DETERMINANTS OF GREEN FINANCING ADOPTION BY SMALL AND MEDIUM SIZED ENTERPRISES IN MANUFACTURING SECTOR AT NAIROBI CITY COUNTY, KENYA

BY

JUSTIN M. KARIUKI

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND INVESTMENTS) IN THE SCHOOL OF BUSINESS, KCA UNIVERSITY

DECEMBER, 2023

DETERMINANTS OF GREEN FINANCING ADOPTION BY SMALL AND MEDIUM SIZED ENTERPRISES IN MANUFACTURING SECTOR AT NAIROBI CITY COUNTY, KENYA

BY

JUSTIN M. KARIUKI

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND INVESTMENTS) IN THE SCHOOL OF BUSINESS, KCA UNIVERSITY

DECEMBER, 2023

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged

Sign……... Reg. No…….

Date……...

I do hereby confirm that I have examined the master's dissertation of

Justin M. Kariuki

And have approved it for examination.

Sign: _____ Date: _____

Dr. Gladys Bunyasi

Dissertation Supervisor

ABSTRACT

The general objective of this study was to determine the factors influencing the uptake of green financing by small and medium-sized enterprises in Nairobi, Kenya. It was guided by the following specific objectives: to assess the effect of organizational characteristics on the uptake of green financing by SMEs in Nairobi; to assess the effect of technology on the uptake of green financing by SMEs in Nairobi; to assess how government support influences the uptake of green financing by SMEs in Nairobi; to assess the effect of access to financing information on the uptake of green financing by SMEs in Nairobi, particularly those in the Manufacturing sector. The theories used in this study were the Resource theory of sustainable finance, System disruption theory of sustainable finance, the Positive signaling theory of sustainable finance, the and Priority theory of sustainable finance. The study utilized descriptive research design and the population was the management of registered small and medium-sized enterprises in Nairobi, Kenya. The target population for the study was the 134 small and medium-sized enterprises in Nairobi, Kenya. Census of all the SMEs was done. Questionnaires included questions on background and constraints to adoption of green financing which were used as the main tool to collect primary data. Data collected was then analyzed using SPSS through inferential statistics i.e., regression analysis, hypothesis testing, and confidence intervals where measurements drawn from the samples were used to make generalizations about the larger population of SMEs. Tables and graphs were used to present data and further interpret the results. The regression analysis showed that organizational characteristics had a positive and insignificant beta coefficient meaning that it does not contribute significantly to uptake of green financing. Further, it was shown technology had a positive and significant beta coefficient meaning that use of better technologies by SMEs could lead to improved uptake of green financing. Similarly, the regression analysis showed that Government support had a positive and significant beta coefficient meaning that increased government support should lead to improved uptake of green financing. Lastly, the regression analysis showed that access to financing information had a positive and significant beta coefficient meaning that increased access to Financing Information could lead to improved uptake of green financing. Based on these findings, this study concludes that organizational characteristics does not contribute significantly to uptake of green financing. Also, on these findings, this study concludes that use of better technologies by SMEs could lead to improved uptake of green financing. Additionally, this study concludes that increased government support could lead to improved uptake of green financing by SMEs. Lastly, this study concludes that increased access to financing information could lead to improved uptake of green financing. Based on these findings, this study recommends that the management of SMEs come up with policy of auditing their financial statement s as to increased their chances of accessing green financing from banks. Lastly, this study recommends that management sponsor most of their employee to attend green financing trainings and seminars so as to create more awareness of the available green financing projects for the SMEs.

ACKNOWLEDGEMENTS

I would like to thank a number of people for their contributions to this dissertation. Their unique contribution made sure that this dissertation is finished and presented in compliance with university rules.

I thank Dr. Gladys Bunyasi, my supervisor, for helping to shape and complete this dissertation successfully and for all of her assistance and mentorship during the process. I also acknowledge the business school's larger academic faculty.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

DEDICATION

This research project is dedicated to Elijah Kariuki Mungai, Jane Nzisa Kariuki, Winfred Wambui Kariuki, Elvis Muasya Kariuki, Mark Kamwere Kariuki and Joseph Clifford Kamau who kept pushing me to ensure I deliver and graduate. It is also dedicated to the Lord Almighty for enabling me to see it through.

ACCRONYMS AND ABBREVIATIONS

SMEs – Small and Medium- Sized Enterprises

UNEP – United Nations Environment Programme

ILO – International Labour Organization

ITUC – International Trade Union Confederation

NGOs – Non-governmental Organizations

SGF - South African green finance

LSEG – London Stock Exchange Group

SDGs - Sustainable Development Goals

AU - African Union

EAC - East African Community

GDP – Gross Domestic Product

ASSEK - The Association of Startup and SMEs Enablers of Kenya

SPSS- Statiscal Package for the Social Sciences

DFI- Development Finance Institutions

CSIS- Center for Strategic & International Studies

IFC- International Finance Corporation

KAM-Kenya Association of Manufacturers

OPERATIONAL DEFINITION OF TERMS

Government Support	Tax Incentives, incentives for the reduction of mandatory contributions, government grants, government-supported loans, and guaranties, trusts, or insurance provided by a government, irrespective of whether a private entity is wholly or partially responsible for management of the government
Green Financing	Financial investments flowing into sustainable development projects and initiatives, environmental products, and policies that encourage the development of a more sustainable economy.
Information Access	Information access is the freedom and ability to identify, obtain and make use of database or information effectively
Organizational Factors	It encompasses all those elements that influenced the way that the organisation and everybody within it behaves
Technology	Technology is the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment.

CHAPTER ONE

This chapter will cover Introduction and background information. There is also the problem statement, research objectives, research questions, significance of the study and the study scope.

1.1 Background of study

Small and Medium Enterprises (SMEs) play a crucial role in fostering economic growth inside emerging nations. The contributions of small and medium-sized enterprises (SMEs) in industrialized countries have been recognized and documented over the course of history. The contributions encompassed within this context encompass product innovation, technical advancement, and employment creation. Upon this realization, it is imperative for African nations to acknowledge the significance of providing support to small and medium-sized enterprises (Liang, 2023).

Recent years have seen the advent of the "green economy," which combines environmental concerns with economic growth. In the past decade to fifteen years, corporations and authorities worldwide have prioritized this issue. Businesses globally are under pressure to be responsible and environmentally friendly to promote sustainable development. Many of these companies view their environmental sustainability as a competitive advantage. The company's main goal is to increase its competitiveness by increasing its environmental performance, resolving customer environmental issues, and minimizing its production and service impacts. Corporate adoption of ecologically sustainable technologies has been extensively studied (Liang & Zhu, 2023). Stakeholder pressure, environmental restrictions, organizational size, managerial traits, human resource use, and industrial sector have been studied (Aseto, 2022).

The SMEs' sustainable practices are crucial to meeting the Paris Agreement's ambitious climate ambitions. Technology and ecologically sustainable business practices by small and medium-sized enterprises (SMEs) are crucial to climate change mitigation. Public and private financial institutions, regulatory authorities, rating agencies, and other relevant bodies must be involved to provide financial aid for small business sustainability. Public and commercial finance institutions must also invest in SMEs' net zero emissions transition. Increasing awareness and providing concrete resources to help small and medium enterprises (SMEs) achieve sustainable goals is also necessary. Melgar (2022) suggests smaller enterprises may seek more ecologically sustainable finance and investments.

The researchers examined Austria's green financing business from 2021 to 2030. The green economy is expected to get 17 billion EUR in investments annually. Due to government funding shortages, sustainable firms, also known as green enterprises, need private capital, according to popular belief. Exploiting financially sustainable, eco-friendly resources may help achieve this goal. The Austrian banking system's flaws are acknowledged. These allegations suggest that Austria's sustainable finance industry is undeveloped compared to worldwide benchmarks. Mutual funds dominate investment, with institutional investors driving activity over private investors. Additionally, Austrian consumers lack knowledge of ecologically friendly financial options.

Falcone and Sica (2019) claim that biomass producers face institutional and financial hurdles when seeking investment funds, notwithstanding green finance options. The biomass business faces challenges such a lack of financial service providers, the transience of green financial instruments, and limited financing options for producers.

1.1.1 Determinants of Green Financing Uptake

According to the research conducted by the Confederation of British Industry (CBI) in 2019, a significant number of businesses and financial institutions operating within the United Kingdom are actively embracing environmentally sustainable finance options. The poor uptake of green financing by other enterprises and financial institutions can be ascribed to a dearth of comprehension, inadequate knowledge, imprecise data, and insufficient regulatory frameworks. In 2019, the Confederation of British Industry (CBI) released a report suggesting the adoption of green financing as a suggested course of action for the financial sector in the United Kingdom. As to the findings of the Climate Business Initiative (2019), it is advisable to undertake a thorough evaluation of financial regulations in order to ascertain the presence of incentives that promote the allocation of funds towards environmentally sustainable initiatives.

According to Sokolova (2019), the Ukrainian administration has demonstrated a lack of passion for the advancement of a sustainable economy. The influence of non-governmental organizations (NGOs) in Ukraine on the development of a green economy is more significant than that of the Ukrainian government. The Ukrainian Green Bank, often known as "Ukrgasbank," has successfully enhanced the accessibility of environmentally friendly investments in Ukraine, accomplishing this result independently of governmental assistance.

Jena and Dhruba (2020) argue that there exists a necessity for the implementation of improved educational endeavors within the Indian banking industry, specifically pertaining to the domain of green financing. The argument put up by proponents is that the augmentation of green capital inflow into India necessitates a collaborative and market-oriented endeavor involving multiple stakeholders. This endeavor should commence with the development of a well-defined and specific delineation of the term "green finance." Additional alternatives that warrant consideration are the adoption of regulatory measures to govern the realm of green

financing and the imposition of sanctions on enterprises that exhibit substantial carbon emissions.

Chang's (2019) paper presents a comprehensive examination of the challenges and prospects associated with the advancement of sustainable finance in Singapore. Several difficulties can be discovered, namely: Small and medium-sized enterprises (SMEs) in Singapore encounter obstacles when attempting to issue green bonds as a result of their restricted size and financial limitations, which impede their capacity to finance initiatives. The current state of the green bond market in Singapore is characterized by its early stage of growth, wherein there is a lack of widespread knowledge and understanding among small and medium-sized enterprises (SMEs) on the concept of green finance. In addition, the absence of openness and reporting channels poses significant obstacles and hazards. According to Chang (2019), it is crucial to define a precise and unambiguous definition for the term "green." Additionally, the author underlines the necessity of providing additional information concerning the environmental, social, and governance (ESG) performance of bond issuers.

The author further emphasizes the importance of improving the transparency of financial instruments linked to green investments. Furthermore, the paper suggests the establishment of designated "green pockets" as a means to foster a heightened demand for investments that prioritize environmental sustainability. Finally, Chang (2019) emphasizes the need of promoting the growth and distribution of knowledge and skills in this particular field. The elucidation of the relevance of environmental consciousness is of utmost importance, and aggressive steps must to be implemented to foster the advancement of green financial markets and investments.

The existing body of academic research indicates that the discourse around Africa's efforts to foster sustainability within its economy is in its nascent phase, as evidenced by the

works of Liang (2023), Aseto and Melgar (2022), Altenburg and Engelmeier (2013), and Desmond and Asamba (2019). The predominance of a prescriptive approach, as opposed to a descriptive technique, is evident in the bulk of research endeavors pertaining to sustainability and circular economies, particularly in developing countries. However, it is expected that upcoming studies on the effects of company operations and market dynamics would be published in the near future.

1.1.2 Uptake of Green Financing

The current body of research on environmentally responsible fundraising in the African context is limited. According to policymakers, South Africa stands out as the only African nation that has successfully established a policy specifically addressing the allocation of funds for activities aimed at promoting ecological sustainability. In December 2017, Nigeria made history by being the first African country and the fourth country worldwide to issue its debut sovereign green bond. In the region of Sub-Saharan Africa, the Least Developed Countries Fund and the Clean Technology Fund, which are both administered by the World Bank, accounted for the second largest total amount of climate money in the year 2019. Watson and Schalatek (2019) assert that Nigeria and Morocco have developed sustainable green funding plans for the African continent, as indicated in the Economic Report on Africa (2020).

The Johannesburg Stock Exchange (JSE) has established a sector dedicated to ecologically beneficial activities, generally known as the "green sector." The Nairobi Securities Exchange and the regulatory agencies responsible for monitoring the capital market in Kenya collaborated to develop legislation concerning green bonds. The governments of Seychelles and Namibia have recently expressed their mutual commitment to collaboratively issuing blue and green bonds. Preliminary proposals for the establishment of green bond development strategies have been created for the countries of Mauritius and Gabon. The incipient phase of the market for environmentally conscious investments in Central Africa is apparent.

Zadek and Flynn (year) have documented a significant increase in the prevalence of South African green funds (SGF). Financial markets in South Africa play a crucial role in enabling banks to support environmentally conscious firms in their long-term pursuits. In 2012, Nedbank became the first financial institution in South Africa to introduce the issue of a green bond, thus establishing itself as a pioneer in this domain. The South African Industrial Development Corporation was responsible for the issue of these bonds. The green bond is available to all potential investors and offers an annual interest rate that has the potential to reach 7.5% over a certain period of time. The entirety of the monetary units assigned to the green bond will be utilized exclusively to give financial support for a wide array of initiatives related to the green economy and businesses focused on renewable energy inside the geographical boundaries of the nation of South Africa.

The release of a report by the United Nations Environment Programme (UNEP) in 2015 marked an important milestone in the pursuit of sustainable and environmentally friendly economic development in African nations. This research presented a set of policy suggestions intended to facilitate the transition towards a "green economy" model. Exemplary cases include the implementation of environmentally conscious and inclusive lending criteria and incentives, the issuance of green bonds, as well as the trading of green assets and stocks on African stock exchanges. According to Dia (2019), some African states are presently involved in the examination and adoption of alternative financial mechanisms. In Uganda, the funding of renewable energy projects is facilitated by the exploitation of crowdsourcing systems, whilst in Nigeria, the financing of such efforts is supported through the adoption of green bonds. Marbuah (2020) did a study on the state of the green bond market in Africa and observed limited progress in its development. Despite their combined contribution amounted to less than one percent of the global market, certain nations wield substantial influence. Multilateral

development organizations operating in Africa have successfully issued bonds that have a diminished environmental impact.

LSEG (2020) proposes that African nations should consider making adjustments to their public policies with the aim of bolstering their environmental sustainability and fortifying their ability to withstand the consequences of climate change. Minimizing the consumption of fossil fuels in Africa is of utmost importance. The enhancement of green finance markets in Africa can be facilitated by the introduction of government policies that foster the acquisition of environmentally friendly assets.

