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**An Examination of the Effect of Impact Investment
Instruments on Sustainable Development Financing in Kenya**



**A Dissertation Submitted to Strathmore University Business School in Partial
Fulfilment of Master of Science in Development Finance Degree of Strathmore
University.
April, 2021**

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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Mati Benson Njiru

April, 2021

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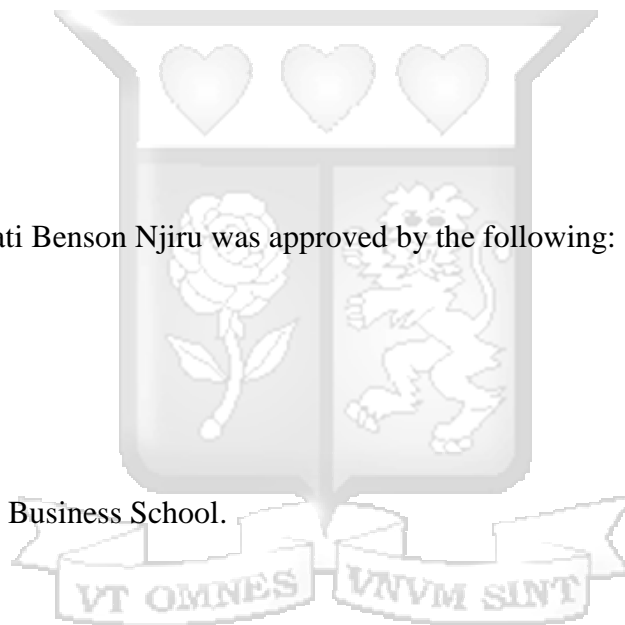
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ABSTRACT

It is estimated that the amount of finances required for key sectors related to the United Nations 2030 Agenda for Sustainable Development at the global level is approximately US dollar 5 to 7 trillion per year. This study sought to break ground in a new academic field of enquiry by examining the effect of impact investment instruments, novel approach for financing social and sustainable enterprises that is gaining momentum in Kenya and across the world, on sustainable development financing in Kenya. This study sought empirical evidence on the effect of green bonds and social impact bonds (SIBs) usage on sustainable development financing in Kenya. The 2030 Agenda for Sustainable Development overall vision is to lead the world toward a path of inclusive economic development, social inclusion and environmental sustainability. The study sought to examine Kenya's progress in sustainable development financing and took stock of the effect of impact investment instruments on financing social and sustainable enterprises implementing the SDGs commitments in Kenya. The study empirically analysed social, environmental and economic performance data from impact investors employees in Kenya and mapped the impact data to the SDGs. Using a descriptive cross-sectional survey design, relevant data was collected from 185 employees of the 37 impact investors, members of GIIN, using structured questionnaires and analysed using descriptive and inferential analysis. Results showed that impact investment instruments play a critical role in sustainable development financing in Kenya. Further, a statistically positive significant relationship between social impact bonds and sustainable development financing was found, while green bonds had a statistically negative significant relationship with sustainable development financing. Finally, the joint effect of the two variables was statistically significant. Theoretically, this study contributes to impact investment instruments knowledge base by providing a model that optimizes the use of impact investment instruments on sustainable development financing. The study provides empirical evidence supporting the structure of impact investment instruments and sustainable development financing link from a developing country context using perspectives of the impact investors' employees. Policy formulation may focus on mandating impact investors to develop social and environment performance management practices for measuring and reporting their social and environment performance.

Key Words: Financing, Green bonds, Impact investment, SIBs, Sustainable development

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ABBREVIATIONS AND ACRONYMS

ANOVA – Analysis of variance

CV – Coefficient of Variation

ESG – Environmental, Social and Governance

DFI – Development Finance Institutions

DIBs – Development Impact Bonds

FDI – Foreign Direct Investment

FRM – Financial Risk Management

GIIN – Global Impact Investing Network

GSG – Global Steering Group for Impact Investment

IBRD – International Bank for Reconstruction and Development

ICMA – International Capital Markets Association

ICO – Instituto de Crédito Oficial

IFC – International Finance Corporation

KPMG – Klynveld Peat Marwick Goerdeler

MDF – Master of Science in Development Finance

MDGs – Millennium Development Goals

MDPI – Molecular Diversity Preservation International

N – The size of the population

OECD – Organisation for Economic Co-operation and Development

PBO – Parliamentary Budget Office

SD – Standard Deviation

SDGs – Sustainable Development Goals

SIBs – Social Impact Bonds

SMEs – Small and Medium Enterprises

SPSS - Statistical Package for the Social Sciences



SRI – Socially Responsible Investing

TBL – Triple Bottom Line

TOCO – Theory of Change Organisation

UK – United Kingdom

UN – United Nations

UNCTAD – United Nations Conference on Trade and Development

UNDG – United Nations Development Group

US – United States

VIF – Variance Inflation Factors



DEFINITION OF TERMS

Impact Investment	A subset of socially responsible investing that actively seeks to make positive impact by financing social and sustainable enterprises that generate measurable social or environmental value in addition to financial gain (Abrahams & Walaza, 2018).
Impact Investors	They are institutions that design and execute financing products for profit making social and sustainable enterprises that create positive social and environmental value (GSG, 2018).
Green Bonds	They are impact investment instruments earmarked for green projects that deliver environmental and climate benefits, such as renewable energy projects and climate-smart agriculture (KPMG, 2018).
Social Impact Bonds	They are any type of impact investment instrument where the proceeds will be exclusively applied to finance or re-finance in part or in full new and/or existing eligible social and sustainable projects (KPMG, 2018).
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nations General Assembly, 1987).



DEDICATION

I dedicate this dissertation to the Social and Sustainable Entrepreneurs, Impact Investors Employees, Supervisor, Research Advisors and all those who made the study a success. Thank you for your time and unconditional support.

Above all, I thank the Almighty God for giving me the strength and patience to carry me through the process.



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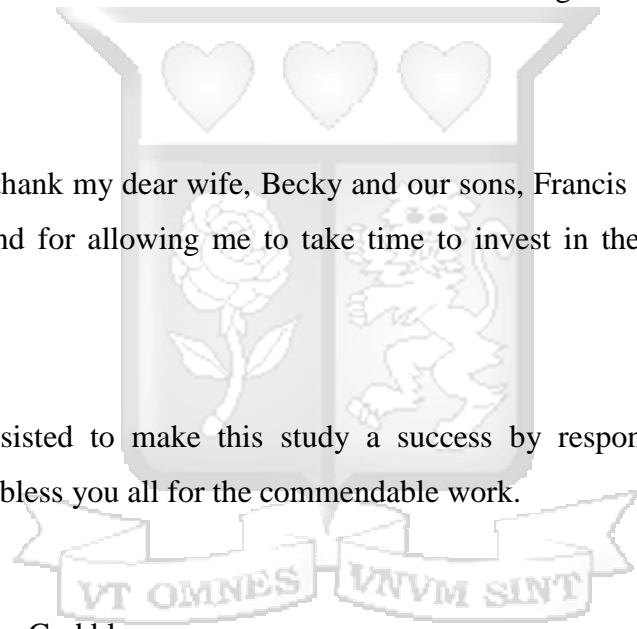
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I thank you all and may God bless you.



CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter discusses Kenya's impact investing industry, the sector in which this study was conducted. It starts with the background of the study, which discusses a brief introduction of the impact investing industry, impact investment instruments and sustainable development financing in Kenya. The subsequent section provides the problem statement and objectives of the study. Towards the end of the chapter, the scope of the study is discussed. The study concludes with a perspective on the significance of the study.

1.2 Background of the Study

The United Nations 2030 Agenda for Sustainable Development commonly known as Sustainable Development Goals (SDGs) is the premier global initiative for promoting sustainable and inclusive economic growth, social development and environmental protection (UNDG, 2016). The SDGs comprise an ambitious 17 goals and 169 targets defining the world's post-2015 sustainable development agenda (UN, 2015). The SDGs were unveiled and ratified by the 193 UN Member States in 2015 and took effect in 2016 (UN, 2015).

While the SDGs had not been designed as a framework for impact investment in the first instance, there is a clear case that the 2030 Agenda calls for most ambitious financing strategy for sustainable development (OECD, 2019). As the paradigm of development co-operation is changing, new actors have emerged in sustainable development finance space known as impact investors (Castellas & Ormiston, 2018). Impact investment is a subset of socially responsible investing that actively seeks to make positive impact by financing social and sustainable enterprises that generate measurable social or environmental value in addition to financial gain (KPMG, 2018). Social and sustainable enterprises aim to create economic value and produce positive social and environmental outcomes in line with the SDGs through financially sustainable business models (Castellas et al., 2018). Impact investors not only mobilises impact capital to finance the SDGs initiatives but, most importantly, catalyses innovative financing approaches to solve social, environmental and economic challenges (Mogapi et al., 2019).

The 2030 Agenda calls upon stakeholders at all levels for their individual and collaborative involvement in sustainable development financing (UN, 2019). Similarly, the UN expects governments to be primarily responsible for SDGs adoption and to take ownership for the

implementation and financing (Pineda-Escobar, 2019). However, governments have scarce resources to finance the implementation of the SDGs, hence creating opportunities for impact investors to play a role in financing SDGs initiatives. According to (GSG, 2018) Kenya is the innovation leader in Africa and has attracted the largest share of impact investments in Africa. The question pertaining to whether impact investment instruments complements the sustainable development financing remained largely unanswered. This study sought to answer the question by examining the effect of impact investment instruments on sustainable development financing in Kenya.

1.2.1 Impact Investing in Kenya

One of the most creative, innovative and optimistic fields of sustainable development finance is an emanating industry known as impact investing (Jackson, 2013). Impact investing was introduced in 2007 to mobilise impact capital required to fund societal problems (Abrahams & Walaza, 2018). To navigate the complexity of sustainable development financing, where inclusive economic development, social inclusion and environmental sustainability are attained, impact investing is experiencing exponential growth (GSG, 2018). Impact investors target to attain measurable social and environmental outcomes alongside financial outcomes (IFC, 2019). Impact investors differ from traditional investors on several aspects, unlike commercial investors or philanthropy that primarily seek either financial or social returns; impact investors seek both financial and social returns from enterprises. Impact investors attain these noble goals by financing social and sustainable enterprises (Roundy et al., 2017).

Impact investing industry in Kenya has been on an upward mobility due to increasing number of social and environmental challenges requiring impact investments and attractive rates of return to impact investors (GSG, 2018). This was influenced by the Kenya's innovative financial services sector, which has emerged the most attractive to impact investors (British Council, 2017). Looking ahead, the industry's upward mobility is not likely to cease in Kenya. This is as a result of positive governance, economic and business environment trends and thriving social and sustainable enterprises that attract impact investors (GSG, 2018). Recent government of Kenya initiatives promote the growth of the impact investment movement (GSG, 2018). In 2018, the government launched Big 4 Agenda, a social economic development plan outlining government's four key sectors to be prioritized over a period of five years to 2022: affordable housing, security and agricultural productivity, manufacturing and universal health coverage (PBO, 2018). The government has publicly acknowledged the significance role of impact investors in financing the Big 4 Agenda (GSG, 2018).

