milka Trading
36. Shankan Enterprises Ltd
37. Eco Consult
38. Ramco Printing Works
39. Alpha Dairy Products
40. Stainless Steel Products Lt
41. Creative Fabric World
42. Octagon Express
43. Deal laboratories
44. Sun Power Technologies
45. Metco Limited
46. Cuma refrigeration
47. Element Solutions Limited
48. Multegen Limited
49. Dawn industries
50. Super Manufacturers Ltd
51. Associated Battery Manufacturers (E.A) Ltd
52. Ashut products Ltd
53. Haco Industries Kenya Ltd
54. Silpack Industries Limited
55. Wanjis Food Industries Ltd
56. Vaja's Manufacturers Ltd
57. Blow Plast LTD
58. Adhesive solutions
59. Bosky Industries Ltd
60. Unga Group Ltd.
61. Kartasi Products Ltd
62. Hydraulic Hose & Pipe
63. Orbit Chemical Industries
64. Platinum Packaging Limited
65. Doshi Group of Companies
66. Accurate Steel Mills Ltd
67. Kenden limited
68. Impala Glass
69. Philafe Engineering Ltd



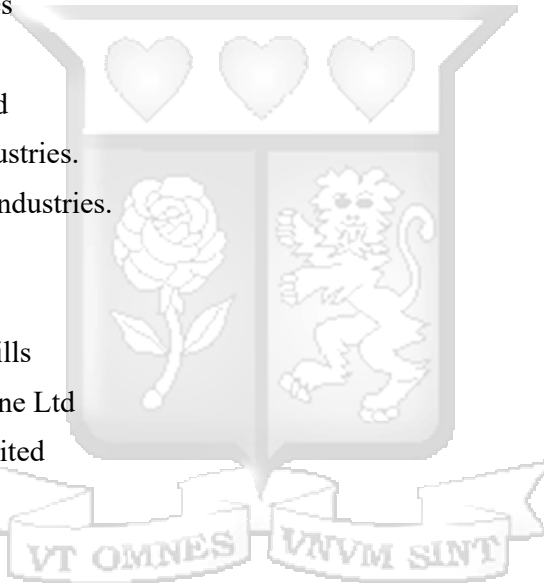
70. Duff Engineering Limited
71. Motioncity International Ltd
72. Creative Innovations Ltd.
73. Mjengo Limited
74. Tripac Chemical Industries Ltd
75. Cool Air Technology
76. Mather & Platt Kenya Ltd
77. Superfit Steelcon Ltd
78. Gartex Holdings Limited
79. Chemco Distributors
80. Gimpex for Paper and Board
81. Sudi Chemical Industries
82. Kim-Fay E.A Limited
83. Bogani Industries Ltd
84. Clayhouse enterprises
85. Bana VENTURES
86. Benq Systems
87. Barbeques Today Ltd
88. Kenrotti Ltd
89. Gee designs
90. Fine fair
91. Karatasi Industries
92. Muteshi enterprises
93. Kernj Enterprises
94. Pepam Holding Limited
95. Panamer Company Limited
96. Galen Empire
97. Imani Workshops
98. Flexoworld Ltd
99. Metal Crown Ltd
100. Reliable Concrete Works
101. Elwin Industries Ltd
102. Racking Systems Kenya Suppliers
103. Solid State Ltd
104. Silver Oak Technologies



105. Olympian tank limited
106. Powa ventures limited.
107. Kangaroo brands
108. Kibagare wheat factory.
109. Dora mattress
110. Grond enterprises
111. Valley land miller's factory
112. Bigton chemical industries
113. Letceller food industries.
114. Unga Africa limited.
115. Hi chem industries
116. Slaughtering
117. Kingsgeorge industries
118. Ushindi bottlers limited
119. Movers engineering limited
120. Dashy industries limited
121. Eurofix industries
122. Aquaworld engineering
123. Umami industries limited
124. Bulher industries
125. Ng'ombe feeds limited
126. Srk food industries
127. Olmec industries
128. Vitone Africa Ltd
129. Mangetho plastic limited
130. Rivatec industries
131. Afro plastic limited
132. Heret and sons glass industries
133. Brand Ace limited company
134. Ondiba light industries
135. Quality packaging and hygiene ltd
136. Non-oven bags makers
137. Fraden manufacturers
138. Dinow mattresses industries
139. Nyagah industries