The establishment of universally accepted and unambiguous standards to delineate the notion of "green" is of utmost importance in fostering the development of a resilient green finance sector in Africa (OECD, 2020). The framework encompasses several fundamental elements, including effective communication between public and private entities, collaborative efforts on an international scale, the development of capabilities, robust underlying securities markets, enhanced transparency and incentives within capital markets, and the promotion of active securities markets.

1.1.3 Enterprises in Nairobi

As to the Kenya Micro and Small Enterprises Policy sessional paper number 5 (2020), a considerable fraction of private sector enterprises in various economic sectors can be classified as small and medium-sized enterprises (SMEs). The sector indicated above comprises 90% of privately-owned enterprises, employs 93% of the labor force, and contributes 24% to the country's total gross domestic product. Therefore, the expansion of this enterprise is of utmost importance in achieving the developmental goals indicated in Kenya Vision 2030. The expansion of this industry holds potential for promoting regional and global policy objectives, such as the Sustainable Development Goals (SDGs) outlined by the United Nations, Agenda

2063 established by the African Union, and Vision 2050 developed by the East African Community.

Considerable scholarly research has been conducted on the subject of small and medium-sized enterprises (SMEs). However, there has been a lack of focus on investigating the factors that influence the adoption of green financing among SMEs in Kenya. The main aim of this study was to assess the level of adoption of green financing among small and medium-sized firms (SMEs) in Kenya. Additionally, the research aimed to identify the characteristics that either help or impede the adoption of green financing within this particular sector. This study seeks to enhance the current understanding of green funding in Kenya by illuminating these facets.

1.2 Problem Statement

Small and Medium-sized Enterprises (SMEs) constitute a substantial and dynamic economic segment within the city of Nairobi, Kenya. These enterprises play a crucial role in facilitating the generation of employment opportunities, fostering economic growth, and driving innovation (Mwobobia, 2017). Despite their economic significance, a substantial proportion of small and medium-sized enterprises face notable challenges in accessing green financing, which is crucial for undertaking sustainability initiatives and promoting environmental and social responsibility goals (Mangena & Chamisa, 2008).

The present matter encompasses two aspects. Firstly, small and medium enterprises (SMEs) in Nairobi exhibit a discernible deficiency in their utilization of green funding, as they often face financial constraints that hinder their involvement in sustainable initiatives and undertakings (Buli, 2018). Furthermore, the limited uptake of green financing can be attributed to several factors. These include inadequate government backing, limited availability of

financial data, and challenges associated with organizational characteristics such as organizational culture and the quality of human resources (Muriithi & Njeru, 2017).

This matter carries significant consequences. Due to their restricted availability of green financing, small and medium-sized enterprises (SMEs) encounter difficulties in implementing environmentally conscious strategies or achieving international sustainability objectives, despite their significant potential in advancing sustainability efforts (United Nations, 2015). The aforementioned factor has implications for the prospective economic growth and the ability of the small and medium-sized enterprise (SME) sector to contribute to Kenya's efforts in achieving environmental sustainability and fulfilling its duties in mitigating climate change (Government of Kenya, 2015).

Moreover, small and medium-sized enterprises (SMEs) may fail to recognize the advantages of cost reductions, enhanced market competitiveness, and innovation resulting from sustainability initiatives if they lack access to capital specifically dedicated to environmentally friendly projects. In brief, the matter holds broader implications for the sustainable development of Kenya, in addition to its immediate impact on small and medium-sized enterprises (SMEs).

This study aims to investigate the factors that drive small and medium-sized enterprises (SMEs) in Nairobi to adopt green financing, in response to the significant problem of limited access to green finance and its associated implications. The objective of this study is to ascertain the key determinants that influence the adoption of environmentally sustainable finance by small and medium-sized enterprises (SMEs), policymakers, and financial institutions. The acquisition of useful insights from this study will aid in the formulation of targeted initiatives aimed at enhancing the adoption of green financing, promoting sustainable practices, and advancing Kenya's broader sustainability agenda.

1.3 Research Objectives

1.3.1 General Objective

The study sought to establish the factors influencing the uptake of green financing by small and medium-sized enterprises in Nairobi, Kenya

1.3.2 Specific Objectives

The study sought to achieve the following specifics objectives.

i. To investigate the effect of organizational factors on the uptake of green financing by SMEs in Nairobi.
ii. To investigate the effect of technology on the uptake of green financing by SMEs in Nairobi
iii. To assess the effect of Government support on uptake of green financing by SMEs in Nairobi
iv. To investigate the effect of access to information on green financing on the uptake of green financing by SMEs in Nairobi

1.4 Research Questions

The study sought to Answer the answer the following study questions;

i. To what extent does organizational factors affect the uptake of green financing by SMEs in Nairobi?
ii. To what extent does technology affect adoption of green financing by SMEs in Nairobi
iii. To what extent does government support affect adoption of green financing by SMEs in Nairobi?
iv. To what extent does access to financing information affect adoption of green financing by SMEs in Nairobi?

1.5 Justification of the Study

The majority of companies, however, are unable to reap the potential economic benefits of this trend because being green comes at such a hefty cost. Small and medium-sized enterprises (SMEs) have fewer financial resources available to them, and their company operations are more dependent on cash flow than those of bigger enterprises. This may prohibit them from functioning in a manner that is sustainable. Green money is an answer to this problem, which may be found in the previous sentence. The provision of funding for environmental activities, regulations, and organizations is referred to as "green financing," which is a subset of "sustainable finance." These organizations and activities include things like the reduction of carbon emissions and the development of infrastructure that is more resistant to the effects of climate change. This study will investigate how small and medium-sized manufacturing enterprises in Nairobi, Kenya utilize green finance because there is a lack of research on the topic.

1.6 Significance of the Study

1.6.1 Contribution to the Association of Startup and SMEs Enablers of Kenya

The study will provide The Association of Startup and SMEs Enablers of Kenya with information that will assist them in better understanding the green finance behavior of SMEs. Therefore, it would be beneficial for them to adopt laws and regulations that encourage small and medium-sized businesses to embrace green funding.

1.6.2 Contribution to Academic Research

The extension of knowledge brought forth by this study regarding the use of environmentally friendly finance by small and medium-sized businesses will be beneficial to academics and researchers. The study will help the general public comprehend the green finance that is being implemented by Nairobi's smaller and medium-sized businesses.

1.6.3 Contribution to the government

The study may be crucial to the Kenyan government since it will give them a voice in decision-making when new policies are developed.

1.7 Scope of the Study

The primary aim of this research was to identify the various elements that contribute to the adoption of green financing among small and medium-sized firms in Nairobi, Kenya. The study was driven by the subsequent specific objectives: to evaluate the impact of organizational characteristics on the adoption of green financing by small and medium-sized enterprises (SMEs) in Nairobi; to evaluate the impact of technology on the adoption of green financing by SMEs in Nairobi; to evaluate the influence of government support on the adoption of green financing by SMEs in Nairobi; to evaluate the impact of access to financing information on the adoption of green financing by SMEs in Nairobi, specifically those operating in the Manufacturing sector. The theories employed in this study encompassed the Resource theory of sustainable finance, System disruption theory of sustainable finance, Positive signaling theory of sustainable finance, and Priority theory of sustainable finance. The research employed a descriptive research approach, with the target population being the management of registered small and medium-sized firms located in Nairobi, Kenya. The study focused on a specific group, namely the 134 small and medium-sized firms located in Nairobi, Kenya. A comprehensive survey was conducted to gather data on all small and medium-sized enterprises (SMEs).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter analyzes the research on the elements affecting SMEs in Nairobi, Kenya's industrial sector to use green finance. It will examine green finance theories, empirical research from prior worldwide studies, and issues uniquely affecting Kenya's SMEs sector.

2.2 Theoretical review

2.2.1 Resource-Based Theory

The theoretical framework known as Resource-Based Theory (RBT) was initially introduced by Penrose (2009), who presented a conceptual model outlining the efficient management of an organization's resources, diversification strategy, and productive prospects. Penrose's seminal work introduced the notion of conceptualizing a corporation as a cohesive collection of resources, with the aim of understanding how it may effectively pursue its objectives and exhibit strategic behavior (Penrose, 2009; Penrose, 2009). The development of RBT commenced during the 1980s.The Theory of the Growth of the Firm served as the precursor to the development of the Resource-Based Theory (RBT). In subsequent years, namely in the 1990s, the contributions of Jay Barney played a pivotal role in the development and establishment of the Resource-Based Theory (RBT) as the prevailing framework within the field of strategic management and strategic planning.

The Resource-Based Theory (RBT) is based on two fundamental assumptions on the mechanisms via which firm-specific resources contribute to the development of long-term competitive advantage and the reasons why certain organizations consistently outperform others by achieving higher levels of competitiveness (Helfat & Peteraf, 2003). According to Helfat and Peteraf (2003), there exist variations in the bundles of resources possessed by

different enterprises. The heterogeneity of resources and capacities among a population of enterprises is a fundamental aspect of the Resource-Based Theory (RBT), since it serves to distinguish the competitive advantage of individual firms. The concept of resource heterogeneity posits that when a corporation possesses distinct resources in a given context, it may hold a greater level of expertise in doing specific tasks, hence enabling the creation of a competitive advantage. Furthermore, the intricacies involved in the exchange of resources across enterprises might give rise to the perpetuation of disparities in resources, as posited by the premise of resource immobility.

The theoretical assumptions of Resource-Based Theory (RBT) commence with the premise that organizational characteristics are not simply subject to modifications. In order to attain sustained competitive advantage and ensure success, it is imperative for the organization to rectify its orientation. The prevailing framework for assessing a company's profit potential, as proposed by Porter (1989), posits that a firm's internal elements, such as its resources and capabilities, play a decisive role in determining its profitability. Barney's (1991) groundbreaking research on strategic resources emerged as a pivotal contribution to the Resource-Based View (RBV), serving as a guiding framework for the evolution of the resource-based perspective into a fully developed theory known as RBV. Nevertheless, the conventional Resource-Based Theory (RBT) fails to provide a comprehensive explanation of the underlying reasons and mechanisms by which certain firms manage to get a competitive edge within conditions characterized by unpredictability and rapid transformations (Adner & Helfat, 2003).

The emergence of a more comprehensive resource-based view (RBV) implies that organizations have the capacity to attain a competitive edge not alone via the utilization of crucial resources, but also by cultivating novel capabilities through learning, skill acquisition, and the gradual accumulation of tangible and intangible assets. According to the resource-based

perspective, it is proposed that enterprises that own valuable resources, which are both costly and challenging to mimic, have the ability to produce long-term competitive advantage through their control over these resources (Barney, 1991). Therefore, it is possible for companies to gain a competitive edge by consistently rearranging or modifying a variety of resources and developing novel applications in order to satisfy market needs (Adner & Helfat, 2003).

The purpose of this research is to analyze the techniques of resource allocation and utilization that are used by small and medium-sized businesses (SMEs) in order to advance the use of green finance. This research is consistent with the theoretical framework that places emphasis on the strategic allocation of resources as a strategy to attain a sustainable advantage in competitiveness. Research on the use of environmentally friendly financing by small and medium-sized businesses (SMEs) in Nairobi can be examined through the lens of the Resource-Based Theory, which offers a helpful framework for doing so. This idea emphasizes how important it is to efficiently manage financial resources in order to achieve a competitive edge and, as a result, boost efforts to improve sustainability. The purpose of this study is to investigate the factors that have an impact on the financial resources that are available to small and medium-sized businesses (SMEs). These elements include organizational characteristics, government support, access to financing information, and more.

2.2.2 Positive Signalling Theory

According to the positive signaling theory, it is postulated that in order for economic actors to effectively engage others who can support them in achieving one or more sustainable finance objectives, they must first publicly announce their dedication to one or more of those objectives (Quatrini, 2021; Park, 2018). This is necessary in order to attract the support of those individuals. Through their annual reports and several other means of public communication, economic actors have the chance to successfully explain to the public the self-established sustainable financial objectives they have set for themselves in the economy. In addition to

this, people are able to voluntarily supply information that is monetary as well as information that is not monetary in nature. Businesses may decide to highlight their most recent green bonds or other kinds of sustainable financing methods in order to attract investors who have a strong interest in companies that use environmentally responsible business practices.

The dissemination of this information makes it easier to attract investors in environmentally friendly bonds. One technique of this kind involves a government making a public announcement of its commitment to adopting a comprehensive strategy for sustainable funding at the national level. A proclamation may also suggest that the government is willing to seek technical assistance from other nations in the process of formulating a plan for sustainable finance, thereby elevating the country's standing in terms of its commitment to sustainability.

Lastly, this program has the potential to entice sizeable amounts of foreign direct investment (FDI) in projects that aim to improve environmental sustainability. According to the positive signaling theory of sustainable finance, the act of publishing information helps to lessen the knowledge asymmetry that occurs between investors and corporations. This is because investors are more likely to invest in companies that disclose information. The concept of positive signaling is connected to a few different difficulties. To begin, it is important for business professionals to exercise caution if they are making judgments based on information that is readily available to the public that is associated with sustainable financing. In addition, businesses may make tactical use of the reliable and sustainable financial data that they collect on a consistent basis in order to disguise any unfavorable information. In the event that a company suffers significant financial losses as a result of the investments it has made in fossil fuels, the company may decide to make a public declaration of its intention to refocus its efforts on activities that are more environmentally responsible.

The application of environmentally friendly financial practices by small and medium-sized businesses (SMEs) in Nairobi can be efficiently analyzed via the lens of the Positive Signaling Theory of Sustainable Finance, which will result in the production of significant insights. This idea highlights how important it is for small and medium-sized enterprises (SMEs) to demonstrate their commitment to sustainability in a constructive manner, often through the implementation of procedures involving transparency and sustainability reporting. According to the findings of the study, the success of establishing trust among stakeholders and gaining access to green financing sources may be dependent on the effectiveness of the signaling mechanism.

By effectively communicating the various ways in which they are working to reduce their impact on the environment, small and medium-sized businesses (SMEs) have the potential to influence the widespread adoption of environmentally friendly forms of finance. This idea applies to having an awareness of how small and medium-sized businesses (SMEs) in Nairobi can strategically demonstrate their commitment to social and environmental responsibility. This, in turn, may have an effect on their ability to get environmentally friendly financing and successfully implement sustainable financial plans.

2.2.3 System Disruption Theory of Sustainable Finance

The sustainable finance hypothesis postulates that the pursuit of sustainable finance objectives may lead to structural adjustments in the conventional financial system as well as disruptions to businesses that are dependent on it. It's possible that the level of disruption that sustainable finance entails will determine whether or not economic actors choose to adopt or reject it. Given the possibility that conventional mainstream finance may be disrupted, economic actors may be forced to decide whether or not they will support the shift toward sustainable finance or whether or not they will participate in it. The process by which economic players make decisions is dependent on an appraisal of the relative benefits and drawbacks of sustainable

finance, as well as the possible impact of any disruptions that may arise on the economic actors' own organizations, financial resources, and overall livelihoods.