The impact investors are divided into three categories: asset owners, asset managers and service providers (Jackson, 2013). Impact investors design and execute financing products for profit making social and sustainable enterprises that create positive social and environmental value (Harji & Jackson, 2012). The Global Impact Investment Network (GIIN) is the member body overseeing the largest global community of impact investors; 102 Asset Owners, 169 Asset Managers and 69 Service Providers engaged in impact investing (GIIN, 2020). This study focused on asset owners and asset managers that are members of GIIN, doing impact investments in Kenya.

According to GIIN's 2019 annual impact investors survey, more than 60% of GIIN members tracked investment performance to the SDGs, driven by the desire to integrate into the global sustainable development paradigm (GIIN, 2019). The survey further revealed that impact investors appreciate SDGs as an appropriate framework for aligning sustainable development financing with the global goals and providing a widely accepted structure for communicating impacts with stakeholders (GIIN, 2019).

The 2018 state of Kenya impact investing report revealed that the sector has picked up with impact investments increasing from between US dollar twenty (20) thousand and US dollar one (1) million to US dollar three (3) million per enterprise due to the increase in number of viable social and sustainable enterprises (GSG, 2018). The 2017 British Council report on the state of social enterprises in Kenya, however, observed that 64% of the enterprises were still in their early stage of growth and required small impact investments, but limited impact investment capital was available at that size (British Council, 2017).

According to a study by GIIN, between years 2005 and 2015, approximately 50% of the impact capital invested in East Africa targeted the Kenyan market, representing about US dollar six hundred and fifty (650) million of impact investments (GIIN, 2015). As at 2015, there were 136 impact investment instruments active in Kenya, managed by 95 impact investors (GIIN, 2015). This study sought to examine the alignment of impact investment instruments on addressing sustainable development financing in Kenya.

1.2.2 Impact Investment Instruments in Kenya

Kenya has a strong entrepreneurial culture that presents a wide range of investment opportunities to impact investors, in innovative social and sustainable enterprises in sectors such as renewable energy, financial services, infrastructure development, affordable housing, industrialization and climate-smart agriculture (GSG, 2018). Impact investment capital is not

limited to a specific class of assets. It includes venture capital, portfolio investment, fixed income instruments and bonds (UNDP, 2016). Private equity and private debt are the most common impact investment instruments adopted by impact investors, with private debt taking the largest share in value terms (UNDP, 2016). This study focused on two types of private debt financing instruments, green bonds and social impact bonds, adopted by impact investors to address sustainable development financing gap in Kenya.

Private debt financing is the loaning of money to social and sustainable enterprises by impact investors for a defined period of time at variable or fixed interest rates (KPMG, 2018). The impact investors receive a promise that the principal amount and interest shall be repaid back regularly, in addition to the creation of positive social and environmental value (IFC, 2019). The common private debt financing instruments adopted by impact investors are green bonds and social impact bonds (KPMG, 2018). Bonds are private debt agreements where issuers borrow money from impact investors and make periodic payments of principal amount and interest (Kansas, 2005).

Green bonds are impact investment instruments earmarked for green projects that deliver environmental and climate benefits, such as renewable energy projects and climate-smart agriculture (KPMG, 2018). Social impact bonds (SIBs) are impact investment instruments that are performance based and whose returns are derived on rigorously measured outcomes of social programs which include infrastructure development, affordable housing, industrialization, innovation and employment creation (KPMG, 2018).

The vibrant social and sustainable enterprises in Kenya seek impact investment capital for scaling up (British Council, 2017). This matches the focus of impact investors, which primarily target profitable social and sustainable enterprises creating social and environmental value, alongside financial returns (GIIN, 2015). However, despite Kenya's relatively developed social and sustainable entrepreneurship culture compared to the rest of East Africa, social entrepreneurs still face substantial challenges in accessing sustainable development financing to implement innovative ideas geared towards the Agenda 2030 for sustainable development (GIIN, 2015). This study sought empirical evidence on the effect of impact investment instruments, green bonds and social impact bonds, usage on sustainable development financing by analysing the social, environmental and economic performance data of impact investors in Kenya.

1.2.3 Sustainable Development Financing in Kenya

In 1987, the Brundtland Commission articulated sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations General Assembly, 1987). The sustainable development concept champions the interrelated goals of achieving inclusive economic growth, while maximizing social welfare and preserving the world’s natural environment (Berger-Walliser & Park, 2015).

The concept of sustainable development financing seeks to align the economic, social and environmental goals to the incentives of impact investors in the global financial system. Impact investing presents the platform for realizing sustainable development financing (Park, 2018). Contrary to negative ESG screening, impact investing actively and intentionally selects investments in social and sustainable enterprises with the aim of creating positive social or environmental value (Park, 2018). The adoption of impact investment instruments in sustainable development financing is, however, hindered by scarce investment opportunities (Pluess, et al., 2015). As the number of impact investors seeking opportunities to generate social and environmental value is growing over time, there are not enough investment opportunities in social and sustainable enterprises that meet the impact investors’ expectations, thereby limiting access to the impact capital managed by impact investors (GIIN, 2019). Accordingly, innovation is necessary to create new impact investment instruments and strategies that align to the financing needs of social and sustainable enterprises addressing the sustainable development initiatives (Keohane, 2016).

The United Nations provided member states a forum to convey views on the challenges facing the world and formulation of global goals addressing the world’s sustainable development (Bebbington & Unerman, 2018). The SDGs are a guiding frame for people, planet and prosperity that were adopted by all 193 UN member states in 2015 and officially came into effect in 2016 to stimulate sustainable development over a period of 15 years in areas of critical importance for humanity and the planet (UN, 2015). Since its inception in 2015, the 2030 Agenda for sustainable development has provided a blueprint for shared prosperity in a sustainable world (UN, 2019). The year 2030 is a decade away and the world must reflect on whether impact investment instruments, target sustainable development financing (UN, 2019). UNCTAD estimates that the amount of finances required for key sectors related to the 2030 Agenda for sustainable development at the global level is approximately US dollar five (5) to seven (7) trillion per year (OECD, 2019). The 2019 SDGs report demonstrated that

while progress was being made to attain the 2030 Agenda, the sustainable development financing gap was on an upward mobility (UN, 2019).

The report observed that the world's natural environment was degenerating at an alarming rate (UN, 2019). The report also noted that the goal of achieving food security by 2030 was being jeopardized by the lack of appropriate investments. Global hunger was on an upward mobility and half of the world's population lacked essential health care services (UN, 2019). It was abundantly clear that a much deeper, faster and more ambitious response was needed to unleash the social, environmental and economic transformation needed to realize the 2030 Agenda for sustainable development. It was on this basis the study sought to examine the effect of impact investment instruments on sustainable development financing in Kenya, by focusing on the top four SDGs as identified by C-Change, that have the greatest potential to create social and environmental value. The top four SDGs are Sustainable Energy (Goal 7), Economic Growth and Employment Creation (Goal 8), Infrastructure Development and Industrialization (Goal 9) and Climate Change (Goal 13).

1.3 Problem Statement

The core of impact investing is the desire to bring about positive social and environmental value while at the same time generating financial returns on capital (Abrahams & Walaza, 2018). Kenya has made progress in supporting the impact investing industry, however, there are financing gaps for enterprises implementing social and sustainable initiatives (GSG, 2018). It was on this basis, the current study sought to examine the effect of impact investment instruments on sustainable development financing. The 2030 Agenda for sustainable development was projected to require annual financing to a tune of US dollar 1.4 trillion for low- and lower-middle-income countries. It was forecasted that more than half of the financing require to be raised by impact investors (Castellas & Ormiston, 2018). This study sought to examine sustainable development financing from a developing country perspective.

Impact investors plays an important role in sustainable development finance landscape, by channelling green bonds and social impact bonds to enterprises, pursuing sustainable business models with measurable social and environmental outcomes (Castellas & Ormiston, 2018). Impact investment instruments therefore presented an appropriate context from which, the effect of green bonds and SIBs usages on sustainable development financing could be examined (UN, 2019). The impact investors' strong emphasis on social and environmental

impact measurement provided a frame for examining the effect of green bonds and SIBs usages on sustainable development financing in Kenya (KPMG, 2018).

Five years after adoption of the 2030 Agenda for sustainable development, the SDGs have assumed the position of ‘field-level frame’ for impact investing in Australia, providing a common framework to measure and report ‘impact’ (Castellas & Ormiston, 2018). Many impact investors are actively utilising the SDGs to frame their investment and fundraising agenda. In 2017, for example, Oiko Credit, a leading impact investor, highlighted the importance of aligning their two (2) billion Euros fundraising and investment with the SDGs (ClearlySo, 2017). In order to catalyse Kenya’s realization of the 2030 Agenda for sustainable development, it was important to examine the effect of impact investment instruments, green bonds and SIBs, usage on sustainable development financing.

1.4 Research Objectives

1.4.1 General Objective

The general purpose of the study was to examine the effect of impact investment instruments usage on sustainable development financing in Kenya.

1.4.2 Specific Objectives

The specific objectives of the study were:

- i. To examine the effect of green bonds usage on sustainable development financing in Kenya.
- ii. To examine the effect of social impact bonds usage on sustainable development financing in Kenya.
- iii. To examine the joint effect of green bonds and social impact bonds usage on sustainable development financing in Kenya.

1.5 Research Questions

The research questions were:

- i. To what extent and how has the green bonds usage influenced sustainable development financing in Kenya?
- ii. To what extent and how has the social impact bonds usage influenced sustainable development financing in Kenya?
- iii. To what extent and how has the joint effect of green bonds and social impact bonds usage influenced sustainable development financing in Kenya?

1.6 Scope of the Study

The study was conducted in Kenya's impact investment industry with specific focus on the impact investors that were members of the Global Impact Investors Network as at December 2019. The study focused on the social, environmental and economic performance data of the impact investors financing social and sustainable enterprises addressing the top four SDGs as identified by C-Change, that have the greatest potential to create social and environmental value. These are Sustainable Energy (Goal 7), Economic Growth and Employment Creation (Goal 8), Infrastructure Development and Industrialization (Goal 9) and Climate Change (Goal 13). The study did not include impact investors outside of this category. The study was conducted between May and October 2020.

1.7 Significance of the Study

The results of the study make significant contribution to academia, policy and the impact investment practice by addressing the knowledge gaps identified. This study was therefore useful to practitioners in the impact investment industry such as impact investors, social and sustainable enterprises implementing the SDGs; policy makers and regulatory bodies; and academia and researchers.

1.7.1 Practitioners

This study was an educative research to the impact investors and social and sustainable enterprises in the development finance industry on the effect of impact investment instruments on sustainable development financing. The study provides insights to the impact investors on existing sustainable development financing gaps in the social and sustainable entrepreneurship landscape. The study is useful to impact investment practitioners because it makes available objective information on the actions necessary to optimize the use of impact investment instruments, green bonds and social impact bonds, in order to achieve sustainable development financing. This study further informs practitioners on the need to embrace an integrated application of impact investment instruments to improve sustainable development financing. Through this study, impact investors' employees have practical solutions on the impact investment instruments—sustainable development financing association as key drivers for successful attainment of the Agenda 2030 for sustainable development in Kenya. In addition, this study provides empirical findings in a developing country context since most studies in this area focused on developed countries context.