140. Nairobi safety shop.
141. Dura foams.
142. Conor enterprises limited.
143. Bashir confectionery industries
144. Go Food limited
145. Kenafric bakery.
146. Altimate packaging industries
147. Fault flour mills.
148. Kenclean enterprises Ltd
149. Solai paints.
150. Hemko feeds limited
151. Alfa coat industries
152. GSE kenya
153. Benta fresh limited
154. Premier foods industries.
155. Robico chemical industries.
156. Razco group
157. Henkel group
158. Maridadi Flour Mills
159. Ramboo Colourcane Ltd
160. More ventures limited
161. Premier industries
162. Kifaru enterprises
163. Okay General trading
164. Centre of technological development
165. Neopack limited
166. Healthy u
167. Codin flow bakeries
168. Bytewise limited
169. Chameleon solutions
170. Finsbury trading ltd.
171. Chau basket and packaging industries
172. Jubilee tissue industries
173. Devik Nandan
174. Jubilee feeds



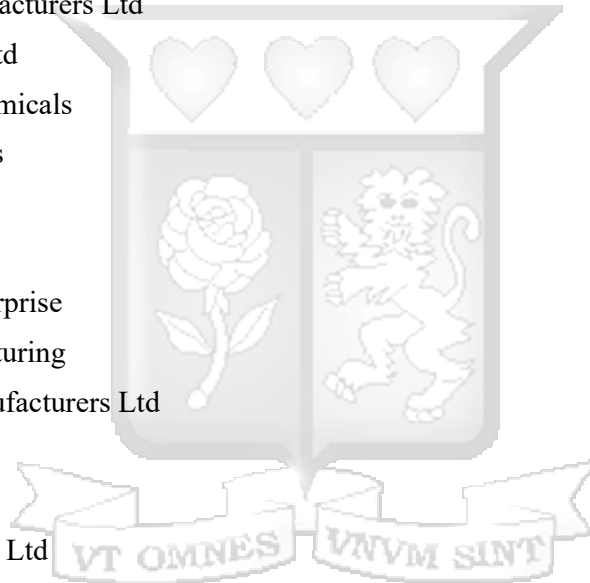
175. Tee gee industries Ltd
176. Jowango fabricators
177. Kidani mabati
178. BURN manufacturing
179. Teshua safety
180. Pembe tatu industries
181. Robico chemical industries
182. Rajab manufacturers limited
183. Chemical tonye agencies
184. Omwami General fabricators
185. Jok junior bakeries
186. Union paints limited
187. Anka packaging industries
188. Small wave industries limited
189. Swan lacquer
190. Ahmed and sons medical limited
191. Seven Folks feeds limited
192. East Africa Foundry
193. Kirinyaga flour limited
194. Royal beauty industries
195. Bit and bite foods
196. Twiga foods
197. Ruiru bakery
198. Plenty and picky supplies
199. Kawanga bottlers
200. Josanga enterprises
201. Alfa industries
202. Teridia footwear
203. Napro industries
204. Wasafi Nairobi
205. Pioneer foods
206. Prolex Ventures
207. Riflo manufacturers.
208. Mega timber manufacturers
209. Eris industries



210. Delta fabricators
211. Gamma Universal Limited
212. Saifee Chemicals Ltd
213. Bakuli Foods
214. Fayaz bakery
215. Afrochem Products
216. Daily Fresh Bakery
217. Pea foods processors
218. Savanna brands
219. Mugo traders limited
220. Glory Paints
221. Wandu Packaging Ltd
222. ASL Ltd
223. Kinko Paints
224. Nijab manufacturing limited
225. Midrow kenya ltd
226. Sarma enterprises
227. Parachichi industries
228. Teshua safety house ltd
229. Kimberley Industries
230. Hemco feeds
231. Mhogo Foods
232. P J Products
233. Three Bees Decorex Painting
234. Vision Paints Ltd
235. Paul's Cookiemans Ltd
236. Pantel Chemicals Ltd
237. Uchumi Chemical plant LTD
238. Moonwalk Investments Limited
239. Africa Spirits Limited
240. Pegler Paints
241. Sante Farm Ltd
242. Euro Industrial Chemicals
243. Maroo Chemical Industries Ltd
244. Amaris Chemicals