After all relevant information has been provided, economic players will have the ability to make educated decisions regarding whether or not they support sustainable finance. The aforementioned method acknowledges the complexity of sustainable financing and its potential to shake up the conventions of conventional banking practices. The concept recommends the publication of sufficient information relevant to the strategies and methods that will be applied in the transition towards sustainable finance. This disclosure should also include the identification of processes or frameworks that will be terminated in order to enable this transition. It is necessary to obtain the clarity about the potential implementation of novel procedures or organizational frameworks, as well as a full understanding of the impact these adjustments may have on firms that heavily depend on traditional mainstream finance. This is because it is imperative to ascertain the clarity regarding the potential implementation of novel procedures or organizational frameworks. In addition to the aforementioned, it is very necessary that the disclosure include an exhaustive explanation of the process that would be used to pay reparation to economic entities that were negatively impacted. Disclosure of all relevant information has the potential to significantly streamline the transition process and offer restitution to people whose lives have been disrupted as a result of the implementation of sustainable financing.

The implementation of environmentally responsible policies and procedures within the financial industry can result in a number of positive outcomes. In the first place, it acknowledges the power that sustainable funding has to shake up the established order of things in the financial sector. In addition, ensuring full transparency in regard to the implementation of the transition towards sustainable finance and its potential influence on economic

stakeholders may assist these stakeholders in comprehending the rationale for the change, which may result in a reduction in their opposition to the move.

The hypothesis of the disruption of the sustainable finance system, which intends to facilitate the shift toward sustainable finance, does not require the presence of the disruption of the conventional financial system as one of its necessary elements. Alternately, economic actors have the option of purposefully choosing funding solutions that place a higher priority on environmental, social, and governance (ESG) factors (Gutterman, 2020; Krauss, Kruger, & Meyer, 2016). This could be made easier through the establishment of a hybrid financial system or sector that functions inside the confines of the traditional financial system. This is something that could potentially be made possible.

When seen through the prism of the Positive Signaling Theory of Sustainable Finance, an investigation into the extent to which small and medium-sized businesses (SMEs) in Nairobi are adopting environmentally friendly financial practices in their day-to-day operations might produce insightful new understandings. This idea emphasizes how important it is for small and medium-sized enterprises (SMEs) to demonstrate their commitment to sustainability in a constructive way, often by being transparent and engaging in the practice of sustainability reporting. According to the findings of the study, the success of establishing trust among stakeholders and gaining access to green financing sources may be dependent on the effectiveness of the signaling mechanism. By effectively communicating the various ways in which they are working to reduce their impact on the environment, small and medium-sized businesses (SMEs) have the potential to increase the rate at which environmentally friendly financial methods are adopted. This idea pertains to the comprehension of the manner in which small and medium-sized businesses (SMEs) in Nairobi can strategically display their commitment to social and environmental responsibility. This, in turn, may have an impact on

their ability to secure environmentally friendly finance and effectively implement environmentally responsible financial practices.

2.2.4 Priority Theory of Sustainable Finance

According to the priority theory of sustainable finance, the significance of the sustainable finance agenda within a specific nation or region can be inferred from the degree to which economic players located inside that nation or region work toward the achievement of sustainable finance objectives (Wilson, 2010). This theory was established with the intention of clarifying the elements that contribute to the varying levels of commitment to sustainable finance that may be observed across a variety of countries and areas. When deciding how to prioritize things, it is essential to take into account the coordinated, independent, and cooperative efforts of economic actors who are working toward the achievement of long-term financial goals, as well as the expediency of reaching a consensus and putting plans into effect.

The economic concerns of a sizeable percentage of the actors in this situation are highly specialized. These priorities can be organized in any sequence that is judged appropriate, beginning with the least significant and progressing all the way up to the most important. The relative ranking of sustainable finance goals on a list of priorities serves as a reflection of the level of priority that is assigned to them by the various actors in the economic system. The aforesaid goals might be revised at some point in the future depending on how the domestic or international environment develops. Krauss (2010) predicts that within a given amount of time, economic agents will not take the sustainable finance agenda seriously and will not make major attempts to attain sustainable finance targets. It is extremely probable that economic players will treat the agenda for sustainable finance with the utmost seriousness and expend considerable efforts towards achieving its objectives if sustainable finance is one of the key concerns of economic actors (Kuhn, 2020).

If sustainable finance is one of the primary concerns of economic actors, then it is highly probable that sustainable finance will be one of the primary concerns of economic actors. This tendency can be linked to the fact that economic agents do not give a significant amount of significance to it. (Setyowati, 2020; Cunha, Meira, & Orsato 2021) Financial institutions have the capacity to incorporate the principles of sustainable finance into their fundamental business models, thereby establishing sustainability as a fundamental business principle. This can be accomplished by incorporating sustainable finance principles into fundamental business models. This highlights the critical requirement for financial institutions to have access to sustainable financing.

There are repercussions associated with the choice to pursue objectives that are feasible from a financial standpoint. This problem emerges when long-term financial objectives are given higher priority than other goals, which can lead to the postponement or abandonment of those other objectives until the long-term financial objectives have been accomplished. The act of giving up one goal in order to make progress toward another is what is meant by the term "trade-off." Many people are reluctant to prioritize financially achievable aims over other critical goals because of the high potential costs that are associated with trade-offs. This is because trade-offs can be costly in more ways than one. It is possible that developing countries do not have a complete understanding of the significance of making the prioritization of sustainable finance objectives a top priority. This is because developing nations may view the pursuit of increasing their GDP per capita as being of a higher priority than the prioritization of sustainable finance objectives. According to the priority theory of sustainable finance, the prioritization of different categories of sustainable finance can be influenced by how much weight is given to different categories of goals at the various stages of the ranking process.

There are two significant advantages that come along with placing an emphasis on sustainable funding. In the first part of the statement, it is acknowledged that economic actors

pursue basic goals, one of which may be the achievement of sustainable financial aspirations. In this context, "fundamental goals" refers to the goals that are pursued by economic agents. In addition to this, it gives economic actors the opportunity to demonstrate their dedication to the achievement of goals related to sustainable finance (Wilson, 2010). According to Pinchot and Christianson (2020), the transmission of priorities can be spread via a variety of channels, one of which is the media; however, this is not the only option.

The principle of sustainable financial priority comes up against two significant obstacles at the present time. It is essential to recognize that the completion of one's financially sustainable goals is not a given, even while it is true that placing a higher emphasis on such goals may increase the likelihood of their accomplishment. A further disadvantage is that, during the decision-making process, long-term financial goals are not given sufficient weight or consideration. It is not impossible for actors in the private sector to achieve a nation's sustainable finance goals in the absence of action from the government, but this scenario is highly unlikely.

In conclusion, the Priority Theory of Sustainable Financing offers a helpful framework for comprehending the strategic choices that small and medium-sized businesses (SMEs) in Nairobi make about the distribution of their financial resources toward sustainability efforts and green financing projects. This underscores the need to prioritize sustainability initiatives, obtain a competitive edge, and foster long-term commitment to sustainable practices, all of which are key problems in the field of research. Prioritizing sustainability projects, acquiring a competitive edge, and nurturing long-term commitment to sustainable methods

2.3 Empirical Review

2.3.1 Organizational Characteristics and Uptake of Green Financing

The study conducted by Lin and Ho (2011) examined the many elements that exert influence on the adoption of environmentally sustainable practices within the logistics business in China. The determining elements encompass various dimensions, including technological, organizational, and environmental aspects. A survey utilizing a questionnaire was undertaken to investigate the extent of green practice adoption across logistics enterprises in China. A total of 322 samples were collected and subsequently evaluated. The findings of the research indicate that there are considerable beneficial effects of several factors on the adoption of green practices by Chinese logistics enterprises. These factors include relative advantage and compatibility of green practices, organizational support, quality of human resources, regulatory pressure, and governmental assistance. The adoption of green practices is severely hindered by both environmental unpredictability and the difficulty associated with implementing such practices. Nevertheless, the impact of customer pressure on Chinese logistics companies is not substantial.

The study conducted by Christmann (2000) examined the impact of "best practices" in environmental management on business performance. These practices aim to facilitate the dual objectives of environmental protection and cost reduction. However, the study overlooked the influence of pre-existing firm resources and capabilities on this relationship. This study examines the necessity of complementary assets in achieving cost advantage through the implementation of best practices, drawing upon the resource-based view of the organization. The findings derived from a study conducted among 88 chemical businesses reveal that the presence of both process innovation capabilities and implementation capabilities operate as complimentary assets. These assets play a moderating role in the relationship between best practices and cost advantage, which is a crucial determinant of firm performance.

Organizations that exhibit a creative orientation tend to be more oriented towards the formulation and implementation of innovative environmental strategies. Consequently, firms that engage people possessing pertinent skills will experience benefits stemming from technical advancements within the environmentally sustainable industry. The predicted benefits for small and medium-sized enterprises (SMEs) are expected to arise from the utilization of high-quality human resources and the implementation of ecological changes.

Jeyaraj (2006) asserts that the implementation of financial incentives and the enhancement of accessibility to diverse technical and financial resources can play a crucial role in fostering and encouraging technological innovation. The concept commonly known as organizational support encompasses the provision of help by a firm to its systems or technology. The practice of mobilizing support for environmental management has the dual purpose of securing resources for the application of environmentally sustainable technologies and fostering a corporate culture that prioritizes environmental responsibility among employees. Furthermore, the role of senior management in offering support to the business is of paramount significance.

The literature was evaluated by Gonzalez-Benito and Gonzalez-Benito (2006) with the aim of identifying the determinants that influence a company's environmental proactivity. The authors begin by asserting that environmental proactivity can be demonstrated through a range of practices and techniques. They proceed to analyze various factors that appear to impact the choice to adopt these strategies. The successful execution of diverse environmentally sustainable initiatives requires the active involvement of departments and divisions through collaborative efforts. Based on empirical evidence, it is commonly observed that senior management exhibits a heightened degree of endorsement and motivation for initiatives focused on promoting environmental sustainability.

In her study, Awino (2014) investigates the relationship between green banking practices and the financial performance of commercial banks operating in Kenya. The author emphasizes that Kenyan commercial banks have always failed to evaluate the environmental consequences of their activities. To examine the association between green banking and the financial performance of commercial banks in Kenya, the researcher collected data from all 43 licensed commercial banks in Kenya as of December 2013. Based on an evaluation of the environmental sustainability measures implemented in mobile banking and online banking, and their relationship with financial performance metrics like liquidity and capital adequacy, the researcher has established a notable positive correlation between the eco-friendly banking aspects of mobile banking and online banking, and the financial performance of commercial banks in Kenya.

2.3.2 Technology and Uptake of Green Financing

The literature on organizations and the natural environment conducted by Etzion (2007) is examined in this study, focusing on publications from 1992 onwards. The objective is to assess the extent and nature of the contributions made to the fields of strategy and organizational theory. The review is conducted by the author across three distinct levels, namely the firm level, the industry level, and the organizational environment level. Following this, the author proceeds to examine the empirical and conceptual limitations that impede the generation of high-quality research. Additionally, the author emphasizes specific studies that effectively surmount these obstacles. Based on the findings of the study, the implementation of environmentally friendly technology exhibits potential in terms of diminishing energy usage, addressing the depletion of natural resources, minimizing waste and pollution, enhancing both environmental and financial outcomes, and fostering social and environmental accountability.

The study undertaken by Del Rio Gonzalez (2005) centered on the paper and pulp sector in Spain. The study's findings suggest that the main driving force for the adoption of clean

technology in this area is its financial and economic advantages. The adoption of green technology by organizations is anticipated due to the projected comprehensive advantages it presents. The adoption of environmentally friendly technology holds significant potential benefits, which should serve as a strong incentive for small and medium-sized enterprises to embrace its implementation.

In a study undertaken by Gowa (2009), attention was directed towards examining the optimal strategies employed in the management of environmental information in the African context. This study focused on Uganda and aimed to examine the impact of information technology on environmental management. The findings of the study demonstrate that the utilization of information technology has the potential to enhance the process of decision making in the context of environmental management. The fundamental premise is that effective information management methods will ultimately lead to a favorable impact on the environment and an improved quality of life for individuals.

Cherutich (2013) conducted a study on the management of electronic trash (e-waste) in Kenya. The research centered on the management of mobile phone waste inside mobile phone operators operating in Kenya. The research was conducted in the format of a survey, which engaged important stakeholders within the mobile phone industry in Kenya. The results indicate that there is evidence of both economic and social advancement taking place in Kenya. The phenomenon of social upgrading has become apparent as a result of the substantial employment opportunities created by the mobile sector, both directly and indirectly. The mobile phone business in Kenya has demonstrated economic upgrading, since it serves as the primary contributor to government revenue through taxation. Furthermore, the advancement of technology has resulted in the utilization of many mobile phone applications, such as m-agriculture, m-commerce, m-education, m-governance, and m-health.

The study undertaken by Adamson et al. (2005) examined the environmental implications of computer information technology within an institutional context. The research encompassed a comprehensive examination of Guelph University through the utilization of a case study approach. The primary aim of the study was to ascertain the efficacy of energy utilization and the appropriate disposal of outdated IT components within the educational setting. The study's findings demonstrate that the suboptimal utilization of energy and the production and disposal of computer systems contribute to the emission of hazardous substances into the environment.

2.3.3 Government Support and Uptake of Green Financing

Scupola (2003) did an investigation of the environmental, organizational and technological drivers of Internet commerce adoption and implementation in small businesses. To conduct the study, the Tornatsky and Fleischer model was adopted and tested in seven small businesses located in Southern Italy. Environmental factors of special importance are government intervention, public administration and external pressure from competitors, suppliers and buyers. Scupola (2003) argued that governmental institutions have the ability to foster technological progress by offering tax exemptions, monetary incentives, and technical resources. The accessibility of external resources plays a significant role in shaping the adoption of ecologically friendly activities.

Xie and Hanafiah (2023) did a systematic literature review (SLR) on empirical data on the sustainable development of small and medium-sized enterprises in China and abroad from 2000 to 2022. This literature review covers 50 articles from peer-reviewed academic journals related to their theoretical area, research design, sampling/data collection methods, data analysis, and thematic areas. The Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) statements were used to analyze this study’s systematic literature review. The result illustrated that the government has the potential to augment its benevolence by

adopting various strategies, including the introduction of tax incentives or subsidies for alternative energy technologies, the provision of low-interest bank loans for green technology, and the facilitation of reduced rates for environmental insurance.