1.7.2 Policy Makers and Regulatory Bodies

This study was an educative research to the policy makers and regulatory bodies on the progress made in financing the 2030 Agenda for sustainable development in Kenya. The study provides insights on the policies required to address the challenges faced by impact investors financing social and sustainable enterprises, implementing sustainable development initiatives in Kenya. The findings of the study are useful to the key government bodies implementing sustainable development initiatives. Policy makers and other related government bodies are continually seeking efforts, which provide direction for the creation of social, environmental and economic value in Kenya, by creating impact investment opportunities such as the Big 4 Agenda, a social economic development plan. This study therefore contributes to policy by providing valuable recommendations on how to improve the existing guidelines, which prescribe the practice of impact investors in Kenya. Studies examining the impact investment instruments-sustainable development financing link within the impact investing industry are scarce, yet the long-term success of the impact investors and social and sustainable enterprises contributes to the attainment of the Agenda 2030 for sustainable development, which will result to economic and social empowerment of vulnerable Kenyans.

1.7.3 Academia and Researchers

Although the impact investment practice posits that impact investors generate measurable social and environmental value in addition to financial returns, not much empirical evidence has been documented on the effect of impact investment instruments on sustainable development financing in a developing country context, this study sought to contribute to this otherwise grey area. This was therefore an educative study to the academia and researchers. It contributes to the body of knowledge and form a basis for further research and academic writing on the relationship between impact investment instruments and sustainable development financing. It also gives insights on progress made towards the financing of the 2030 Agenda for sustainable development in a developing country context. This study adopted positivism research philosophy to obtain answers to the research question under inquiry. This approach was adopted because the nature of the research question required a quantitative approach, in order to empirically analyse the effect of impact investment instruments on sustainable development financing. By adopting such a philosophy, the study contributes to the knowledge base of impact investment by providing empirical evidence on the effect of impact investment instruments on sustainable development financing in Kenya.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature from academic research and practitioner writings that relates to impact investment instruments and sustainable development financing. The first section provides a detailed overview of the theoretical foundations on which this study was anchored. The second section digs deeper into the study's empirical literature review on the relevant study constructs by reviewing the effect of green bonds and social impact bonds on sustainable development financing. The chapter concludes with the discussion of the research gaps and the representation of the study variables in the conceptual model.

2.2 Theoretical Literature Review

This first section of the chapter reviews and provides a summary of theories that relate to impact investment instruments and sustainable development financing. Appropriate use of impact investment instruments can contribute to the attainment of the 2030 Agenda for sustainable development. The impact investment instruments variables, green bonds and social impact bonds, and their association with sustainable development financing in this study are anchored on the theory of change and the triple bottom line investing approach. Each of these theories are discussed in more detail in the next section.

2.2.1 The Theory of Change

Theory of change is an ongoing process of reflection to explore change, how it happens and what change means in a particular context (TOCO, 2016). The theory of change is a facet of programme theory, a long-standing field of evaluation, developed in the 1960s (Jackson, 2013). Programme theory approaches urge a more explicit focus on the theoretical underpinnings of programmes, clearer articulation of how programme planners view the linkages between inputs and outcomes, and how programmes are intended to work, to improve evaluations and programme performance (Funnell & Rogers, 2011). The coining of the term “theory of change” is found in the considerable body of theoretical and applied development in the evaluation field, especially among the work of people such as Huey Chen, Peter Rossi, Michael Quinn Patton and Carol Weiss (TOCO, 2016).

The theory of change is common in examining impact investments and sustainable development because applying the approach is cost-effective compared to other options of evaluation (Jackson, 2013). Theory of change is a cost-effective way to frame and inform an

examination of impact investment instruments performance on sustainable development financing (Funnell & Rogers, 2011). Additionally, it can be used simultaneously with a wide range of data collection methods and analysis tools. In this sense, it is an adaptable and economic examination method that foster analytic rigour and learning (Jackson, 2013).

While there is no perfect model in the practice of examination, the theory of change is an integral and explicit element in examining impact investments and sustainable development (Jackson, 2013). Theory of change was therefore used to examine the relationship between impact investment instruments and sustainable development financing (Bugg-Levine & Emerson, 2011). To what extent do green bonds and SIBs really make a difference in the lives of the marginalized and vulnerable people in Kenya? This is the core question, the real bottom line, for any examination of impact investment instruments and their effect on sustainable development financing (Jackson, 2013). The theory of change was tested in greatest detail while examining the effect of green bonds and SIBs usage on sustainable development financing.

The theory of change thus provided foundation on which the effect of impact investment instruments on sustainable development financing was examined. This theory provided this study with the justification to gather social, environmental and economic performance data of impact investors in Kenya and map the impact data to the 2030 Agenda for sustainable development. The theory of change helped understand and examine the individual and joint effect of green bonds and SIBs on sustainable development financing in Kenya.

2.2.2 The Triple Bottom Line Investing Approach

The Triple Bottom Line (TBL) investing approach is a sustainability framework that was coined by John Elkington in 1994. It examines an enterprise's social, environmental and economic impact (John, 1994). The TBL incorporates three dimensions of performance; social, environmental and financial; which makes it different from traditional frameworks since it includes environmental and social dimensions that are difficult to assign appropriate means of measurement (Slaper & Hall, 2011). The TBL framework introduced a new way for enterprises to measure sustainability and the performance of investments (Elkington, 2018).

The TBL comprehend the core of sustainable development by measuring the impact of an enterprise's activities on the universe, including its profitability and shareholder values as well as its social and environmental impact to the world (Savitz, 2006). The sustainability sector has grown rapidly, since the 1990s, when annual revenues globally were around US

dollar one (1) billion (Elkington, 2018). The United Nations SDGs market forecast suggested that future markets for sustainable products and services could yield annual revenues of over US dollar twelve (12) trillion per annum by 2030 (Elkington, 2018).

Sustainability has been an often mentioned goal by enterprises, yet measuring the degree to which an enterprise is pursuing sustainability is difficult (Slaper & Hall, 2011). It was therefore important to establish the degree of sustainability measurement in a country by examining the effect of impact investment instruments on sustainable development financing (Elkington, 2018). Interest in TBL investing approach has grown across impact investors, with many impact investors adopting the TBL sustainability framework to examine the social, environmental and economic performance of impact investment instruments, such as the green bonds and SIBs (Slaper & Hall, 2011).

The study by Sridhar and Jones explored three criticisms of the TBL investing approach by drawing out five questions from the criticisms and conducting a review of sustainability reports to examine and answer the five questions (Sridhar & Jones, 2012). The three criticisms explored are TBL measurement complexity, TBL as a systemic approach and TBL as a compliance mechanism (Sridhar & Jones, 2012). The exploration concluded that the TBL reporting system depicts a negative outlook of what sustainability should aim to be, in spite of raising awareness of impact investors to report against (Sridhar & Jones, 2012).

The TBL dimensions commonly known as the three Ps, people, planet and profits, lack a common unit of measure (Slaper & Hall, 2011). Economic outcomes can be easily measured in monetary value whereas it was not easy to measure social and environmental outcomes in monetary value (Slaper & Hall, 2011). The solution to the difficulties in monetizing all the dimensions of the TBL was the use of an index as a measurement unit, which allowed for comparisons between entities (Slaper & Hall, 2011). The TBL investing approach provided the study with justification to gather and analyse economic, environmental and social performance data of impact investors and map the impact data to the 2030 Agenda for sustainable development. The TBL helped understand and examine the individual and joint effect of green bonds and SIBs on sustainable development financing using an ordinal scale.

2.3 Empirical Literature Review

This second part of the chapter highlights the empirical studies on the effect of green bonds and social impact bonds on sustainable development financing.

2.3.1 The Effect of Green Bonds on Sustainable Development Financing

Green bonds are sustainable development financing instruments earmarked for green projects that deliver environmental and climate benefits, such as waste and pollution control, water and sanitation projects, efficient transport services and renewable energy projects (KPMG, 2018). According to (C-Change, 2017) the top SDGs with the greatest potential to create environmental and climate benefits that impact investors finance with green bonds are; SDG 7, “Ensure access to affordable, reliable, sustainable and modern energy for all” and SDG 13, “Take urgent action to combat climate change and its impacts” (UN, 2015). This study established that 54% of the impact investors financed SDG 7 with green bonds while 46% of the impact investors financed SDG 13 with green bonds, to create environmental and economic value in Kenya.

In 2007, concerned that climate change posed a significant risk to their portfolios, a group of Swedish pension funds looked for investments that would support climate-friendly solutions and realize impact (Reichelt, 2018). They approached the World Bank with whom they worked together to design a new product and in November 2008, the first green bond was issued and with it, created a new way to connect sustainable development financing from impact investors to sustainable climate projects (Georgieva, 2019). The first green bond issued in 2008 has created the blueprint for today’s green bond market of over US dollars five hundred billion (Reichelt, 2018). The 2015 World Bank’s first Green Bond Impact Report is widely recognized by the market as a standard and model for impact reporting (IBRD, 2019). Other green bond issuers now include impact investors and commercial banks (Georgieva, 2019). All green bond issuers are measuring, tracking and reporting on the social and environmental impact of their impact investments (IBRD, 2019).

The green bond market has grown from a market dominated by the World Bank, an international development institution with the sole purpose of eradicating extreme poverty and boosting shared prosperity, to one that includes a wide range of issuers such as banks, governments and impact investors (Reichelt, 2018). Impact investors are demanding data that shows how they can reduce environmental, social and governance risks in their portfolios, as well as how their investments are helping create positive value to the environment and society at large (Reichelt, 2018). Social and sustainable enterprises are engaging with impact investors to exploit opportunities presented by green bonds to realize financial returns while creating environmental value (Reichelt, 2018).

The challenge now is to ensure that the world harness the revolution and momentum of green bonds towards the financing of 2030 Agenda for sustainable development (Reichelt, 2018). A case study on Sweden bond market found that when market actors reflect on the impact of green bonds on moving economies towards sustainability, they tend not to highlight the actualisation of green projects and investments (Maltais & Nykvist, 2020). Consequently, a study by (Alonso-Conde & Rojo-Suárez, 2020) suggest that green bond financing constitutes a strong financial incentive for the investor, which can help align their objectives with those of the investee.

Green bonds have been one of the most prominent initiative in the field of sustainable development finance over the past decade; however, there is no empirical study on the effect of green bonds on financing initiatives earmarked for economic prosperity and the creation of environmental quality in a developing country context. It is for this reason; this study sought to conduct an empirical analysis on the matter, to provide new insights that can advance the contribution of green bonds in financing initiatives earmarked to the 2030 Agenda for sustainable development in Kenya.