245. Royal Mabati Industries
246. Shakers Industries
247. General Plastics Ltd
248. Bulwark industries
249. Tradewinds agency
250. Unilab kenya ltd
251. Chemraw Ea Ltd
252. Unilab Kenya Ltd
253. Velda Industrial Chemicals & Products
254. Basco Products (K) Ltd
255. County Corn Mills
256. Krystal Manufacturers Ltd
257. Voda Water Ltd
258. Chamuga Chemicals
259. Polo Industries
260. Kentel Bakers
261. Nails and steel
262. Esabwah Enterprise
263. Ideal manufacturing
264. Olympic Manufacturers Ltd
265. Best Choice
266. Kira Paints
267. Proffex Kenya Ltd
- 268.
269. Maroo Polymers
270. Colas Manufacturing
271. Dodhia Packaging Kenya ltd
272. Nitro Chemicals
273. Appi Colour Creation Limited
274. Shivam Enterprises Ltd
275. Silpack Industries Ltd
276. Spectra Chemicals Kenya
277. Megvel Cartons Ltd
278. Fine Wood Works Ltd
279. Kasol Paints Ltd



280. Dantex Industrial Chemicals
281. Go Foods Ltd
282. PARACHICHI INDUSTRIES
283. Ramboo Colourcane Ltd
284. Maridadi Flour Mills
285. Jowaga Fabricators Limited
286. Jubilee Tissue Industries Limited
287. Mutana Holdings Ltd
288. Kenafic Industries
289. Propack Kenya
290. Razco Ltd
291. Napro Industries Ltd
292. Nt Heish Ltd
293. Afro Plastics (Kenya) Ltd
294. Nallion Ltd
295. Antomark stainless Steel fabricators
296. Unifresh Exotics (K) Ltd
297. Danka Investments Ltd
298. Frigoken Ltd
299. Neopack Limited
300. Uzi Traders Limited
301. Alfa Coate Industries
302. Summer Millers Ltd
303. Pemar Agro
304. Regal Pharmaceuticals Ltd
305. Mill Bakers Ltd
306. Hillman Paints
307. Carton Manufacturers Ltd
308. Fosters Packaging Ltd



Appendix IV: Introduction Letter:

Ole Sangale Rd, Madaraka Estate,
P.O Box 59857 00200, Nairobi, Kenya.
Cell: +254 703 414/6/7, Twitter: @SBSKenya
Email: info@sbs.ac.ke or visit www.sbs.strathmore.edu



Friday, April 5, 2024

Director General,
National Commission for Science Technology and Innovation,
P. O. Box 30623, 00100
Nairobi.

Dear Sir,

RE: FACILITATION OF RESEARCH – BOUCHER, OSEKO NANCY

This is to introduce Boucher, Oseko Nancy who is a Master of Science in Development Finance (MDF) Student at Strathmore University Business School, admission number MDF/36597/19. As part of our MDF Program, Nancy is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MDF course.

Nancy is undertaking a research paper on "**The Effect of Sustainable Reporting Practices on the Operational Performance of Manufacturing Firms in Nairobi, Kenya: Mediating Effect of Firm Capabilities:**" The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MDF seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research.

We appreciate your support and shall be willing to provide any further information if required.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Alois Njoroge".

Alois Njoroge
Manager - Graduate Programmes.

Association of African
Business Schools



Strathmore Business School is a Proud member of:



AACSB

Appendix V: Ethical Review Approval



25th March 2024

Ms Oseko Nancy,
oseko.nancy@strathmore.edu

Dear Ms Oseko,

RE: The Effect of Sustainable Reporting Practices on the Operational Performance of Manufacturing Firms in Nairobi, Kenya: Mediating Effect of Firm Capabilities

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2099/24**. The approval period is from **25th March 2024 to 24th March 2025**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC



Appendix VI: NACOSTI Research Licence

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
RefNo: 971260	Date of Issue: 08/April/2024
RESEARCH LICENSE	
	
<p>This is to Certify that Ms. Nancy Bochaberi Oseko of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: THE EFFECT OF SUSTAINABLE REPORTING PRACTICES ON THE OPERATIONAL PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI, KENYA: MEDIATING EFFECT OF FIRM CAPABILITIES: for the period ending : 08/April/2025.</p>	
License No: NACOSTI/P/24/34402	
Applicant Identification Number 971260	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	
See overleaf for conditions	