Nkwabi and Mboya (2019) assessed the factors impeding the growth of SMEs in Tanzania. Factors such as a lack of business training, capital constraints, a lack of finance, poor infrastructure, a lack of collateral, poor production, poor technologies, tight regulations, corruption, poor market accessibility, the motivation of the business owners, limited access to information, a lack of human competencies and inadequate raw materials were measured. A mixed-method approach was used in this study, inclusive of content analysis to extract the constraints from the 21 items of literature in Tanzania. Thereafter, a quantitative approach was applied where descriptive statistics were used to determine the frequency and percentage of the factors in order to extract the most significant variables affecting SME growth in Tanzania. The findings reveal that Tanzanian SME growth is mostly impacted by financial constraints, capital constraints, poor technology and tight regulations. The study recommends that financial assistance through lowering the interest rates and simplifying the borrowing procedures must be given to SMEs to enable them to avail the necessary finance and capital for their business Also the government must support SMEs by simplifying the regulations for SMEs such as levying taxes. Business training must be provided to the SMEs by government organisation such as the Small Industries.

In their study, Odhengo, Korir, Muthini, and Moturi (2021) conducted an analysis on the landscape of climate finance in Kenya in the pursuit of operationalizing Kenya's Nationally Determined Contributions (NDC). The Landscape of Climate financing in Kenya represents the inaugural endeavor to monitor the allocation of climate financing inside the nation subsequent to the ratification of the Paris Agreement. According to the findings of the report, a total of KES 243.3 billion (equivalent to USD 2.4 billion) was allocated towards investments

connected to climate in the year 2018. This amount represents approximately one third of the required annual financial resources for addressing climate-related matters. The investigation, spearheaded by the National Treasury of Kenya, reveals that the finance being monitored is disproportionately focused on specific sectors and activities that would only partially tackle climate-related concerns. Consequently, substantial endeavors will be required to harmonize all sectors that are pertinent to the attainment of Kenya's Nationally Determined Contributions (NDCs). In aggregate, the total amount of public investment, comprising contributions from both domestic and international sources, amounted to KES 144.3 billion, representing 59.4% of the total. Conversely, investment from the private sector accounted for KES 98.9 billion, constituting 40.7% of the overall investment. To achieve the climate objectives specified in the Nationally Determined Contributions (NDC), there is a pressing need to substantially increase the volume of both public and private climate funding by 2030.

2.3.4 Financing Information and Uptake of Green Financing

In their study, Imran, Salisu, Aslam, Iqbal, and Hameed (2019) employed the Natural Resource-Based-View (NRBV) framework to investigate the moderated mediation model pertaining to the influence of information access on the sustainability of small and medium-sized enterprises (SMEs). The researchers explored the mediating role of access to resources and innovation capability in the relationship between information access and sustainability, as well as the moderating role of management commitment in the relationship between innovation capability and SME sustainability. This study collected data from a sample of 222 small and medium-sized enterprises (SMEs) in Pakistan. The research employed a purposive sampling methodology to administer the survey questionnaire. The data analysis was conducted using the Smart-PLS program. The study's findings suggest that the availability of knowledge has an impact on both sustainability and the potential to innovate. Furthermore, the availability of resources has been found to have an impact on the capacity for innovation, while it has not

been observed to have a significant influence on the sustainability of small and medium-sized enterprises (SMEs). In addition, the capacity for innovation serves as a mediator in the association between resource accessibility, information accessibility, and the sustainability of small and medium-sized enterprises (SMEs). Furthermore, the degree of management commitment plays a moderating role in the association between access to knowledge and innovation capability. However, it does not have a moderating effect on the relationship between access to resources and innovation capability. The paper examines and analyzes the practical, theoretical, and methodological consequences.

The study conducted by Exposito and Sanchis-Llopis (2018) investigated the effects of product, process, and organisational innovations on two distinct aspects of business performance, namely finance and operations. There are two key indications that are used to assess financial performance: a rise in sales and a reduction in production costs. Two distinct measures reflect the operational performance of a firm: expansion of productive capacity and improvement in the quality of the product or service offered by the firm. Based on an extensive sample of small and medium-sized enterprises (SMEs) in Spain, our research reveals noteworthy effects of innovation on both aspects of company performance. However, it is important to note that these effects vary depending on the type of innovation and the specific performance indicator being examined. Moreover, our findings suggest that a comprehensive examination of the link between innovation decisions in small and medium-sized enterprises (SMEs) and their business performance is warranted, taking into account multiple dimensions. The aforementioned findings have important implications for the development of innovation policies and strategies specifically targeted towards small and medium-sized enterprises (SMEs).

The study conducted by Ogunsola and Babalola (2020) investigated the correlation between the utilization of business information and both customer happiness and the

performance of micro, small, and medium-scale firms (MSMEs). The research design utilized in this study was a survey methodology. A total of 120 micro, small, and medium enterprises (MSMEs) were surveyed through the administration of a questionnaire, while an additional 15 key informants were interviewed to gather data. The quantitative analysis involved doing frequency counts, calculating mean ranks, and conducting Spearman's rank correlation analysis using SPSS version 20. The qualitative data underwent a process of content analysis. The study addressed three research inquiries and examined two hypotheses at a significance level of 0.05. The findings of the study indicate a statistically significant correlation between the utilization of business information and both customer satisfaction ($r=0.462$, $p=0.000$) and the performance of micro, small, and medium enterprises (MSMEs) ($r=0.431$, $p=0.000$). The study's findings indicate that individuals in positions of ownership and management within Micro, Small, and Medium Enterprises (MSMEs) had an understanding of the advantages associated with business information. However, it is evident that they have not effectively harnessed these benefits to their full potential.

In their study, Pramono, Sondakh, Bernarto, Juliana, and Purwanto (2021) aimed to provide a descriptive analysis of the demographic and business profiles, as well as the personal-entrepreneurial characteristics, in Manado, the capital city of North Sulawesi. Additionally, the researchers intended to examine the relationship between these profiles and characteristics and the success of the businesses in the area. A total of 21 participants were recruited from a pool of individuals who had a positive reception towards the interviewers, in order to provide a representative sample for the open-ended structured questionnaire. The utilization of stepwise regression analysis facilitated the researcher in identifying the factors that hold the greatest significance in representing the human attributes associated with the concept of "locus of control." These variables include self-efficacy, needs for achievement, personal traits, and impediments to business progress. The low comprehension of financial concepts and the

presence of costly and inadequate energy and telecommunications infrastructure have been identified as factors impeding the competitive capability of small and medium-sized enterprises (SMEs).

Chepngetich (2016) aimed to investigate the correlation between financial literacy and the performance of small and medium firms in Uasin Gishu County. The research was guided by the theory of planned behavior. The study consisted of a sample size of 1053 registered small and medium-sized enterprise (SME) owners located in Uasin Gishu County. The researchers employed cluster and random sampling methodologies in order to determine a sample size of 290 small and medium-sized enterprises (SMEs). The data was gathered through the utilization of structured questionnaires. The test-retest technique was utilized to assess the dependability of the instruments used for data collecting. The data was subjected to descriptive statistical analysis, wherein frequencies, tables, percentages, averages, and standard deviation were utilized to show the findings. Data analysis was conducted using inferential statistics and the Pearson correlation method. The results suggest that there is a notable impact of acquiring financial literacy skills and budgeting knowledge on the performance of small and medium-sized enterprises (SMEs).

2.4 Research Gap

In contemporary times, there has been a noticeable increase in the adoption of renewable energy sources, such as wind and solar power. This trend is primarily motivated by environmental concerns and the necessity to attain sustainable energy solutions in the long run. However, there is a significant lack of understanding on the difficulties related to incorporating renewable energy into the current energy infrastructure. Kamal (2023) asserts that the current body of scholarly literature mostly concentrates on the technical facets associated with the production of renewable energy, occasionally neglecting the crucial matters concerning energy storage, grid integration, and regulatory frameworks. Moreover, a considerable amount of

academic research has been devoted to examining certain geographical areas or technology domains, leading to notable gaps in understanding regarding global-scale matters and potential solutions.

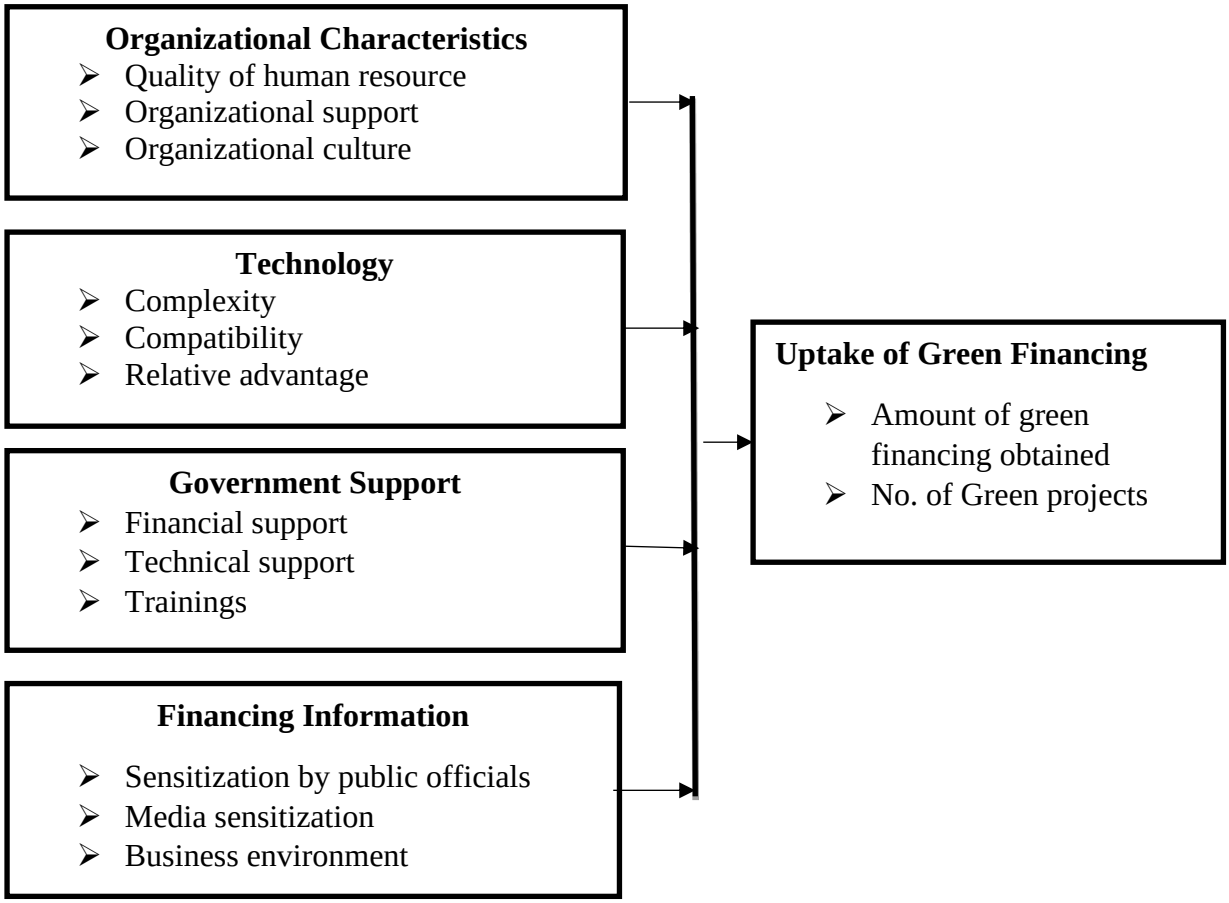
The lack of extensive academic research in this particular field presents significant challenges in the pursuit of a feasible transition to renewable energy sources. To facilitate this transition, it presents a formidable task to devise efficacious policies, business models, and technology without a comprehensive understanding of the complexities entailed in integration. To effectively bridge the current void in research, it is crucial to embrace a multidisciplinary approach that incorporates the analysis of technological, economic, regulatory, and social aspects pertaining to the incorporation of renewable energy. To facilitate the advancement of a more environmentally friendly and enduring future, it is imperative for academics, legislators, participants in the energy business, and the global community at large to collaboratively confront these prevailing inadequacies. The integration of renewable energy in a sustainable manner is a crucial component of this incorporation (Wang, 2023).

2.5 Conceptual Framework

In the realm of research, a conceptual framework, which is a theoretical structure or model, serves as a guiding tool for formulating hypotheses, research questions, and conducting data collection and analysis. It delineates the fundamental concepts, variables, and relationships that the researcher intends to investigate, providing a roadmap for research endeavors. In the context of social science research, the significance of a conceptual framework is particularly pronounced, as it aids in organizing ideas and establishing a systematic approach to comprehending and elucidating complex phenomena.

FIGURE 1

Conceptual Framework



2.6 Operationalization of Variables

The study focuses on the adoption of green financing by small and medium-sized enterprises (SMEs) in Nairobi, Kenya. It operationalizes five distinct parameters to examine this phenomenon. The aforementioned factors encompass various aspects of an organization, such as the quality of its human capital, technological elements like compatibility and complexity, government support in the form of financial assistance and training, and strategies for obtaining financing information through media channels, public officials, and the business community. The dependent variable assesses the extent of long-term program commitment and resource

adequacy to measure the adoption of green finance. The data collection process will involve the utilization of questionnaires, while the primary analytical approach will be descriptive analysis. This methodology will be employed to ascertain the key determinants that influence small and medium-sized enterprises (SMEs) in Nairobi to embrace green finance.

TABLE 1

Operationalization of Variables

Type of Variable	Variable	Indicators	Source of Indicators	Scales	Collection Tool	Type of Analysis
Independent	Organizational characteristics	Quality of human resource Organizational support Organizational culture	(Lin and Ho, 2011)	Ordinal	Questionnaire	Descriptive
Independent	Technology	Complexity Compatibility Relative advantage	(Lin and Ho, 2011)	Ordinal	Questionnaire	Descriptive
Independent	Government support	Financial support Technical support Trainings	(Lin and Ho, 2011)	Ordinal	Questionnaire	Descriptive
Independent	Access to financing information	Sensitization by public officials Media sensitization Business environment	(Lin and Ho, 2011)	Ordinal	Questionnaire	Descriptive
Dependent	Uptake of green financing by SMEs	Adequacy of resources Long-term programs	(Lin and Ho, 2011)	Ordinal	Questionnaire	Descriptive

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The methodology portion of the study provides a comprehensive account of the methodology, data collection tactics, and analytical methodologies that will be utilized to investigate the determinants of small and medium-sized enterprises (SMEs) in Nairobi, Kenya in their adoption of green finance.

3.2 Research Design

According to Cooper and Schindler (2014), a research design may be described as a comprehensive plan or framework that guides the gathering, measurement, and analysis of data. It serves as a procedural outline that allows researchers to find answers to their research questions. Mugenda and Mugenda (2003) assert that descriptive research aims to identify and analyze the factors that are linked to specific events, outcomes, situations, or patterns of behavior. The utilization of a descriptive design was deemed appropriate for this research study due to its ability to establish correlations between variables and facilitate the collection of information necessary for estimating the population parameter. The utilization of descriptive studies was deemed most suitable for this research endeavor, as it involved the collection of information pertaining to the current status of small and medium firms in relation to indirect taxes, without engaging in any type of variable manipulation.