2.3.2 The Effect of Social Impact Bonds on Sustainable Development Financing

Social impact bonds (SIBs) are sustainable development financing instruments that are performance based and whose returns are derived on rigorously measured outcomes of social programs which include employment creation, decent work environments and innovative industrialization (KPMG, 2018). According to (C-Change, 2017) the top SDGs with the greatest potential to create social and economic value that impact investors finance with SIBs are; SDG 8, “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” and SDG 9, “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation” (UN, 2015). This study established that 56% of the impact investors finance SDG 8 with SIBs while 44% of the impact investors financed SDG 9 with SIBs, to create social and economic value in Kenya.

The social impact bond principles, the premier investor-based standard in the SIB market, defines SIBs as “any type of debt instrument where the proceeds will be exclusively applied to finance or re-finance in part or in full, new and/or existing eligible social and sustainable projects” (ICMA, 2017). The original rationale of SIBs was to support social projects that, if successful, would result in cost-savings that are large enough to repay the investors funds plus interest (UNDP, 2017). The first SIB was launched in the UK to fund the rehabilitation

of ex-prisoners and reduce recidivism (UNDP, 2017). Social finance raised approximately US dollar eight (8) million from seventeen (17) impact investors, which was invested in the prison's re-entry service programme (UNDP, 2017).

The aim of the SIBs is to encourage the private sector to take on some of the risk associated with social programmes, by establishing a contract, which sets out, the sums, required from impact investors to finance social-interest programmes (Sciau, 2019). The SIB is a financial innovation in impact investing that is instrumental in sustainable development financing (Park, 2018). The defining characteristic of SIBs as compared with the standard bonds is earmarking (Park, 2018). Impact investors provide funds for investment in social and sustainable project whose terms and conditions are set forth in the SIB issue prospectus, requiring the funds to be applied purely in social and sustainable initiatives (Park, 2018).

Social and sustainable enterprises dedicated to sustainable economic growth, productive employment creation, infrastructure development and sustainable industrialization have been the biggest target of SIBs proceeds (Lancaster, 2016). The key objective of the social and sustainable enterprises must be for the benefit of the vulnerable and marginalized people in the society (ICMA, 2017). SIBs are potentially attractive to private social and sustainable enterprises in part due to branding value associated with the SIBs (Park, 2018). As impact investors show greater interest in sustainable businesses, enterprises signal their commitment to sustainable development (Greene, 2014). In doing so, more social impact investment is channelled by impact investors to social and sustainable programmes earmarked for sustainable development (Wilkie, 2015).

SIBs address the principles of sustainable development both explicitly and implicitly. In explicit terms, impact investors adopt SIBs as a means to finance the SDGs (IFC, 2017). A pioneering SIB issued by the World Bank in 2017 used the SDGs as the basis for determining both the financial and social return to impact investors (Bartholomew, 2017). As part of its 'SDGs Everyone' initiative, the World Bank committed to use the proceeds to support the financing of projects aligned to SDGs (World Bank, 2017). Implicit references to the SDGs are abounding in the SIB market. Numerous SIBs focus on providing opportunities for productive employment creation and decent work opportunities for all people. A pioneering SIB issued by the ICO was used to provide affordable financing to small, medium and micro-enterprises (Sustainalytics, 2014). SIBs are targeted towards employment creation and retention in pre-specified economically underperforming regions in developing countries; this aligns with SDG 8 (Sustainalytics, 2014). Also consistent with SDG 8 is Starbucks' SIB,

which provides direct support to coffee farmers participating in the company's sustainable direct coffee sourcing programmes (Sustainalytics, 2017). Another focus area is infrastructure development and sustainable industrialization investments, often integrated into SIBs that finance both social and environmental projects; this aligns with SDG 9 (OECD, 2015).

There was a surge in the issuance of social impact bonds that was driven by a heightened awareness of social issues, ranging from income inequality to healthcare availability to tech accessibility; however, there was no empirical study on the effect of SIBs on financing initiatives earmarked for economic prosperity and creation of social capital and equity in Kenya. It was for this reason, this study sought to conduct an empirical analysis on the matter, to provide new insights that can advance the contribution of SIBs in financing initiatives earmarked to the 2030 Agenda for sustainable development in Kenya.

2.4 Research Gaps

Studies by (OECD, 2019), (Castellas & Ormiston, 2018) and (Pomare, 2018) had shown that global impact investors are engaging in language consistent with the Agenda 2030 for sustainable development. It was however unclear on the extent which impact investment instruments influence sustainable development financing in developing countries. There was therefore a need to examine the individual and joint effects of green bonds and social impact bonds on sustainable development financing in a developing country context. This study sought to fill the gap by empirically analysing the economic, environmental and social performance data of impact investors doing impact investments in Kenya.

Literature by (KPMG, 2018) and (UNDP, 2016) further showed that private debt financing was the largest financing solution for sustainable development adopted by impact investors, with the green bonds and SIBs the common impact investment instruments used to finance social and sustainable enterprises implementing sustainable development initiatives. It was therefore important to understand the effect of green bonds and SIBs usage on sustainable development financing in Kenya. This understanding is instrumental for impact investors to understand Kenya's sustainable development financing requirements and shall contribute to the attainment of the United Nations 2030 Agenda for sustainable development.

The survey by (GIIN, 2019) revealed that more than 40% of impact investors were tracking economic, environmental and social performance of their impact investments to the SDGs. The study by (Mogapi, Sutherland, & Prangle, 2019) on the other hand revealed that there were opposing views expressed as to whether the tensions between financial return and social

impact result in trade-offs. This study sought to contribute to the body of knowledge by empirically analysing social, environmental and economic performance data of impact investors and documenting the extent of their influence on sustainable development financing in Kenya.

The impact investment and sustainable development are relatively new concepts in developing countries, hence the justification for studies in the field to inform policy making and promoting the practice. This study focused on examining the effect of impact investment instruments, green bonds and social impact bonds, usage on sustainable development financing in Kenya, a developing country.

Table 2. 1: Summary of the Knowledge Gaps

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
OECD (2019)	The focus of the study was to highlight new evidence on the role of social impact investment in financing sustainable development.	The study used an exploration approach of social impact investments around the globe.	The study provided new guidance to help social impact investments maximize the contribution of social impact funds to the 2030 Agenda for sustainable development.	The study noted that the financing for sustainable development targets middle income countries despite efforts to shift financing towards the least developed ones.	The current study focused on the effect of impact investment instruments on sustainable development financing in Kenya, a least developed country.

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
GIIN (2019)	The survey focused on the global impact investing activities and perspectives of the industry development.	The survey collected data by administering questionnaires on 266 impact investors that had invested at least USD 10 million in impact investment since their inception or had made at least five impact investment.	The survey found that the impact measurement & management is central to impact investor’s goals and practice, with more than 40% of the respondents tracking performance of their impact investments to the SDGs.	The survey targeted global impact investors, with a majority of the respondents drawn from the developed markets, limiting the generalization and transfer of the findings to the emerging markets.	The current study focused on impact investors driving universal well-being and environmental prosperity in the Kenyan context, by empirically analysing the effect of green bonds and SIBs on sustainable development financing.
Pineda-Escobar (2019)	The study focused on contributing to the debate regarding the understanding of the multiple manifestations and alternatives for the implementation of the SDGs.	The study applied a two-stage qualitative design with summative content analysis, taking Colombian context as a case study.	The study found that companies in Colombia are showing interest in incorporating the SDGs in their sustainability reporting.	The study was based on a narrow spectrum of analysis, making the generalizability of the findings obtained only applicable to those organizations included in the sample.	The current study broadened the spectrum of analysis by focusing on impact investors financing sustainable development in Kenya, a developing country context.

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
Mogapi et al. (2019)	The focus of the study was to examine how impact investors in South Africa manage the tensions between financial returns and social impact.	This was a qualitative study based on 15 semi-structured interviews with key stakeholders in the impact investment community in South Africa.	The study found that there are two opposing views expressed as to whether the tensions between financial return and social impact result in trade-offs.	The limitation of the study was inherent in the snowballing sampling approach and generalisation and transfer of the study results to other African countries was limited due to the middle-income status of South Africa.	The current study sought to document views on the tensions between financial returns and social impact by empirically analysing social, environmental and economic performance data of Kenya's impact investors.
Meschede (2019)	The study focused on investigating information dissemination related to the U.N. SDGs on German local governmental website in metropolitan areas.	The study conducted a content analysis of local governmental websites of the 15 largest German cities.	The SDGs found their way into several German cities and their corresponding governmental websites. The most prevalent topics linked to the SDGs were climate protection and energy.	The analysis of the website only provided a snapshot of reality as the content changes permanently.	The focus of the current study was to offer reliable findings on the effect of impact investment instruments on financing social and sustainable enterprises implementing SDGs in Kenya.

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
Castellas & Ormiston (2018)	The focus of the study was to understand whether and how impact investment is aligned with and contributing to SDGs in Australia.	The study used a thematic content analysis to uncover the occurrences of key words linked to the 17 SDGs within impact metrics reported by impact investors.	The study found that impact investors are engaging with language consistent with the SDGs, a possible field-level frame to guide impact strategy and measurement.	The study was based on impact data collected from impact investors a developed country and revealed that impact investors measured social outcomes more than environmental outcomes.	The current study operationalized sustainable development financing as a dependent variable with a focus on the average size of financing as key indicator, conducted in a developing country context.
Castellas, Ormiston, & Findlay (2018)	The study explored the emergence of impact investment in Australia and how it was shaping the development of the social and sustainable enterprise sector.	The study adopted sequential exploratory mixed methods approach, which included 18 interviews with impact investors and online questionnaires. The study also utilized institutional theory.	The study revealed that the impact logic may become overshadowed by the investment logic if the difference in rigor around financial and impact performance measurement is maintained.	The study's limitation was the focus of a small group of stakeholders within impact investment industry in the Australian context, which made it difficult to generalize and transfer the results to Kenya.	The current study sought to examine the effect of impact investment instruments on sustainable development financing in Kenya, a developing country.

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
Bebbington & Unerman (2018)	The study established and advanced the role of accounting in the pursuit of the U.N. SDGs, which are regarded salient point of departure for sustainable development.	The approach used was the synthesis of interdisciplinary perspectives on sustainable development and integration of this with the accounting for sustainability literature.	The study found that the SDGs provided a context for (re)invigorating accounting's contribution to sustainable development debates.	The study was too broad; it focused on the entire 17 SDGs that are underpinned by 169 targets and 232 indicators.	The current study focused on the top 4 SDGs as identified by C-Change that have the greatest potential to create social and environmental value; SDGs 7, 8, 9 and 13.
Pomare (2018)	The study focused on sustainable development goals (SDGs) and entrepreneurship from an economic and social perceptive.	The study used a multiple framework perspective to discuss opportunities and challenges facing SMEs applying the goal of ensuring sustainable consumption and sustainable production patterns.	The study found that SMEs need to act as a "good corporate citizen" with the responsibility to sustain the environment for future generations and care about the well-being of society at large.	The study faced great level of heterogeneity since the target unit of analysis of the study, SMEs, are not uniform and standardized units.	The current study focused on the Kenyan based impact investors that are members of GIIN, whose impact investee target and performance reporting and data was homogenous.

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
Roundy, Holzhauer, & Dai (2017)	The focus of the study was to answer four questions that are central to understanding the impact investing phenomenon.	This was a qualitative study that used semi-structured interviews with 31 impact investors and conducted an ethnographic observation.	The study found that impact investors represent a unique class of investors that pursue investment opportunities that result in both value creation and value capture.	The design of the study was process-focused rather than variance-focused and noted that there were unanswered questions about the performance outcomes of impact investing.	The current study sought to find answers to the unanswered questions by empirically analysing social, environmental and economic performance data of impact investors in Kenya.
Leventhal & Mehra (2017)	This study focused on extending existing research on impact measurement (IM) in social enterprises (SEs) by capturing, comparing and contrasting perceptions of IM in SEs in Australia and India.	The study used qualitative design to analyse 10 cases. The grounded theory was used to analyse the data and signalling theory used to depict how information asymmetry can be reduced by measuring and reporting on IM.	The study revealed that the emerging perceptions of IM in both countries were described according to the development of the SEs, its perceived impact and IM methods and challenges.	The design used focused on 5 cases in each country, limiting representation of the unit of analysis.	The current study used the theory of change to examine the effect of impact investment instruments on sustainable development financing and TBL investing approach as justification for gathering impact performance data.

Author(s) (Year)	Focus of the Study	Research Methods	Findings and Conclusion	Knowledge Gaps	Focus of the Current Study
Kelman (2017)	The focus of the study was to better link the parallel processes yielding international agreements on climate change and sustainable development.	The study used exploration method to link the relationship between climate change and sustainable development.	The study found that there was no reason that existed for climate change to be separated from sustainable development processes.	The study adopted a conceptual approach that was unlikely to be implemented in impact investing and sustainable development practice.	The current study used green bonds as an indicator for the independent variable. Green bonds are earmarked for green projects that lead to sustainable development.

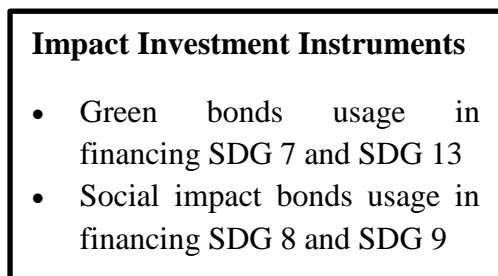
Source: Current Scholar, 2021

2.5 Conceptual Framework

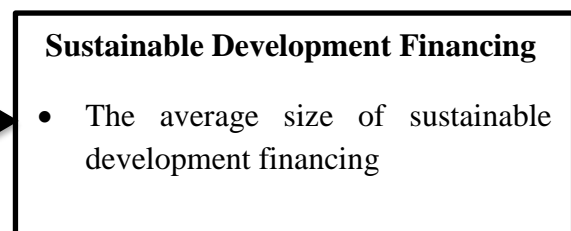
A Conceptual framework is a diagrammatic representation that describes how the study variables relate to each other. Following the proceeding literature review, a conceptual framework was derived showing the researcher’s conceptualization of the relationships between the study variables. The variables were impact investment instruments, the independent variable while sustainable development financing was the dependent variable.

Figure 2. 1: Conceptual Framework

Independent Variable



Dependent Variable



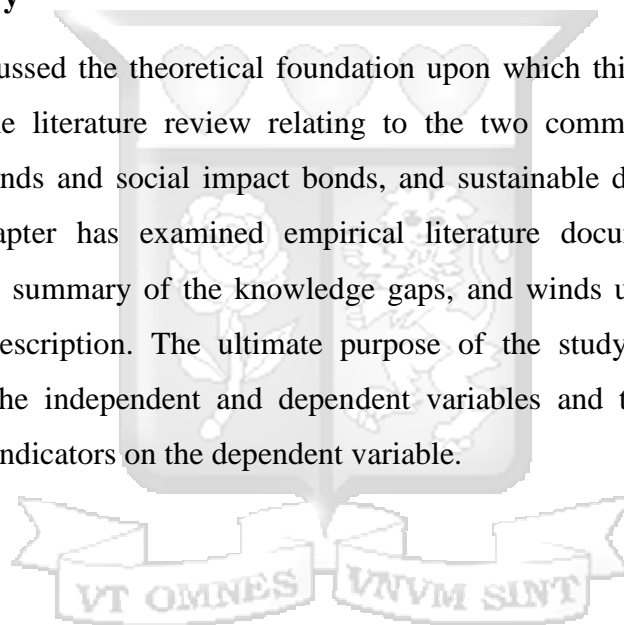
Source: Current Scholar, 2021

The conceptual framework (Figure 2.1) shows the constructs of the study variables, whose operationalization was based on existing theoretical and empirical literature as illustrated in

Table 3.1 in Chapter three. Sustainable development financing was the independent variable comprising the average size of sustainable development financing. The average size of sustainable development financing represent the amount of impact investment made by impact investors to social and sustainable enterprises implementing sustainable development initiatives. Impact investment instrument was the dependent variable comprising the green bonds usage and social impact bonds usage. The green bonds and social impact bonds are impact investment instruments adopted by the impact investors to finance social and sustainable enterprises implementing sustainable development initiatives. The above conceptual framework for the study was therefore designed based on existing theoretical and empirical literature analysed by the researcher.

2.6 Chapter Summary

This chapter has discussed the theoretical foundation upon which this study was based on, and elaborated on the literature review relating to the two common impact investment instruments, green bonds and social impact bonds, and sustainable development financing. Furthermore, the chapter has examined empirical literature documented on the study variables, presented a summary of the knowledge gaps, and winds up with the conceptual framework and its description. The ultimate purpose of the study was to examine the interaction between the independent and dependent variables and the joint effect of the independent variable indicators on the dependent variable.



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a systematic process of solving the research problem. This chapter presents a stepwise approach that was adopted to objectively analyse the effect of impact investment instruments on sustainable development financing in Kenya. This chapter highlights the research philosophy, research design and population of the study, sampling design and data collection methods and procedures that were used for this study. In addition, in order to address data quality concerns, the chapter highlights the reliability and validity tests that were carried out. Further, the chapter presents a summary of operationalization of the study variables, and ends by explaining the data analysis procedures that were used to test for the hypotheses and the study's ethical consideration.

3.2 Research Philosophy

Researchers use philosophical scientific orientation to establish methods used to obtain answers to research questions. Philosophical science is that view which enables researchers to obtain scientific explanations to scientific questions (Nyongesa, 2018). Research philosophy is therefore an overarching belief on how a phenomenon was investigated in terms of data collection and analysis (Saunders & Bristow, 2015). According to (Creswell & Creswell, 2017) research philosophy is a system of beliefs and assumptions concerning knowledge generation and development in a scientific study.

According to (Babbie, 2010) research philosophy provides an explanation for the assumptions that people make about nature of reality and it provides the orientation of the person carrying out the study. This orientation is what is known as epistemology, which deals with the study of nature and extent of knowledge. There are different types of philosophies, which guide scientific research namely positivism, interpretivism, pragmatism, realism and constructivism, however, the epistemological research philosophies that support social science research are three, namely; positivism, interpretivism and pragmatism (Saunders, Lewis, & Thornhill, 2019).

According to (Cooper & Schindler, 2014) positivism is an empirical quantitative approach in which phenomenon is isolated and observed repeatedly and data used to establish relationships, after which predictions are made about the observed and tested interrelationships. On the other hand, interpretivism is a qualitative approach that posits reality is unstable and can only be understood through subjective interpretation, which

requires intervention in reality (Cooper & Schindler, 2014). This study was guided by the positivism research philosophy because it adopted the position that reality is stable, observable and that relationship between variables can be described objectively, using data obtained from administration of questionnaires to the impact investors' employees, in order to empirically analyse the effect of impact investment instruments on sustainable development financing in Kenya.

3.3 Research Design

Research design is defined as a “blueprint for conducting a scientific study with maximum control over factors that may interfere with the validity of the findings” (Korrapati, 2016). Research design defines the processes for sampling, collecting, analyzing and interpreting data. Different research designs are appropriate for different types of studies (Almalki, 2016).

This study adopted a descriptive cross-sectional survey design. Descriptive research design involved the collection and analyzing of data to describe the phenomena under analysis (Cooper & Schindler, 2014). Descriptive studies are useful when the scholar intends to examine the relationship between variables. The descriptive research design was chosen for this study to describe the relationship between impact investment instruments and sustainable development financing, by collecting empirical data from impact investors in Kenya. There was no manipulation of data in this kind of research design, hence it was possible to accurately analyse the effect of impact investment instruments on sustainable development financing in Kenya.

This study was cross-sectional because it involved sampling of the population and collecting data from the respondents at a specific point of time. According to (Zikmund, 2013) cross-sectional studies are those in which data is collected once from a respondent, rather than repeatedly. Authors such as (Babbie, 2010), (Cooper & Schindler, 2014) and (Creswell & Creswell, 2017) suggested that many studies in the field of business were descriptive and cross-sectional in nature because data was collected at a specific point of time. In addition, the cross-sectional survey was preferred because it enabled collection of data from a pool of participants with varied characteristics and an analysis of relationships between variables in order to explain hypotheses. Further, it was preferred because it was not costly to perform and did not require plenty of time over which to collect data. The descriptive cross-sectional design was previously used in similar studies and surveys by several researchers including (Castellas & Ormiston, 2018), (Kelman, 2017) and (GIIN, 2019).

3.4 Population of the Study

Population is the total collection of elements about which the researcher wishes to make inferences for the research (Cooper & Schindler, 2014). The target population for this study was the employees of the impact investors in Kenya that were members of GIIN as at 31st December 2019. There were thirty seven (37) impact investors registered with GIIN, that were doing impact investment and sustainable development financing in Kenya, as at 31st December 2019 (GIIN, 2020). Out of the 37 impact investors, thirteen (13) were asset owners and twenty four (24) were asset managers. Due to the small population size, all impact investors registered with GIIN were targeted for this study. In respect to impact investors' employees in Kenya, there was no published data on the number of employees in the organizations. This study administered the research instrument on five (5) employees in each of the 37 impact investors that were involved in impact investment and sustainable development financing in Kenya. Five employees from each of the 37 impact investors were considered the employees that are involved in impact investment and sustainable development financing, as per the researcher's judgement. The study's target respondents were therefore one hundred and eighty five (185) employees of impact investors that were involved in impact investment and sustainable development financing in Kenya.

The previous studies that used impact investors as target population include (OECD, 2019), (GIIN, 2019) and (Castellas & Ormiston, 2018). The studies, however, focused on global impact investors as the unit of analysis. This study focused on Kenyan based impact investors as the target segment of the population. The motivation to use impact investors in Kenya as the unit of analysis for the study was the fact that the impact investors target a return on capital and measurable social and environmental outcomes by financing initiatives earmarked for sustainable development (GSG, 2018). The analysis of the effect of impact investment instruments on sustainable development financing was instrumental in determining whether the Kenyan based impact investors were influencing the financing of the 2030 Agenda for sustainable development (UN, 2019).