3.3 Target Population

The target demography of the study comprised 134 small and medium-sized firms (SMEs) located in Nairobi, Kenya, which are registered with the Kenya Association of Manufacturers. The examination of factors impacting the adoption of green financing is pertinent when

considering these small and medium-sized enterprises (SMEs), since they encompass a diverse range of industries and sectors.

3.4 Sampling Size

The study employed the census approach due to the limited size of the target population. The utilization of the census approach guarantees the representation of subgroups within the sample, who would otherwise be excluded by alternative sampling methods due to their limited population size (Mugenda & Mugenda, 2003). The Census approach was employed by the researcher because to its suitability for the tiny target population of this investigation.

3.5 Research Instrument

Two key components make up the research instrument for the study on the adoption of green financing by SMEs in Nairobi, Kenya: semi-structured interviews and a structured questionnaire. The structured questionnaire was designed to capture quantitative data by utilizing Likert-scale questions that assess several elements such as organizational traits, technology, government aid, and access to financing information. A representative sample of small and medium-sized enterprises (SMEs) in Nairobi was selected to systematically and uniformly gather data. On the other hand, the qualitative component of the research was captured through the utilization of semi-structured interviews. To comprehensively analyze the perspectives of participants and offer qualitative insights into the factors influencing the adoption of green financing, this study employed open-ended questions and subsequent probing inquiries throughout the interviews. The interviews were recorded, transcribed, and subsequently underwent a thematic analysis. Through the integration of these research methodologies, a comprehensive framework for data collecting was established, facilitating the examination of both quantitative data and a full understanding of the determinants that impact the adoption of green financing among small and medium-sized firms in Nairobi.

3.6 Validity and Reliability of the instrument

Ensuring the credibility of the study necessitates the establishment of both validity and reliability of the research instrument. To achieve content validity, it is imperative to conduct a thorough literature research and seek expert consultation. Factor analysis is a statistical technique that can be employed to assess the construct validity of a measurement instrument. On the other hand, criterion validity involves the examination of the instrument's output in relation to established measurements. On the other hand, the assessment of dependability can be accomplished by the utilization of measures such as Cronbach's alpha, which serves to ensure the attainment of consistent results. A limited sample size is employed for preliminary testing with the purpose of identifying and resolving issues pertaining to the wording and comprehensibility of the inquiries. By adhering to established protocols (DeVellis, 2016), the aforementioned measures collectively enhance the quality and accuracy of the data collected for the study, hence bolstering the validity of the research outcomes.

3.7 Data Collection Procedure

The utilization of qualitative data obtained through semi-structured interviews conducted with a specific group of small and medium-sized enterprise (SME) representatives will provide a comprehensive examination of the various factors that influence the acceptance and implementation of environmentally friendly funding options. To enhance the comprehensiveness and reliability of the study, the data collection methods employed in this research incorporate a blend of quantitative and qualitative approaches, thereby facilitating a comprehensive understanding of the subject matter.

3.8 Data processing and Analysis

Data analysis is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-

making (Meta, 2014). After all data has been collected, the researcher conducted data cleaning, which involves identification of incomplete or inaccurate responses. According to Shamoo and Resnik (2003) various analytic procedures provide a way of drawing inductive inferences from data and distinguishing the phenomenon of interest from the statistical fluctuations present in the data. This was corrected to improve the quality of the responses. Data was coded and entered in the computer system for analysis using the statistical package for social sciences (SPSS).

Spearman correlation and regression analysis was used and a Chi-square test of independence at 95% confidence level to establish quantitative data. Likert scale for ranking factors in accordance to their weighted means. Tables, charts and graphs were used in presenting the analysed data. Qualitative data was analysed using content analysis. That data was categorized into themes and analysis, thereof, based on the prevalence of the themes and subthemes in addition to their relevance to the topic (Gujarati, 2000). This enhances the descriptive analysis.

3.8.1 Statistical Model

Empirical modeling refers to a broad category of activities that involve the creation of models through the process of observation and experimentation (Greene, 2008). The researcher employed the statistical software SPSS to conduct a multivariate regression analysis in order to estimate the following, in line with the study's objectives:

The estimated model to be used is as below:

$$\mathbf{Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where:

β_0= Constant term

Y = Uptake of Green Financing

$\mathbf{X_1}$ = Organizational Characteristics

$\mathbf{X_2}$= Technology

$\mathbf{X_3}$= Government Support

$\mathbf{X_4}$= Financing Information

$\boldsymbol{\beta_1}$= regression coefficients for X_1

$\boldsymbol{\beta_2}$= regression coefficients for X_2

$\boldsymbol{\beta_3}$= regression coefficients for X_3

$\boldsymbol{\beta_4}$= regression coefficients for X_4

$\boldsymbol{\varepsilon}$ = the error term

3.8.2 Test of Significance

A significance test is a formal technique used to compare observed data with a claim, sometimes known as a hypothesis, which is being evaluated for its truthfulness (Myers, Well, Lorch, & Robert, 2010). In a more specific manner, the significance level of a study, represented by the symbol α, refers to the chance of rejecting the null hypothesis when it is actually true (Dalgaard, 2008). The p-value, denoted as ρ, represents the likelihood of observing a result that is as extreme or more extreme than the one obtained, assuming that the null hypothesis is valid. According to Sham and Purcell (2014), the outcome is deemed statistically significant within the parameters of the investigation when the value of ρ is less than or equal to α.

The determination of the significance level for a study is made prior to the collection of data and is commonly established at 5% or a lower threshold, contingent upon the specific

discipline under investigation (Craparo, 2007). The researchers choose to utilize a t-test in order to assess the statistical significance of the data. The utilization of the test in hypothesis testing is advantageous as it enables the determination of whether a given procedure or treatment genuinely exerts an influence on the target population, or if there exists a distinction between two groups.

3.9 Diagnostic Tests

The objective of diagnostic research is to assess the efficacy of a diagnostic test in confirming or excluding specific characteristics within a given sample (Glasser, 2014). According to Rommel (2013), diagnostic tests are designed to address several types of predispositions that may occur in a study aimed at assessing accuracy. The objective of the assumption test was to ascertain the researcher's ability to proceed with the regression model in the study. Several assumptions were examined to determine their presence or absence. This study examined two tests, specifically the normalcy test and the multicollinearity test. A pilot test was conducted to determine the dependability of the questionnaire which was the research instrument used for this study. The test was conducted on be piloted using 10 SMEs from Thika town.

3.9.1 Normality Test

This study assumes that the data follows a normal distribution. According to McInnes (2018), the purpose of a normality test is to ascertain whether the sample data has been derived from a population that follows a normal distribution. The normality test is employed to determine if a given dataset conforms well to a normal distribution model (Doornik & Hansen, 2008). The normality test for the research was conducted using the Shapiro-Wilk statistic. According to Priyatno (2017), one of the decision-making criteria for the test is that if the significance level is more than 0.05, then the null hypothesis, which states that the data originated from a population with a normal distribution, cannot be rejected.

3.9.2 Multicollinearity Test

According to Cohen et al. (2013), multicollinearity is characterized by a situation in which two or more predictor variables inside a multiple regression model exhibit a strong correlation. This scenario involves multiple regression analysis, wherein the predictor variables exhibit a high degree of correlation among themselves (Paul, 2006). The objective is to comprehend the influence of several independent variables on the dependent variable. The presence or absence of multicollinearity is not the primary concern, but rather its degree. The presence of multicollinearity will be assessed by employing the variance inflation factor (VIF). As a general guideline, VIF values exceeding 10 indicate the presence of multicollinearity.

3.9.3 Homoscedasticity Test

Heteroscedasticity is a phenomenon that arises when there is a lack of constancy in the variance of errors. Heteroscedasticity arises due to the presence of outliers within the dataset and the omission of a variable from the statistical model. The data indicates that the sample consists of findings that are either significantly large or inconsequential when compared to the observations made in the investigation. Scatter plots were employed. According to Tabachnick and Fidell (2007), it is imperative that the residuals and the variance of the residuals exhibit uniformity across all projected scores. If this statement is accurate, it implies that the assumption has been satisfied, resulting in a scatter plot that exhibits a rectangular shape. In this scenario, the scores are predominantly concentrated in the central region and are scattered in a rectangular pattern. In a more concise manner, the scores were distributed randomly along a horizontal axis. On the other hand, the presence of any discernible and organized arrangement or grouping of scores is seen as a breach.

3.9.4 Linearity Test

As stated by Edwards (1995), linearity refers to the capacity of a mathematical relationship to be visually represented as a straight line. The objective of the linearity test is to determine the

presence or absence of a linear relationship in the distribution of the dependent and independent variables. In order to employ linear regression, it is necessary to ensure that the linearity assumption is satisfied. The linearity test examines the distribution of data between the dependent variable and the independent variable in order to assess the linearity assumption in linear regression. In this study, a scatter plot graph was employed to assess the degree of linearity exhibited by the linear regression model.

CHAPTER FOUR

RESEARCH FINDINGS AND ANALYSIS

4.1 Introduction

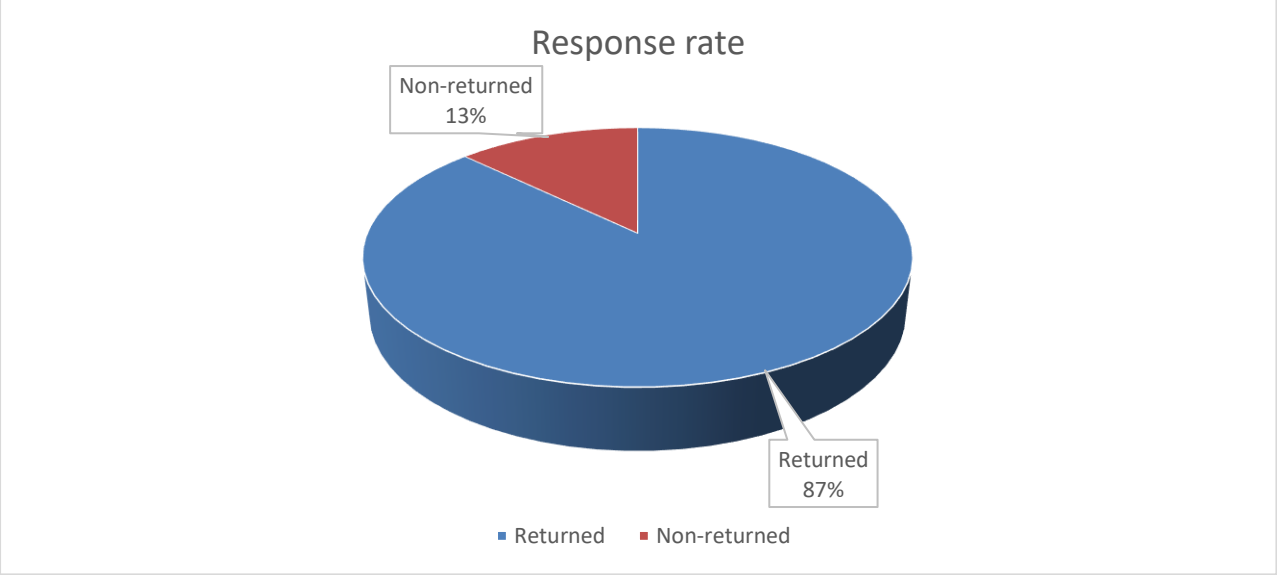
This chapter presents the findings of a research study that aimed to examine the impact of green financing adoption by small and medium-sized enterprises (SMEs) in Kenya, as well as the factors that influence its implementation and contribution to the sector. The findings are displayed in tabular and graphical formats.

4.2 Response Rate

Questionnaires were employed as a means of obtaining the perspectives of the target population on the implementation of green financing within the context of Kenyan small and medium-sized enterprises (SMEs). A total of 134 questionnaires were distributed, of which 117 were completed and subsequently returned for analysis.

FIGURE 2

Response Rate



The response rate depicted in Figure 4.1 is 87%. Based on Fincham's (2008) findings, it is considered acceptable for researchers to achieve a response rate ranging from 30% to 40% on average. However, it is recommended that researchers strive for a response rate of approximately 70% in order to enhance the validity and reliability of their investigations. This suggests that the response rate for the study was deemed suitable. According to Kothari (2019), it was emphasized that a response rate beyond 60% is considered favorable, whilst a response rate surpassing 70% is regarded as excellent.

4.3 Test Results

A preliminary assessment was undertaken to ascertain the reliability of the questionnaire employed as the research tool in this study. The experiment was carried out by employing a sample of 10 subject matter experts (SMEs) residing in Thika town.

TABLE 2

Reliability of Research Instrument

Variable	Cronbach's Alpha	Items	Comment
Uptake of Green Financing	.709	5	Accepted
Organizational Characteristics	.731	5	Accepted
Technology	.715	5	Accepted
Government Support	.762	5	Accepted
Financing Information	.824	5	Accepted

The variables Uptake of Green finance, Organizational Characteristics, Technology, Government Support, and Access to finance information exhibited Cronbach's alpha coefficients of 0.709, 0.731, 0.715, 0.762, and 0.824, respectively. According to Bryman

(2008), all of the Cronbach's alpha coefficients surpass the recommended threshold of 0.7. This suggests that the questionnaire employed in the study had a high level of reliability in gathering data pertaining to the adoption of green funding and the independent factors.

4.4 Demographic Analysis

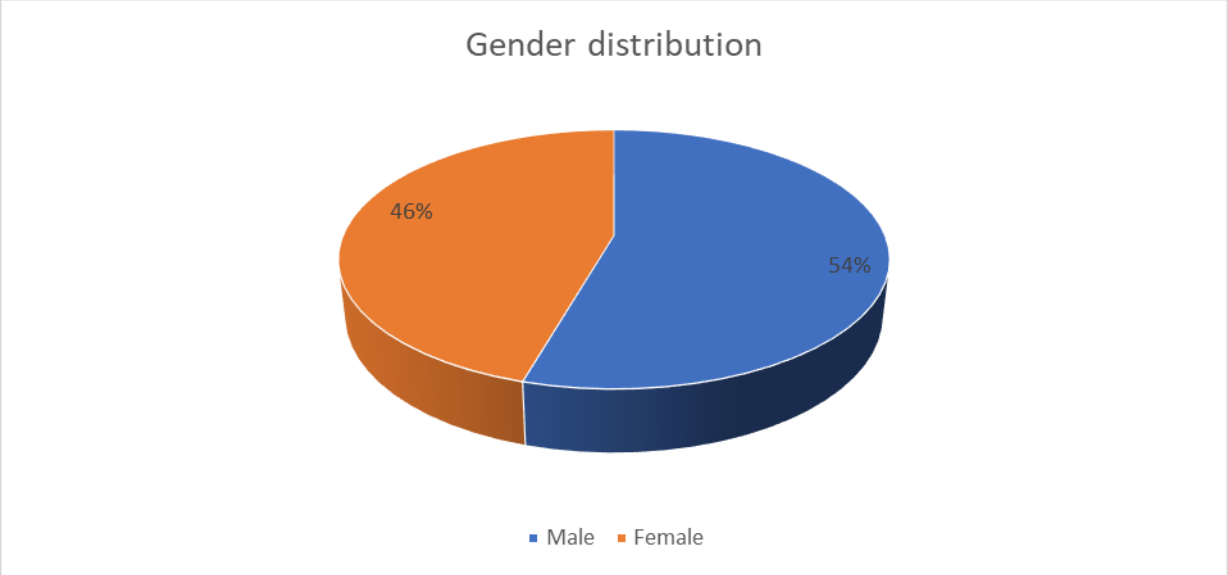
The segment of the study was dedicated to examining the distinct characteristics of the respondents that were relevant to the research. The participants provided information regarding their level of experience, their professional designation in relation to the contributions they have made, and their highest level of educational achievement. The main premise underlying this study was that individuals' demographic characteristics had an impact on their views pertaining to the topic matter being investigated.