The unit of analysis for this study was the impact investors, while impact investors' employees that were involved in impact investments and sustainable development financing were the respondent category. The impact investors were selected for the study due to sustainable development financing the organization offer to social and sustainable enterprises. Impact investors make a significant contribution through the provision of sustainable development financing to the social and sustainable enterprises. Data collected

from the impact investors' employees was used to empirically analyse the effect of impact investment instruments on sustainable development financing in Kenya.

3.5 Sampling Design

Sampling involves the process of selecting a sample of individuals for the study that are a representative of the target population of the study. It involves taking a sub-group from the population of the study in order to take part in the research (Cooper & Schindler, 2014). Researchers must decide how to select respondents from the target population of the study in order to administer the research instrument. Sampling design is the process of selecting the elements of the population that will participate in the data collection. Sampling design also determines how many respondents will be selected for the study (Cooper & Schindler, 2014).

The study selected respondents using non-probability sampling, specifically purposive sampling, because the impact investors employees involved in impact investment and sustainable development financing were the custodians of information regarding the study variables. Cooper and Schindler (2014) suggested that purposive sampling is used when the researcher wishes to select a sample that conforms to certain criteria. The impact investors employees targeted for this study were the senior employees involved in the impact investment because by holding such positions in their impact investors, they are the most ideal respondents possessing information about the effect of the impact investments instruments on sustainable development financing in Kenya.

The respondents were impact investors employees whose sample size were determined based on two factors; the level of precision and the acceptable margin of error. The study adopted a confidence interval of $\pm 5\%$ because most business and social science research use alpha level of 0.05 (Israel, 2003). In addition, a confidence level of 95% was used because most of the data generated from this study was interval data. The 5% margin of error was therefore acceptable (Bartlett, Higgins, & Kortlik, 2001). Based on these reasons therefore, impact investors employees sample size was determined using published tables. As per the published table at 95% confidence level and 0.05 alpha levels, the recommended sample size for a study with a population of less than five hundred (500) elements is sampling the entire population (Israel, 2003). The study administered research instruments to five (5) employees in each of thirty seven (37) impact investors registered with GIIN as at 31st December 2019. The sample size for this study was therefore one hundred and eighty five (185) employees of the impact

investors in Kenya that were involved in impact investment and sustainable development financing.

3.6 Data Collection Methods

This study used primary data, which was collected by administering structured questionnaires on impact investors' employees in Kenya. Most studies on impact investments and sustainable development such as (GIIN, 2019), (Mogapi, Sutherland, & Prangley, 2019), (Roundy, Holzhauser, & Dai, 2017) and (Leventhal & Mehra, 2016) have used primary data and questionnaires as the research instrument.

An online questionnaire was used to collect primary data from the impact investors' employees. Before administering the data collection instrument, respondents were assured of complete confidentiality and anonymity regarding their responses. The questionnaires were administered virtually, due to Covid-19 and social distancing requirement. Respondents were required to state the extent to which they perceived a particular phenomenon.

3.7 Data Collection Procedures

The questionnaires were administered on Google Forms. To increase the response rate, the respondents were contacted and requested to respond to the questionnaire that was shared via email. In addition, an introductory letter from the University explaining the purpose of the study was provided to the respondents, and they were informed that participation in the study was voluntary, with an assurance of utmost confidentiality and anonymity.

The questionnaires had closed questions. Majority of closed questions that were used to collect data were a five-point Likert type scale ranging from a very small extent (1) to a very large extent (5). Similar studies that have used these scales include (GIIN, 2019), (Mogapi, Sutherland, & Prangley, 2019), (Roundy, Holzhauser, & Dai, 2017) and (Leventhal & Mehra, 2016). The questionnaire was divided into four sections. Section A obtained demographic information; Section B corrected data on sustainable development financing; Section C corrected data on the effect of green bonds on sustainable development financing and Section D corrected data on the effect of social impact bonds on sustainable development financing.

The items in the questionnaires were developed based on existing literature and SDGs indicators with some modifications to make them more suitable for the context of the study. The questionnaires were structured as follows; demographic information had eight (8) items, the sustainable development financing had six (6) items, the effect of green bonds on sustainable development financing had two (2) items and the effect of social impact bonds on

sustainable development financing had two (2) items. The filled questionnaires were scanned for consistency and completeness, before analysis.

3.8 Operationalization of Study Variables

Following a detailed review of literature, the variables of this study were operationalized and measured using multidimensional five-point Likert scales. Likert scales are a type of summated rating scale used to measure perceptions of respondents ranging from favourable to unfavourable perceptions, by presenting a series of statements to which respondents were required to state the extent to which they agree or disagree with them Saunders et al., (2016).

Likert-type scales are widely used to collect data on perceptions and views held by respondents on issues in business research, which tend to be difficult to measure if they were asked directly (Cooper & Schindler, 2014). Previous studies on impact investments that have used Likert scales include (GIIN, 2019), (Mogapi, Sutherland, & Prangley, 2019), (Roundy, Holzhauer, & Dai, 2017) and (Leventhal & Mehra, 2016). In this study, the independent variable was impact investment instruments and the dependent variable was sustainable development financing.

Table 3. 1: Operationalization of Study Variables

Variable	Variable Type	Indicators	Questionnaire	Measurement Scale
Sustainable Development Financing	Dependent Variable	<ul style="list-style-type: none"> The average size of sustainable development financing 	Q 14	Interval
Impact Investment Instrument	Independent Variable	<ul style="list-style-type: none"> Green bonds usage Social impact bonds usage 	Q 15 & 16 Q 17 & 18	Ordinal

Source: Current Scholar, 2021

3.9 Data Quality Tests

Cooper and Schindler (2014) suggest that a good research measurement tool is one that passes reliability, validity and practicality tests. Reliability test is the degree to which the measurement procedure is consistent in producing the same results on repeated trials, and is

free from random error. Validity test is the extent to which the questions measure what the researcher wishes to measure. Practicality test is the degree to which the measurement tool is economical to use, convenient or easy to administer and other persons other than the measurement tool designer can interpret results. The researcher tested for reliability and validity of the measurement tools.

3.9.1 Reliability Test

Reliability is a measure of degree to which a research instrument yields consistent results after repeated trials as well as under different conditions (Saunders, Lewis, & Thornhill, 2019). It is important that the measurement instrument used in a survey is reliable for it to measure consistently and free of random or unstable error (Cooper & Schindler, 2014).

For this study, Cronbach coefficient was used to assess the internal consistency by correlating the responses to questions in the questionnaire with each other i.e. calculating average correlation of items. The internal consistency Cronbach's Alpha (α) ranges from 0 to 1, it is therefore a coefficient that reflects how well the measurement items correlate to one another; with the closer it is to 1, the higher the reliability. The coefficient alpha value ranging from 0 (no internal consistency) to 1 (complete internal consistency) was used. Reliability factors was extracted from the Likert type of scale questions (rating 1 to 5).

Different authors recommend different cut off points for reliability. Cooper and Schindler (2014) suggest a range of 0.7 to 0.9 Cronbach's alpha coefficient to be good for reliability test. On their part, (Bagozzi & Yi, 2012) instead recommend a Cronbach alpha of 0.5 to be the reliability cut off point sufficient for further analysis. As suggested by (Bagozzi & Yi, 2012) this study adopted a cut off Cronbach alpha of 0.5.

3.9.2 Validity Test

Validity tests were carried out to determine the extent to which the research instrument measured the variables it was designed to measure. Validity is the ability of the research instrument to measure what it intends to measure in terms of accuracy and meaningfulness (Saunders et al., 2016). It is a classic analysis criterion used in science, referring to the extent to which conclusions drawn in a research provide an accurate description of the phenomenon under investigation (Cooper & Schindler, 2014). There are a variety of validity tests, for this study, construct validity and face-to-face validity tests was employed. This was because these tests measure the extent to which the set of questions measure the presence of the target constructs (Saunders et al., 2016). Face-to-face validity was dealt with by discussing the

questionnaire with supervisor and experts in the impact investing sector, to confirm their understanding of what the questions seek to measure. Construct validity on the other hand, was assessed using a factor analysis in order to observe how well the individual measures reflect their constructs. The factors were rotated using the Varimax rotation method while Principal Component Analysis method was employed to extract the factors (Cooper & Schindler, 2014).

3.10 Data Analysis

Data collected was counterchecked for accuracy, consistency, uniformity and completeness. The incomplete and inconsistently answered questionnaires were discarded. The remaining questionnaires were coded and analysed using SPSS version 17 to facilitate proper arrangement of the data for tabulation and analysis. Data analysis took place at two levels; descriptive statistics level and inferential statistics level (Creswell & Creswell, 2017).

Descriptive analysis aimed at summarizing distributions and describing a set of data on variables of the study. This analysis was used to profile respondents. It was carried out by producing frequency distributions, mean scores, standard deviations and coefficients of variation and these results was displayed in tables. In addition, cross tabulation was carried out to examine relationships within the data, which was not readily apparent when total survey responses were analysed (Saunders, Lewis, & Thornhill, 2019).

Inferential analysis was performed in order to establish the nature and magnitude of the relationships between the variables and to test the hypothesized relationships. Since the study's intention was to establish relationships between impact investment instruments and sustainable development financing, correlation analysis tests, Pearson's Product Moment Correlation and Coefficient of determination (R^2), which specifies the amount of variation in the dependent variable explained by the independent variable, were used to determine the association between the variables. To test the study hypotheses, multiple linear regression models was used (Saunders, Lewis, & Thornhill, 2019).

Multiple regression analysis was carried out to predict the dependent variable given the independent variables. P-value was used to check for significance of individual variables in the regression model, whereby a relationship was considered statistically significant if the p-value was ≤ 0.05 (Creswell & Creswell, 2017).

The ordinal logistic regression model was expressed as follows:

$$\begin{aligned} \text{logit } [P(Y = 1)] \\ = \beta_0 + (\beta_1 \times \text{GBsSDG7}) + (\beta_2 \times \text{GBsSDG13}) + (\beta_3 \times \text{SIBsSDG8}) + (\beta_4 \\ \times \text{SIBsSDG9}) + \varepsilon \end{aligned}$$

Where $Y = \begin{cases} 1 = \text{Event happening} \\ 0 = \text{Event not happening} \end{cases}$

Where:

Y = The average size of Sustainable Development Financing,

GBsSDG7 = Green bonds usage in financing SDG 7,

GBsSDG13 = Green bonds usage in financing SDG 13,

SIBsSDG8 = Social impact bonds usage in financing SDG 8,

SIBsSDG9 = Social impact bonds usage in financing SDG 9, and

ε = Error Term

3.10 Tests of Statistical Assumptions

The tests of statistical assumptions were done to establish if the collected data met the normality, multicollinearity, autocorrelation and heteroscedasticity assumptions, before data analysis was performed. It was based on these results that the measures of central tendency, dispersion, tests of significance, tests of associations and prediction was performed. Tests of statistical assumptions relied on certain assumption being met about the study variables; failure to meet these assumptions would have implied that the study results have not been trustworthy (Osborne & Waters, 2002).