4.4.1 Gender distribution of the respondents

Participants were instructed to indicate their gender. The data obtained from the 117 participants was analyzed and documented in figure 3.

FIGURE 3

Gender of Respondent



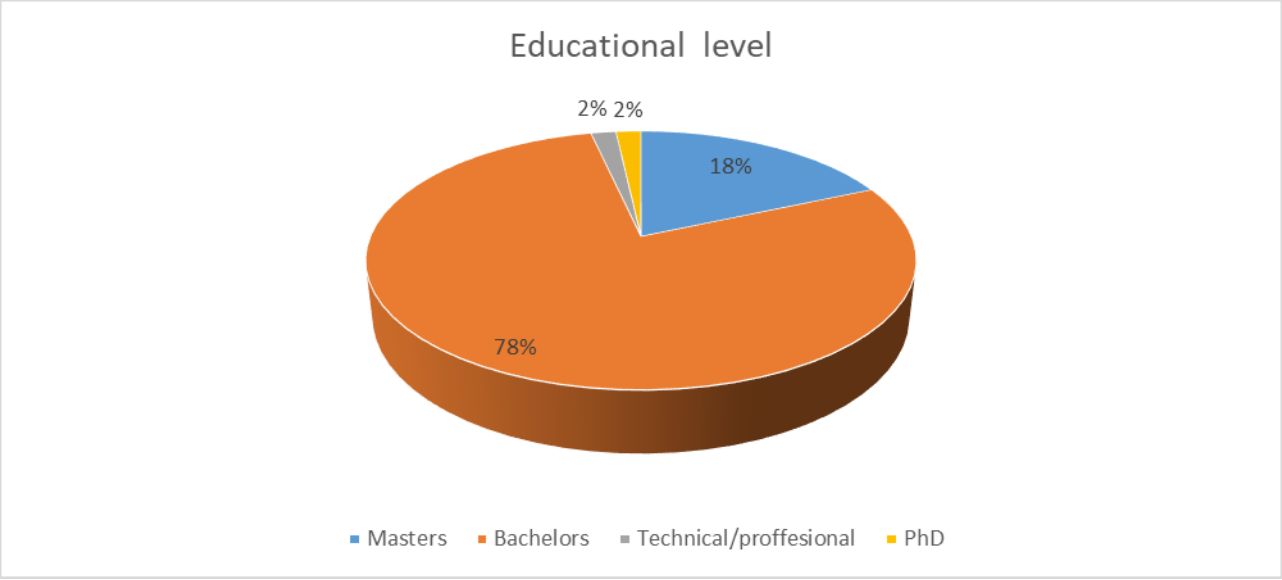
Based on the obtained data, it was found that 54% of the participants identified as male, while the remaining 46% identified as female, representing the minority group. The data suggests that a significant proportion of respondents are male, whereas the female respondents represent a smaller minority. Nevertheless, there appears to be a recent upward trend in the participation of women in both formal and informal employment. The observation of a third gender rule is also mandated by articles 97 and 98 of the Constitution of Kenya 2010, which stipulate that no gender should have a representation beyond two-thirds of the total workforce.

4.4.2 Education level

In addition, the participants were requested to indicate their highest degree of schooling attained. The data obtained from a total of 117 participants who completed and returned their questionnaires were analyzed and subsequently depicted in figure 4.

FIGURE 4

Education Level



The findings depicted in figure 4 indicate that among the 117 participants who completed and submitted the questionnaires, a significant proportion (78%) possessed a bachelor's degree as their highest level of education. Additionally, 18% reported having a master's degree as their

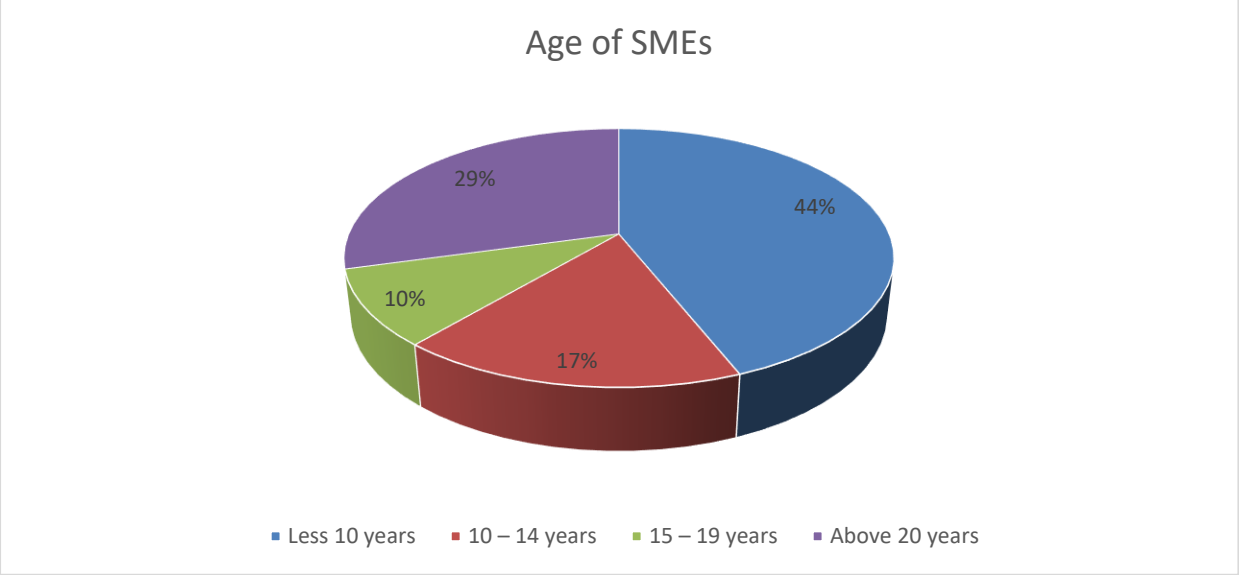
highest educational attainment, while 2% indicated technical or professional education as their highest level. Lastly, 2% of the respondents reported holding a PhD as their highest qualification. In general, the study found that a majority of the participants possessed a formal education, enabling them to complete the questionnaires without requiring the assistance of an interpreter.

4.4.3 Number of years an SME has been in existence

In addition, the survey participants were asked to provide information regarding the duration of their respective small and medium-sized enterprises (SMEs). The data collected from a total of 117 respondents who completed and returned their questionnaires in their entirety were subsequently analyzed and given in figure 5.

FIGURE 5

Number of years an SME



The data presented in figure 5 illustrates the duration of time that small and medium-sized enterprises (SMEs) have been operational. The findings of the study revealed that among the 117 small and medium-sized enterprises (SMEs) surveyed, 44% of them had been in operation for less than 10 years. Additionally, 17% of the SMEs had a tenure ranging from 10 to 14 years,

while 10% had been established for a period between 15 and 19 years. Furthermore, 29% of the SMEs had been in existence for more than 20 years.

4.5 Descriptive Statistics

The descriptive statistics illustrate the results of surveys when participants were asked to indicate their degree of agreement or disagreement with specific statements. Descriptive statistics were utilized to analyze each variable in the present study.

4.5.1 Uptake of green financing by Small and Medium-Sized Enterprises

The variable under investigation was the level of adoption of green finance by Small and Medium-Sized Enterprises (SMEs) in Nairobi, Kenya. Table 3 presents the descriptive statistics derived from the replies obtained from a sample size of 117 participants. The findings of the study revealed the average values and measures of variability, specifically the means and standard deviations, pertaining to inquiries regarding the adoption of green funding.

TABLE 3

Uptake of Green Financing

Uptake of green financing	N	Mean	Std. Dev.
The organization has been able secure significant amount of green financing recently	117	3.5470	1.00426
There is significant number of green projects where our SME has invested in	117	4.2137	.93614
The SME has a policy of investing in sustainable projects	117	2.3239	.81713
The SME has been awarded severally due to investment in sustainable projects	117	4.6752	.64097
The cost of accessing green finance is affordable	117	2.4641	.87479
Valid N (listwise)	117		

Based on the provided descriptive statistics, it is evident that a majority of small and medium-sized enterprises (SMEs) have successfully obtained a substantial amount of green funding in recent times. The mean value of green financing secured by SMEs is 3.5470, with a standard deviation of 1.00426. Nevertheless, the calculated mean was accompanied by a substantial standard deviation, suggesting that the respondents provided a wide range of replies. Additionally, it has been demonstrated that our small and medium-sized enterprise (SME) has made substantial investments in a considerable number of green initiatives (mean=4.2137, standard deviation=0.93614). Furthermore, the research findings indicate that a significant majority of small and medium-sized enterprises (SMEs) lack a formalized strategy for allocating resources towards sustainable initiatives. The mean value for the presence of such policies was calculated to be 2.3239, with a standard deviation of 0.81713. Finally, the research findings indicate that the affordability of accessing green finance is limited, as evidenced by a mean value of 2.4641 and a standard deviation of 0.87479. The presence of a small standard deviation suggests that the respondents not only exhibited agreement with the statement, but also demonstrated a high level of consensus among themselves. Both individuals provided comparable responses in relation to the given statement.

4.5.2 Organizational Characteristics and Uptake of Green Financing

The second objective was to investigate the ways in which the organizational characteristics affect SMEs in Nairobi in their adoption to green financing. The descriptive statistics from the responses based on 117 respondents is as shown table 4 below.

TABLE 4

Organizational Characteristics

Organizational Characteristics	N	Mean	Std. Dev.
Most banks consider the size of the SME before offering green financing products to SMEs	117	3.9744	.88534
SMEs with operation exceeding 3 years have more access to more to green finance.	117	3.5299	.84662
Banks require audited financial statement before offering green finance	117	3.6154	.72927
Firms that do not generate profits have challenges accessing green finance	117	3.5128	.97923
SMEs with a culture of investing in sustainable projects have more access to green finance	117	3.6325	1.09543
Valid N (listwise)	117		

Based on the descriptive statistics provided, it is evident that a significant number of banks take into account the size of small and medium-sized enterprises (SMEs) when deciding to provide green financing solutions to them. The mean value for this consideration is 3.9744, with a standard deviation of 0.88534. The presence of a small standard deviation suggests that the respondents not only exhibited agreement with the statement, but also had a high level of consensus among themselves. Both individuals provided comparable responses in relation to the given statement. Additionally, the findings indicate that small and medium-sized enterprises (SMEs) with a business operation duration of more than three years have a higher level of accessibility to green finance. The mean value for this group is 3.5299, with a standard deviation of 0.84662. The findings further stated that banks require audited financial statement

before offering green finance (mean=3.6154, standard deviation=0.72927). Finally, the research findings indicate that small and medium-sized enterprises (SMEs) who prioritize investment in sustainable projects demonstrate a higher level of availability to obtain green funding. The mean value for this access is 3.6325, with a standard deviation of 1.09543. The presence of a large standard deviation in conjunction with the mean suggests that there was considerable variation among the respondents in their given responses.

4.5.3 Technology and Uptake of Green Financing

The second objective was to investigate the ways in which the organizational factors affect SMEs in Nairobi in their adoption to green financing. The descriptive statistics from the responses based on 117 respondents is as shown table 5 below.

TABLE 5

Technology

Technology	N	Mean	Std. Dev.
The SME has invested in technology that enables it to have access to green energy	117	2.3846	.77511
The technology adopted by our SME is compatible with those of the green financiers in Kenya	117	4.4957	.96154
Our SME utilizes environmentally-friendly technologies in its operations	117	4.6496	.73480
The SME has invested in energy-efficient equipment and processes in the recent years	117	4.3504	1.10107
Our SME relies on technology to achieve sustainability goals within our SME	117	3.5385	.89576
Valid N (listwise)	117		

Based on the findings shown in Table 4.6, it can be observed that a majority of small and medium-sized enterprises (SMEs) have not made investments in technologies that would facilitate their utilization of green energy resources. The mean value for this variable was calculated to be 2.3846, with a corresponding standard deviation of 0.77511. The calculated mean of 2.3846 indicates a general disagreement among the respondents on the statement in question. Conversely, the standard deviation of 0.77511 suggests a very high level of agreement among the respondents themselves. There was minimal variation in the responses they provided. The findings indicate that the technology implemented by our small and medium-sized enterprise (SME) is in line with that of the green financiers in Kenya. The mean value of compatibility is 4.4957, with a standard deviation of 0.96154. Moreover, it has been demonstrated that small and medium-sized enterprises (SMEs) employ environmentally sustainable technology in their operational processes, as evidenced by a mean score of 4.3504 and a standard deviation of 0.73480. Finally, it has been determined that small and medium-sized enterprises (SMEs) depend on technology to accomplish their sustainability objectives within the SME. The mean value for this reliance is 3.5385, with a standard deviation of 0.89576.

4.5.4 Government Support and Uptake of Green Financing

The third objective was to investigate the ways in which the Government Support affect SMEs in Nairobi in their adoption to green financing. The descriptive statistics from the responses based on 117 respondents is as shown table 6 below.

TABLE 6

Government Support

Government Support	N	Mean	Std. Dev.
The government policy support access to green financing by our SME	117	4.2906	.71991
The government has put in place governmental tax-based incentives for green financing	117	4.5214	.89634
Collaboration between the government and international lenders has helped increase access to green finance.	117	4.6325	.80514
Government policies/regulations encourage green practices in SMEs	117	4.4017	.94741
The government has offered several incentives/programs that promote the adoption of green technology in SMEs	117	2.4974	1.09375
Valid N (listwise)	117		

Based on the descriptive statistics provided, it was seen that the mean score for government policy assistance in facilitating access to green financing by small and medium-sized enterprises (SMEs) was 4.2906, with a standard deviation of 0.71991. The tiny standard deviation observed suggests that the respondents not only exhibited agreement with the statement, but also demonstrated a high level of consensus among themselves. Both individuals provided comparable responses in relation to the given statement. Furthermore, it has been determined that the government has implemented tax-based incentives of a governmental nature to promote green financing. The mean value of these incentives is 4.5214, with a standard deviation of 0.89634. The findings additionally demonstrated that the partnership between governmental entities and international financial institutions has contributed to the

expansion of opportunities for obtaining green finance (Mean=4.6325, Standard Deviation=0.80514). Finally, the research findings indicate that the government has not implemented a range of incentives and programs aimed at encouraging the adoption of green technology in small and medium-sized enterprises (SMEs). The mean score for this lack of government support was found to be 2.4974, with a standard deviation of 1.09375. The presence of a large standard deviation in conjunction with the mean suggests that the respondents provided diverse responses.

4.5.5 Financing Information and Uptake of Green Financing

The fourth objective was to investigate the ways in which access to Financing Information affect SMEs in Nairobi in their adoption to green financing. The descriptive statistics from the responses based on 117 respondents is as shown table 7 below.

TABLE 7

Financing Information

Financing Information	N	Mean	Std. Dev.
Recently there has been increased awareness on green financing among the SMEs in Kenya	117	4.4444	.90444
The management is aware of specific financial institutions or organizations that provide green financing options	117	4.5726	.85416
I have attended workshops or training sessions on green financing	117	4.6667	.85096
The management is aware of different green finance products available to their SMEs	117	4.4530	.82520
It is easy to access information about green financing by SMEs	117	3.2308	1.32863
Valid N (listwise)	117		

Based on the provided descriptive statistics, it can be observed that there has been a noticeable rise in the level of awareness regarding green financing among small and medium-sized enterprises (SMEs) in Kenya. The mean value of 4.4444 and a standard deviation of 0.90444 indicate this upward trend. The presence of a small standard deviation suggests that the respondents not only exhibited agreement with the statement, but also demonstrated a high level of consensus among themselves. Both individuals provided comparable responses in relation to the given statement. Furthermore, it has been shown that the management possesses knowledge of particular financial institutions or organizations that offer green financing alternatives (Mean=4.5726, Standard Deviation=0.85416). The findings additionally indicated that a majority of participants have participated in workshops or training sessions pertaining to green financing, with a mean score of 4.4530 and a standard deviation of 0.85096. Finally, the study revealed that obtaining information regarding green finance by small and medium enterprises (SMEs) was found to be rather straightforward (Mean=2.4974, Standard Deviation=1.32863). The presence of a large standard deviation in conjunction with the mean suggests that the respondents provided a wide range of replies.

4.6 Diagnostic Tests

To get impartial estimations of the study parameters, multiple assumptions of regression were examined. The conducted analyses encompassed the assessment of normality and multicollinearity for the three independent variables.

4.6.1 Normality test

In order to assess the normality of the data, the Shapiro-Wilk test was employed. The Shapiro-Wilk test is considered to have the highest power for a given level of significance, with the Anderson-Darling test closely following, when comparing the Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors, and Anderson-Darling tests (Razali and Wah, 2011). The outcomes of the normalcy test are displayed in table 8.

TABLE 8

Normality test

Variable	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Uptake of Green Financing	.509	117	.058
Organizational Characteristics	.612	117	.077
Technology	.364	117	.086
Government Support	.417	117	.113
Financing Information	.468	117	.173

The normality of the data was assessed by conducting the Shapiro-Wilk test. The statistical analysis revealed that the p-values associated with the variables of green financing uptake, organizational features, technology, government support, and access to financing information were determined to be 0.058, 0.077, 0.086, 0.113, and 0.173, respectively. Based on the obtained p value being higher than the predetermined alpha threshold, it is not possible to reject the null hypothesis that the observed data originates from a population with a normal distribution (Razali & Wah, 2011).

4.6.2 Multicollinearity Test

A multicollinearity test was conducted in order to ascertain whether there exists a high correlation among one or more independent variables within the regression model. The assessment of multicollinearity involves the utilization of two key measures, namely the tolerance value and the Variance Inflation Factor (VIF). The presence of multicollinearity can be inferred when the tolerance value is less than 1 and the VIF value is greater than 10.

TABLE 9

Multicollinearity test

Model	Collinearity statistics	
	Tolerance	**VIF**
Organizational Characteristics	.997	1.003
Technology	.563	1.778
Government Support	.582	1.720
Financing Information	.614	1.629

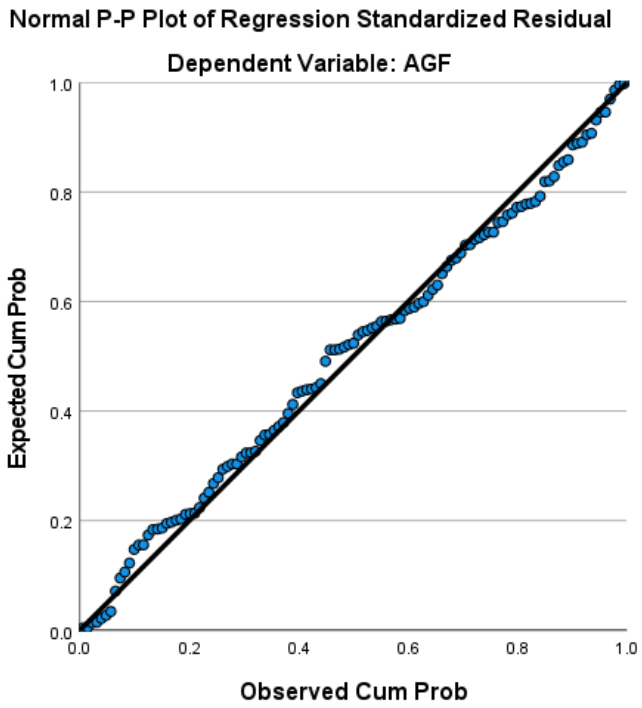
The findings presented in table 9 indicate that the Variance Inflation Factors (VIFs) for the variables of Organizational Characteristics, Technology, Government Support, and Access to Financing Information were observed to be 1.003, 1.778, 1.720, and 1.629, respectively. All four independent variables exhibited a Variance Inflation Factor (VIF) below 10, indicating the absence of multicollinearity. Consequently, a regression analysis was conducted to assess the impact of the three independent variables on the dependent variable.

4.6.3 Linearity Test

The purpose of the linearity test is to ascertain whether there exists a linear relationship between the distributions of the dependent and independent variables. The fulfillment of the linearity assumption is necessary due to the utilization of linear regression in the analysis.

FIGURE 6

Linearity Test



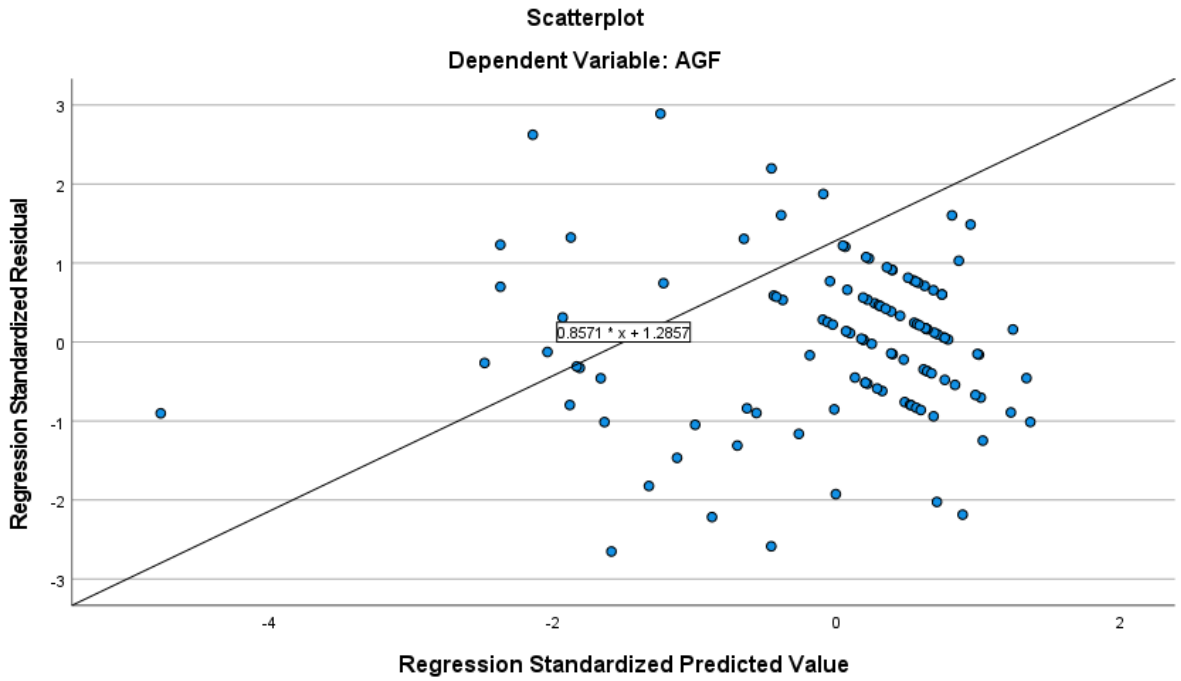
A positively sloped linear relationship is observed. The data distribution exhibits a positive linear relationship. Based on the outcomes of the linearity test, it was determined that the regression model has satisfied the assumption of linearity. Hence, the utilization of linear regression was deemed appropriate.

4.6.4 Homoscedasticity Test

Homoscedasticity is a fundamental assumption in statistical analysis that posits the equality or similarity of variances across distinct groups under comparison. This assumption holds significance in the context of parametric statistical tests as they exhibit sensitivity towards any disparities.

FIGURE 7

Homoscedasticity Test



According to the data presented in figure 7, the scores exhibit a random distribution with no discernible pattern along a horizontal axis. According to Tabachnick and Fidell (2007), it is expected that the residuals and the variance of the residuals exhibit uniformity across all projected scores. If the veracity of this statement is confirmed, it can be inferred that the assumption is satisfied, resulting in the formation of a scatter plot exhibiting a rectangular pattern. The assumption has been satisfied.

4.7 Correlation and Regression Analysis

The findings of the correlation and regression analysis are reported in this section. The primary objective of this study was to determine the correlation between the variables under investigation. Correlation analysis was conducted in order to ascertain the relationship between the independent and dependent variables. The correlation coefficients span from -1, indicating

a perfect negative association, to +1, indicating a perfect positive relationship, with zero denoting no link. The summary of the results is shown in table 10 below.

TABLE 10

Correlation Matrix

		GF (Y)	OC (X_1)	ICT (X_2)	GS (X_3)	FI(X_4)
Uptake of Green	Pearson					
Financing (Y)	Correlation	1				
	N	117				
Organizational	Pearson	.045				
Characteristics	Correlation		1			
(X_1)	Sig. (2-tailed)	.631				
	N	117	117			
Technology (X_2)	Pearson	.605**	-.027			
	Correlation			1		
	Sig. (2-tailed)	.000	.776			
	N	117	117	117		
Government	Pearson	.529**	-.048	.596**	1	
Support	Correlation					
(X_3)	Sig. (2-tailed)	.000	.606	.000		
	N	117	117	117	117	
Financing	Pearson	.537**	-.047	.565**	.544*	1
Information (X_4)	Correlation					
	Sig. (2-tailed)	.000	.617	.000	.000	
	N	117	117	117	117	117

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

The results presented in table 10 reveal that there exists a modest and statistically insignificant positive correlation (r = 0.509, p = 0.000 < 0.05) between organizational characteristics and the uptake of green financing. A noteworthy and robust positive association was seen between technology and the adoption of green financing (R = 0.605; p=0.00 < 0.05). the utilization of

ICT services is expected to result in a commensurate rise in the adoption of green financing. Additionally, the findings indicate a robust and statistically significant relationship between government support and the adoption of green funding (R = 0.529; p=0.000 < 0.05). Enhanced governmental assistance would result in heightened adoption of green financing. Finally, there was a robust and statistically significant positive association between access to finance information and the adoption of green funding, as indicated by a Pearson correlation coefficient of 0.537 (p=0.000< 0.05). Enhanced availability of financial information would result in enhanced adoption of green financing.

4.8 The Model Summary

The model summary includes the R-value, R-square value, adjusted R-square value, and standard error of the estimate.

TABLE 11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669[a]	.448	.428	.37614

a. Predictors: (Constant), FI, OC, GS, ICT

b. Dependent Variable: AGF

According to the model summary, the coefficient of correlation R was found to be 0.669, indicating a robust association between the independent variables (organizational characteristics, technology, government support, and access to financing information) and the dependent variable, which is the uptake of Green Financing in the study. The coefficient of determination, denoted as R2 or R square, indicated a value of 0.448, suggesting that 44.8% of

the variability in the dependent variable could be attributed to the predictor variables used in the study. The unaccounted portion of 55.2% can be attributed to other factors that were not included in the present model.

4.9 Analysis of Variance

The F statistic, which is employed to evaluate the significance of the coefficient of determination ®, was derived through the utilization of analysis of variance (ANOVA) techniques. To assess the adequacy of the model in capturing the data, an analysis of variance was conducted.

TABLE 12

Analysis of Variance

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
	Regression	12.852	4	3.213	22.710	.000[b]
1	Residual	15.846	112	.141		
	Total	28.698	116			

a. Dependent Variable: AGF

b. Predictors: (Constant), FI, OC, GS, ICT

According to the findings presented in table 12, the p value associated with the F value of 22.710 was determined to be 0.000, which is less than the predetermined significance level of 5%. This result indicates that the model under investigation exhibits statistical significance at the 5% level. The major factors in explaining the adoption of green finance were the independent variables of organizational characteristics, technology, government backing, and

access to financing information. The model summary was fitted to estimate the differences between the dependent and independent variables.

4.10 Regression Coefficients

A regression analysis was conducted to examine the collective impact of the independent factors on the dependent variable. The findings were then displayed in table 13 provided below.

TABLE 13

Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
1	**(Constant)**	.762	.452		1.685	.095
	Organizational Characteristics	.090	.085	.075	1.060	.291
	Technology	.318	.082	.361	3.859	.000
	Government Support	.189	.091	.191	2.078	.040
	Financing Information	.213	.082	.232	2.593	.011

$Y=0.318X_2+0.189X_3+0.213X_4$ where **X_2** for technology and **X_3** for Government Support and **X_4** for access to financing information. After considering all relevant elements and assuming the absence of any other variables, the constant value was determined to be 0.762, which represents the degree of absorption of green financing. Nevertheless, if all other parameters remain constant, a one-unit increment in organizational characteristics would lead to a 9.0% rise in the adoption of green funding. In a similar vein, while controlling for other variables, the increased utilization of information and communication technology (ICT) resulted in a notable 31.8% rise in the adoption of green funding. Moreover, it can be shown that a one-unit

rise in government support, while keeping other factors constant, leads to a significant 18.9% upsurge in the adoption of green funding. Finally, with relation to the availability of financial information, an increase of one unit in this variable, while holding other factors constant, would lead to a 21.3% increase in the adoption of green finance. At a significance level of 5%, it was observed that all predictor factors exhibited a statistically significant impact on the adoption of green funding.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary, draws conclusions, and presents recommendations based on the stated objectives. The proposals were directed towards policy makers, practitioners, and scholars. The summary elucidates the relationship between the dependent variable and independent factors.