3.10.1 Test for Normality

The test for normality was carried out because this study required the use of regression analysis model, to predict the dependent variable given the independent variables. This type of analysis assumed data was normally distributed (Osborne & Waters, 2002). The test for normality was necessary because the study led to regressions analysis model. In particular, the Shapiro-Wilk test was employed to test for normality. This test established the extent of normality of the data by detecting existence of skewness or kurtosis. Data was considered to be normally distributed if the test results were statistically insignificant, with significance value of no more than 0.05 (Zhang, Cheng, & Liu, 2011).

3.10.2 Test for Multicollinearity

The test for multicollinearity was conducted to assess whether a high correlation existed between the study variables. Multicollinearity is a situation, which occurs when independent variables are correlated with one another, and when this association is high, it affects the prediction abilities of the predictor variable (Mugenda & Mugenda, 2008). Multicollinearity is assumed to be absent when testing hypothesis using regression analysis, however, this has to be confirmed by conducting the multicollinearity test. The test was computed using the Variance Inflation Factors (VIF) and its reciprocal, the tolerance, to establish if one predictor had a strong linear relationship with the other predictor. A common VIF rule of thumb is that VIFs above 10 is a sign of severe multi-collinearity that affects the study (O'Brien, 2007).

3.10.3 Test for Autocorrelation

The study tested for autocorrelation using the Durbin Watson Statistic to assess the degree of similarity between time series and a lagged version of itself over successive time intervals. The ordinal logistic regression models assume that the error terms are uncorrelated with each other across observations. When the error terms are correlated with each other, it would be stated that they are autocorrelated (Brooks C. , 2019). The Durbin Watson (DW) Statistic has two critical values: an upper critical value (d_U) and a lower critical value (d_L), and there is an intermediate region where the null hypothesis of no autocorrelation can neither be rejected nor accepted. If the Durbin Watson Statistics falls between 0 and the lower critical value then there is evidence of positive autocorrelation. In addition, the test is inconclusive if the DW test value falls either between the upper critical value and lower critical value or between $4-d_U$ and $4-d_L$. However, there is evidence of negative autocorrelation if the DW statistics falls below $4-d_L$ (Brooks C. , 2019). The test was conducted using SPSS.

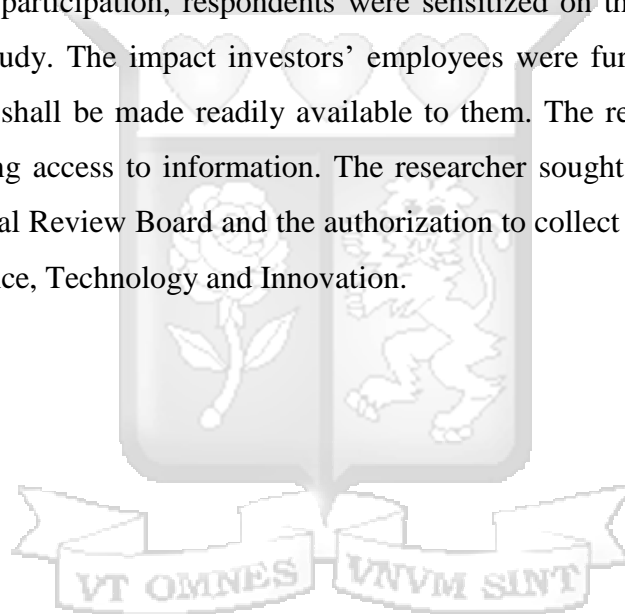
3.10.4 Test for Heteroscedasticity

The study tested for heteroscedasticity, to assess whether the variability of variables was equal or unequal across the range of values of a second variable that predicts it (Brooks C. , 2019). The Lagrange Multiplier (LM) test was conducted to determine whether there was heteroscedasticity. The LM test involved comparing χ^2 -test statistic with the χ^2 -test value from the chi square tables (Wooldridge, 2020). The χ^2 -test statistic was computed by multiplying the number of observations to the R^2 of the model. If the χ^2 -test statistic was to be greater than the χ^2 -test value from the chi square tables then the null hypothesis was to be

rejected. If the null hypothesis was rejected then there was heteroscedasticity (Brooks C. , 2019).

3.12 Ethical Consideration

Ethics refers to the standards of behaviour that guide the conduct of a person in relation to the rights of those who become the subject of their work or are affected by it (Nyongesa, 2018). In this study, the researcher upheld the ethical requirements of research by undertaking certain considerations. Participants were informed of the identity of the researcher, the academic purpose of the study, what the study entails and why it was important for them to participate in it. In addition, participants were enlightened on what the researcher intended to do with the information collected and assured them of confidentiality and anonymity. To encourage high level participation, respondents were sensitized on the potential benefits of participating in the study. The impact investors' employees were further informed that the findings of the study shall be made readily available to them. The researcher used suitable language when seeking access to information. The researcher sought ethical approval from Strathmore Institutional Review Board and the authorization to collect data from the National Commission for Science, Technology and Innovation.



CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the results obtained from primary data collected using a structured questionnaire. The chapter is organized into the following sections: the response rate, the respondents' profile, results from the diagnostic tests, results from descriptive statistics and results from relationship analysis using the correlation matrix and ordinal logistic regression model.

4.2 Response Rate

This study targeted thirty seven (37) impact investors registered with GIIN, that were doing impact investment and sustainable development financing in Kenya, as at 31st December 2019 (GIIN, 2020). The researcher targeted five (5) employees in each of the 37 impact investors that were involved in impact investment and sustainable development financing in Kenya. Therefore, one hundred and eighty-five (185) questionnaires were issued. The participants who completed and returned the questionnaires were 155, which was a response rate of 84% as shown in table 4.1. The response rate was considerably good and can be used to produce accurate and useful findings representative of the target population compared to other studies (Ngure & Waiganjo, 2017).

Table 4. 1: Response rate for the questionnaire

Questionnaire	Frequency
Number of questionnaires issued	185
Completed questionnaires	155
Percentage Response Rate	84%

Source: Primary Data, 2021

4.3 Respondents Profile

Section A of the questionnaire established the demographic profile of the respondents. The questions were framed to collect data on gender, respondent's involvement in impact investment, number of years spent in the impact investment industry, designation, age and

level of education of the respondents. These demographic elements were assessed because of their potential control effects on the study.

Table 4. 2: Demographic profile

Gender	Count	Percent
Male	71	45.8%
Female	84	54.2%
Involvement in impact investment in your organization	Count	Percent
Involvement in impact investment	155	100.0%
Number of years of service in the Impact Investment Industry	Count	Percent
1 to 5 Years	44	28.4%
6 to 10 Years	52	33.5%
11Years and Above	59	38.1%
Respondent's Designation	Count	Percent
Associates	30	19.3%
Analysts	38	24.5%
Managers	66	42.6%
Directors	21	13.6%
Education level	Count	Percent
Post graduate degree	86	55.5%
Undergraduate degree	69	44.5%
Respondents age	Count	Percent

26 to 30 Years	24	15.5%
31 to 35 Years	61	39.4%
36 to 40 Years	39	25.2%
41 Years and above	31	20.0%

Source: Primary Data, 2021

The results in table 4.2 revealed that the impact investors employees sampled were fairly balanced with female making up (54.2%) and male being (45.8%). This shows that there were slightly more females than males in the impact investment industry but with less disparity in the distribution, which may be due to roles related to impact investment, are attracting both males and females because of the desire to attain measurable social and environmental outcomes alongside financial outcomes. The results further revealed that a majority of the sampled employees, 39.4% ranged within the age bracket 31 to 35 years followed by, 25.2% who ranged between 36 to 40 Years. This showed that a majority of the employees sampled for the study were within the active age of between 30 and 40 years. This is an indication that the impact investors have most of their employees within the active age and that they could actively provide information on the effect of impact investment instruments on sustainable development financing in Kenya.

The study further revealed that 55.5% of the employees sampled had post graduate degree and 44.5% had undergraduate degree. This was a clear indication that academic achievement of employees in the impact investment industry were considered important, hence their employees were well equipped with skills and competencies on impact investment instruments and sustainable development financing. Regarding the length of service in the impact investment industry, the study revealed that a majority of the employees sampled, 38.1% had worked in the industry for over 11 years followed by 33.5% that had worked in the industry between 5 and 10 years. The study also revealed that majority of the employees sampled were Managers, 42.6%, followed by Analysts, 24.5%, Associates, 19.3% and Directors, 13.6%. This is a clear indication that the employees possessed relevant and adequate information on the study variables under examination.

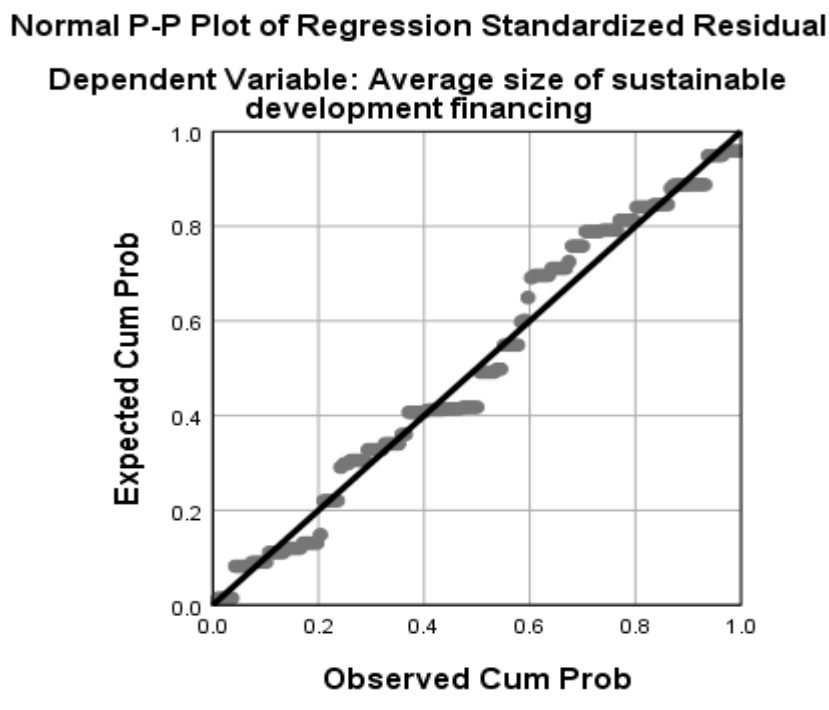
4.4 Diagnostic Tests

This section contains preliminary tests that were carried out on the models of analysis used in this study, specifically the ordinal logistic regression model.

4.4.1 Normality Test

Normality tests were done using P-P plot and histogram, which are descriptive statistics (Zhang, Cheng, & Liu, 2011). The histogram was well curved but with spikes. The P-P plot (Figure 4.1) showed some points lay outside the straight line. Skewness and kurtosis were also used to check for normality. The skewness was not zero and kurtosis was not between 3 or -3, which led to the conclusion that the data could not be used for linear regression models.

Figure 4. 1: Normal P-P Plot



Source: Primary Data, 2021

Figure 4.1 shows the p-p plots for the observed cumulative distribution function (CDF) clustered along a horizontal line of best fit. This demonstrated that the distribution of the data had a good fit in the normal distribution.