5.2 Summary of Findings

This subsection provides a concise overview of the research findings in relation to the stated objectives. According to the summary of the model, the four independent variables exhibited a significant coefficient of determination. Furthermore, the model summary indicates that the four independent factors effectively account for the variances seen in the adoption of green finance performance. The statistical analysis revealed that the model summary exhibited a substantial effect.

5.2.1 Organizational Characteristics and Uptake of Green Financing

The first objective was to investigate the ways in which the organizational factors affect SMEs in Nairobi in their adoption to green financing. From the descriptive statistics above, it was shown that most banks consider the size of the SME before offering green financing products. Also, the results show that SMEs with operation exceeding 3 years have more access to more to green finance. The findings further stated that banks require audited financial statement before offering green finance. Lastly, it was shown that the SMEs with a culture of investing in sustainable projects have more access to green finance.

Organizational Characteristics and uptake of green financing were found to have a statistically insignificant positive Pearson correlation. Similarly, the regression analysis showed that Organizational Characteristics had a positive and insignificant beta coefficient meaning that it does not contribute significantly to uptake of green financing.

5.2.2 Technology and Uptake of Green Financing

The first objective was to investigate the ways in which the technology affects SMEs in Nairobi in their adoption to green financing. From the descriptive statistics, it was established that most SME has not invested in technology that enables it to have access to green energy. Also, the results show that the technology adopted by our SME is compatible with those of the green financiers in Kenya. Further, it was shown that SMEs utilizes environmentally-friendly technologies in its operations. Lastly, it was established that SMEs relies on technology to achieve sustainability goals within the SME. Technology and Uptake of Green Financing were found to have a statistically significant positive Pearson correlation. Similarly, the regression analysis showed that technology had a positive and significant beta coefficient meaning that use of better technologies by SMEs could lead to improved uptake of green financing.

5.2.3 Government Support and Uptake of Green Financing

The third objective was to investigate the ways in which the government support affect SMEs in Nairobi in their adoption to green financing. From the descriptive statistics above, it was shown that the government policy support access to green financing by our SME. In addition, it was established that the government has put in place governmental tax-based incentives for green financing. The results further showed that collaboration between the government and international lenders has helped increase access to green finance. Lastly, it was shown that the government has not offered several incentives/programs that promote the adoption of green technology in SMEs. Government support and uptake of green financing were found to have a statistically significant positive Pearson correlation. Similarly, the regression analysis showed

that Government support had a positive and significant beta coefficient meaning that increased government support should lead to improved uptake of green financing.

5.2.4 Financing Information and Uptake of Green Financing

The fourth objective was to investigate the ways in which access to Financing Information affect SMEs in Nairobi in their adoption to green financing. From the descriptive statistics, it was shown there has been increased awareness on green financing among the SMEs in Kenya. In addition, it was established the management is aware of specific financial institutions or organizations that provide green financing options. The results further showed that most respondents have attended workshops or training sessions on green financing. Lastly, it was shown that it is easy to access information about green financing by SMEs. Access to financing information and uptake of green financing were found to have a statistically significant positive Pearson correlation. Similarly, the regression analysis showed that access to financing information had a positive and significant beta coefficient meaning that increased access to Financing Information could lead to improved uptake of green financing.

5.3 Conclusion

5.3.1 Organizational Characteristics and Uptake of Green Financing

The regression analysis showed that Organizational Characteristics had a positive and insignificant beta coefficient. Based on these findings, this study concludes that organizational characteristics does not contribute significantly to uptake of green financing.

5.3.2 Technology and Uptake of Green Financing

Technology and Uptake of Green Financing were found to have a statistically significant positive Pearson correlation. Similarly, the regression analysis showed that technology had a positive and significant beta coefficient. Based on these findings, this study concludes that use of better technologies by SMEs could lead to improved uptake of green financing.

5.3.3 Government Support and Uptake of Green Financing

The regression analysis showed that Government support had a positive and significant beta coefficient. Based on these findings, this study concludes that increased government support could lead to improved uptake of green financing by SMEs.

5.3.4 Financing Information and Uptake of Green Financing

The regression analysis showed that access to financing information had a positive and significant beta coefficient. Based on these findings, this study concludes that increased access to financing information could lead to improved uptake of green financing.

5.4 Recommendation

Among the 4 independent variables, Technology was shown to have highest effect on Uptake of Green Financing. Based on these results, this study recommends that the SMEs invest more on modern technology that can help them access green financing more easily. It was also shown that Access to Financing Information contribute significantly to the Uptake of Green Financing. Additionally, from the descriptive statistics, it was shown that most respondents have attended workshops or training sessions on green financing. This study recommends that management sponsor most of their employee to attend green financing trainings and seminars so as to create more awareness of the available green financing projects for the SMEs.

5.5 Suggestion for Further Studies

The model summary indicates that the utilization of four independent variables in the study accounts for 44.8% of the observed variation in the adoption of green financing, while the remaining 55.2% is attributed to additional variables that were not included in this particular study. Based on the aforementioned findings, it is recommended that further research be conducted within the same sector, employing alternative variables, in order to ascertain the major factors influencing the adoption of green finance by small and medium-sized enterprises

(SMEs) in Kenya. Finally, a comparable investigation can be conducted on companies listed on the NSE utilizing same variables to ascertain whether analogous results would be achieved.

5.6 Limitation of the Study

The unique characteristics of the individuals comprising the sample population may have potentially impeded the respondents' capacity to furnish veracious responses to the survey. Hence, there exists the potential for the outcomes to inadequately reflect the perspectives of all individuals involved, thereby constraining the generalizability of these findings to other domains within the national economy. The absence of forthright responses from the individuals comprising the sample population gives rise to apprehensions regarding the dependability of the results in illuminating the connections between the variables that are independent and dependent.

REFERENCES

Adedeji, O. et al. (2014). Global Climate Change. Journal of Geoscience and Environment Protection, 2, 114-122.

AFRICA FINANCE CORPORATION: Green Climate Fund Agreement. (2017, December). Africa Research Bulletin: Economic, Financial and Technical Series, 54(10), 21898B-21898C

Aseto, J. O., Anggraeni, K., Melgar, M. I. M., Ballón-Ossio, A., Sander, L. E., Grossi, F., ... & Orwa, N. (2022). Promotion and Uptake of Sustainable Consumption and Production (SCP) Practices among Kenyan MSMEs: Key Learnings. *Sustainability*, *14*(6), 3207.

Chieh-Yu Lin and Yi-Hui Ho (2011), "Determinants of Green Practice Adoption for Logistics Companies in China"

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101.

Cleveland, C. J., & Reibstein, R. (2015). The Path to Fossil Fuel Divestment for Universities: Climate Responsible Investment. SSRN Electronic Journal.

Cleveland, C. J., & Reibstein, R. (2015). The Path to Fossil Fuel Divestment for Universities: Climate Responsible Investment. SSRN Electronic Journal.

Cowie, A., Schneider, U. A., & Montanarella, L. (2007, June). Potential synergies between existing multilateral environmental agreements in the implementation of land use, land-use change and forestry activities. Environmental Science & Policy, 10(4), 335–352.

Creswell, J. W., & Creswell, J. D. (2017). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications.

Daniel F. Runde, Conor M. Savoy, and Janina Staguhn (2021), "Supporting Small and Medium Enterprises in Sub-Saharan Africa through Blended Finance", CSIS Briefs

Daniel F. Runde, Conor M. Savoy, & Janina Staguhn (2021), “Small and Medium-Sized Enterprises, Blended Finance, and Climate Change in Sub-Saharan Africa”, CSIS Briefs

OECD Paris

DFI working group (2017),” Blended Concessional Finance for Private Sector Projects”, Summary report

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method (4th ed.). Wiley.

Etzkowitz, H. (2003, January). Research groups as ‘quasi-firms’: the invention of the entrepreneurial university. Research Policy, 32(1), 109–121

Falcone, P., & Sica, E. (2019, January 19). Assessing the Opportunities and Challenges of Green Finance in Italy: An Analysis of the Biomass Production Sector. Sustainability, 11(2), 517

Fink, A. (2019). Conducting Research Literature Reviews: From the Internet to Paper (5th ed.). Sage Publications.

Fleischer, R. (1989, January). Communication complexity of multi-processor systems. Information Processing Letters, 30(2), 57–65

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). Multivariate Data Analysis (8th ed.). Cengage.

Kenya Micro and Small Enterprises Policy, Sessional Paper No. 05 (2020), Ministry of Industrialization, Trade and Enterprise development

Liang, S., Wang, P., Jia, C., & Zhu, J. (2023). Studying green financing, factor allocation efficiency, and regional productivity growth in renewable energy industries. *Renewable Energy*.

Raymond Obare (2022), “Kenya needs green finance guidelines”, Business Daily

Oxborrow, Lynn & Brindley, Clare. (2013). Adoption of "eco-advantage" by SMEs: Emerging opportunities and constraints. European Journal of Innovation Management. 16. 10.1108/EJIM-09-2011-0079

Trochim, W. M. K. (2006). The Research Methods Knowledge Base. Atomic Dog.

Wang, J., Cui, M., & Chang, L. (2023). Evaluating economic recovery by measuring the COVID-19 spillover impact on business practices: evidence from Asian markets intermediaries. *Economic Change and Restructuring*, 1-22.

Wasiq, M., Kamal, M., & Ali, N. (2023). Factors Influencing Green Innovation Adoption and Its Impact on the Sustainability Performance of Small-and Medium-Sized Enterprises in Saudi Arabia. *Sustainability*, *15*(3), 2447.

Wicker, P., & Frick, B. (2020, November 19). Sustainable Financing of Elite Athlete Development: An Empirical Analysis of Winter Sports in Austria. Sustainability, 12(22), 9664.

Intergovernmental Panel on climate change (February, 2022), "Climate Change 2022: Impacts, Adaptation and Vulnerability"

Xie, Q., & Hanafiah, M. H. (2023). Systematic Literature Review: the Sustainable Development of Small and Medium-Sized Enterprises Under the Trend of Globalization. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(5), 71.

APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

30th April 2023

Ref: letter of introduction of researcher to respondent

Sir/Madam,

My name is Justin Mungai, a student from KCA University. I am conducting academic research on the factors influencing uptake of green financing by Small and Micro Enterprises (SMEs) in the manufacturing sector in Nairobi County, Kenya. I am therefore kindly requesting your cooperation to enable me gather the necessary information. I assure you that your views will be treated with confidentiality and the research will not be used for any financial gains. This survey is completely voluntary and anonymous. If there is any reason to terminate, feel free to leave however please note that your participation to this survey will be much appreciated. I therefore request your participation in this survey by filling out the questionnaire attached to this personally and honestly within a week after you receive it. I will collect the questionnaire after one week. Kindly remember that this study is useful to the society as it promotes awareness-raising and advocacy.

Yours sincerely,

Justin Mungai Kariuki

APPENDIX II: QUESTIONNAIRE

Thank you for participating in our research study. Your input is valuable in helping us understand the determinants of green financing adoption by Small and Medium-Sized Enterprises (SMEs) in the manufacturing sector in Nairobi City County, Kenya. This survey should take approximately [insert estimated time] to complete.

SECTION A: BACKGROUND QUESTIONS

1. Gender:
    - Male
    - Female
2. Age:
    - Under 18
    - 18-24
    - 25-34
    - 35-44
    - 45-54
    - 55-64
    - 65 or over
3. Educational Background:
    - Bachelor's Degree
    - Master's Degree
    - Doctorate/Ph.D.
    - Professional

4. How long have you been involved in the operation of your SME?

    - Less than 5 year
    - 6-10 years
    - 11-15 years
    - 16-19 years
    - More than 20 years

SECTION B: ORGANIZATIONAL CHARACTERISTICS

1. Please indicate, the level of agreement or disagreement with the following statements by putting a check mark against the space corresponding to the correct answer.

Scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree.

ORGANIZATIONAL CHARACTERISTICS	1	2	3	4	5
Most banks consider the size of the SME before offering green financing products to SMEs					
SMEs with operation exceeding 3 years have more access to more to green finance.					
Banks require audited financial statement before offering green finance					
Firms that do not generate profits have challenges accessing green finance					
SMEs with a culture of investing in sustainable projects have more access to green finance					

SECTION C: TECHNOLOGY

2. Please indicate, the level of agreement or disagreement with the following statements by putting a check mark against the space corresponding to the correct answer.

Scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree.

TECHNOLOGY	1	2	3	4	5
The SME has invested in technology that enables it to have access to green energy					
The technology adopted by our SME is compatible with those of the green financiers in Kenya					
Our SME utilizes environmentally-friendly technologies in its operations					
The SME has invested in energy-efficient equipment and processes in the recent years					
Our SME relies on technology to achieve sustainability goals within our SME					

SECTION D: GOVERNMENT SUPPORT

3. Please indicate, the level of agreement or disagreement with the following statements by putting a check mark against the space corresponding to the correct answer.

Scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree.

GOVERNMENT SUPPORT	1	2	3	4	5
The government policy support access to green financing by our SME					
The government has put in place governmental tax-based incentives for green financing					
Collaboration between the government and international lenders has helped increase access to green finance.					
Government policies/regulations encourage green practices in SMEs					
The government has offered several incentives/programs that promote the adoption of green technology in SMEs					

SECTION E: ACCESS TO FINANCING INFORMATION

8. Please indicate, the level of agreement or disagreement with the following statements by putting a check mark against the space corresponding to the correct answer.

Scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree.

ACCESS TO FINANCING INFORMATION	1	2	3	4	5
Recently there has been increased awareness on green financing among the SMEs in Kenya					
The management is aware of specific financial institutions or organizations that provide green financing options					
I have attended workshops or training sessions on green financing					
The management is aware of different green finance products available to their SMEs					
It is easy to access information about green financing by SMEs					

SECTION F: UPTAKE OF GREEN FINANCING

9. Please indicate, the level of agreement or disagreement with the following statements by putting a check mark against the space corresponding to the correct answer.

Scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree.

UPTAKE OF GREEN FINANCING	1	2	3	4	5
The organization has been able secure significant amount of green financing recently					
There is significant number of green projects where our SME has invested in					
The SME has a policy of investing in sustainable projects					
The SME has been awarded severally due to investment in sustainable projects					
The cost of accessing green finance is affordable					

Thank you for your co-operation