4.4.2 Multicollinearity Test

The test of multicollinearity was used to establish the degree of correlation between the two independent variables, green bonds and social impact bonds. According to (Brooks T. , 2012)

a high degree of correlation between these variables creates a problem of multicollinearity. Consistent with other studies on impact investment instruments and sustainable development financing (OECD, 2019), (Castellas & Ormiston, 2018) and (Pomare, 2018), the Variance Inflation Factor, (VIF) was used to test the statistical significance of any cases of multicollinearity.

The hypotheses were as follows:

H₀ – There is no multicollinearity

H₁ – There is multicollinearity

Table 4. 3: Test for Multicollinearity – Variance Inflation Factor

Coefficients^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Green_bond_SDG7	0.849	1.177
	Green_bond_SDG13	0.564	1.774
	Social_bond_SDG8	0.894	1.118
	Social_bond_SDG9	0.586	1.707
a. Dependent Variable: code			

Source: Primary Data, 2021

Table 4.3 presents the outcome of the test for multicollinearity carried out using tolerance and VIF. In the current study tolerance ranged between 0.564 and 0.894 and therefore its reciprocal, the VIF was between 1.118 and 1.774, which is below the maximum threshold value. According to (O'Brien, 2007) a VIF value of less than 10 implies that there is no significant multicollinearity between variables and so the null hypothesis was accepted, meaning that there was no presence of multicollinearity between the independent variables.

4.4.3 Autocorrelation Test

According to (Brooks C. , 2019) the problem of autocorrelation persists when the disturbance terms i.e. U_i and U_j are not equal to zero hence affecting the error term. This results into incorrect standard errors as advanced by (Wooldridge, 2020). This study used the Durbin Watson Statistic to test for autocorrelation as applied by prior studies (Castellas & Ormiston, 2018) and (Pomare, 2018).

The hypotheses were as follows:

H_0 – There is no autocorrelation

H_1 – There is autocorrelation

Table 4. 4: Autocorrelation – Durbin-Watson Test

Model Summary	
Model	Durbin-Watson
1	0.409
a. Predictors: (Constant), Green_bond_SDG7, Green_bond_SDG13, SIB_SDG8, SIB_SDG9	
b. Dependent Variable: code	

Source: Primary Data, 2021

From table 4.4, the calculated Durbin Watson statistics results (0.409), was far away from 2 and so the null hypothesis was rejected, meaning that there was presence of autocorrelation.

Though the practice of ‘correcting for residual autocorrelation’ has long been criticized, it is still commonly advocated and followed (Mizon, 1995). In line with Mizon (1995), autocorrelation presents an opportunity rather than a problem and can be avoided by a ‘general-to-specific’ modelling strategy to the observed modelled variables. This study used ordinal logistic regression model to mitigate the autocorrelation problem.

4.4.4 Heteroscedasticity Test

The problem of heteroscedasticity arises when there is no constant variation in the error term i.e. $\text{var}(u_t) = \sigma^2 < \infty$ (Brooks C. , 2019). Consistent with other studies, the test of heteroscedasticity was carried out by computing the Lagrange Multiplier (Wooldridge, 2020).

This was done using the value of R^2 and multiplying it with the number of observations that is $TR^2 \sim \chi^2(n)$; where n represents the number of regressors in the auxiliary regression. The Lagrange Multiplier (LM) values were thereafter compared against the chi square tabulated values that is; accept null hypothesis if LM is greater than the chi square tabulated.

The hypotheses were as follows:

H_0 – There is a constant variance

H_1 – There is no constant variance

Table 4.5 represents the outcomes generated from computing the Lagrange Multiplier (LM).

Table 4. 5: Heteroscedasticity – Lagrange Multiplier

Model	R^2	No. of observations	LM	Tabulated value (X_2) at 5%
Overall	0.173	155	26.815	(4, 0.05) = 9.49

Source: Primary Data, 2021

As illustrated by the overall model in table 4.5, the LM value (26.815) was greater than the chi square tabulated (9.49) at 95% confidence level, thus we accept the null hypothesis and conclude that the data had constant variance.

4.5 Descriptive Statistics: Impact Investment Instruments

4.5.1 The Effect of Green Bonds on Financing Sustainable Energy Initiatives

SDG 7 focuses on ensuring access to affordable, reliable, sustainable and modern energy for all with a goal of creating environmental and climate benefits (UN, 2015). Lack of access to energy supplies and transformation systems is a constraint to human and economic development. The environment provides a series of renewable and non-renewable energy sources. Increased use of non-renewable energy sources without actions to mitigate the greenhouses gases will have global climate change implications. Energy efficiency and increase of renewable energy contribute to climate change mitigation and disaster risk reduction (UNEP, 2020). To determine the extent to which impact investors are using green bonds to finance sustainable energy initiatives in Kenya, statements relating to SDG 7 indicators were developed to determine impact investors' employees' level of agreement on the use of green bonds in financing SDG 7 implementation in Kenya.

Table 4. 6: Descriptive Statistics: The use of Green Bonds in Financing SDG 7

Statement – SDG 7 Indicators	N	Mean	Median	SD	CV
We finance enterprises providing universal access to affordable, reliable and modern energy services.	155	4.02	4.00	0.793	19.73%
We finance enterprises increasing the share of renewable energy in the global energy mix.	155	4.04	4.00	0.852	21.09%
We finance clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology.	155	4.19	4.00	0.799	19.07%
We promote investment in energy infrastructure and clean energy technology.	155	4.26	4.00	0.765	17.96%
We finance technology upgrade and expansion of infrastructure for supplying modern and sustainable energy services for all.	155	4.16	4.00	0.826	19.86%
Overall Mean Score	155	4.12	4.00	0.676	19.54%

Source: Primary Data, 2021

The overall mean as far as the use of green bonds in financing SDG 7 is concerned was 4.12, standard deviation of 0.676 and the coefficient of variation of 19.54%. This depicts great usage of green bonds by impact investors in financing initiatives earmarked to SDG 7 in Kenya. The statement that “we promote investment in energy infrastructure and clean energy technology” had the highest mean (Mean = 4.26, SD = 0.765 and CV = 17.96%) implying that impact investors contributed greatly to the investment of energy infrastructure and clean energy technology, which are key for human and economic development. However, the statement that “we finance enterprises providing universal access to affordable, reliable and modern energy services” had the lowest mean though above average (Mean = 4.02, SD = 0.793 and CV = 19.73%). The highly varied statement among the sampled impact investors employees was that “we finance enterprises increasing the share of renewable energy in the global energy mix” having the highest coefficient of variation of 21.09%.

4.5.2 The Effect of Green Bonds on Financing Climate Change Initiatives

SDG 13 focuses on taking urgent action to combat climate change and its impacts with the aim of creating environmental and climate benefits for the society (UN, 2015). Climate change is increasing the frequency and intensity of extreme weather events such as heat waves, droughts, floods and tropical cyclones, aggravating water management problems, reducing agricultural production and food security, increasing health risks, damaging critical infrastructure and interrupting the provision of basic services such as water and sanitation, education, energy and transport (UNEP, 2020). To determine the extent to which impact investors are using green bonds to finance climate change initiatives in Kenya, statements relating to SDG 13 indicators were developed to determine impact investors' employees' level of agreement on the use of green bonds in financing SDG 13 implementation in Kenya.

Table 4. 7: Descriptive Statistics: The use of Green Bonds in Financing SDG 13

Statement – SDG 13 Indicators	N	Mean	Median	SD	CV
We finance initiatives strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in Kenya.	155	4.40	4.17	0.971	22.07%
We finance initiatives fostering climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production.	155	3.94	4.17	0.827	20.99%
We finance institutions educating and raising awareness on climate change mitigation, adaptation, impact reduction and early warning.	155	4.03	4.17	0.875	21.71%
We participate in capitalization and operationalization of the Green Climate Fund.	155	3.84	4.17	0.886	23.07%
We finance mechanisms for raising capacity for effective climate change-related planning and management in Kenya.	155	4.12	4.17	0.914	22.18%

We finance capacity building initiatives focusing on combating climate change impacts on women, youth and marginalized communities.	155	4.06	4.17	0.824	20.30%
Overall Mean Score	155	4.06	4.17	0.561	21.72%

Source: Primary Data, 2021

The overall mean as far as the use of green bonds in financing SDG 13 is concerned was 4.06, standard deviation of 0.561 and the coefficient of variation of 21.72%. This depicts great usage of green bonds by impact investors in financing initiatives earmarked to SDG 13 in Kenya. The statement that “we finance initiatives strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in Kenya” had the highest mean (Mean = 4.40, SD = 0.971 and CV = 22.07%) implying that impact investors contributed greatly to the Big 4 Agenda by reducing the frequency and intensity of extreme weather events which are key for improved agricultural production and food security. However, the statement that “we participate in capitalization and operationalization of the Green Climate Fund” had the lowest mean though above average (Mean = 3.84, SD = 0.886 and CV = 23.07%). The highly varied statement among the sampled impact investors employees was that “we participate in capitalization and operationalization of the Green Climate Fund” having the highest coefficient of variation of 23.07%.

4.5.3 The Effect of Social Impact Bonds on Financing Economic Growth and Employment Creation Initiatives

SDG 8 focuses on promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (UN, 2015). Preserving the environment is key to support sustainable economic growth as the natural environment plays an important role in supporting economic activities (UNEP, 2020). Natural disasters directly affect economic activities leading to very high economic losses throwing many households into poverty. Maintaining ecosystems and mitigating climate change have a great positive impact on a country’s economic and employment sectors (UNEP, 2020). To determine the extent to which impact investors are using social impact bonds to finance economic growth and employment creation initiatives in Kenya, statements relating to SDG 8 indicators were developed to determine impact investors’ employees’ level of agreement on the use of social impact bonds in financing SDG 8 implementation in Kenya.

Table 4. 8: Descriptive Statistics: The use of Social Impact Bonds in Financing SDG 8

Statement – SDG 8 Indicators	N	Mean	Median	SD	CV
We finance high levels of economic productivity by focusing on high-value adding and labour-intensive sectors.	155	4.23	4.00	0.849	20.07%
We finance enterprises that support productive activities, decent job creation, entrepreneurship, creativity and innovation.	155	4.10	4.00	0.691	16.85%
We encourage the formalization and growth of micro-, small- and medium-sized enterprises through access to financial services.	155	4.06	4.00	0.855	21.06%
We finance enterprises offering full and productive employment and equal pay for work of equal value to all.	155	3.92	4.00	0.720	18.37%
We finance initiatives substantially reducing the proportion of youth not in employment, education or training.	155	4.31	4.00	0.794	18.42%
We do not finance enterprises engaged in forced labour, modern slavery and human trafficking.	155	3.91	4.00	0.984	25.10%
We finance enterprises that promote sustainable tourism that creates jobs and promotes local culture and products.	155	3.98	4.00	1.047	26.31%
We strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.	155	4.14	4.00	0.846	20.43%
Overall Mean Score	155	4.02	4.00	0.580	20.83%

Source: Primary Data, 2021

The overall mean as far as the use of social impact bonds in financing SDG 8 is concerned was 4.02, standard deviation of 0.580 and the coefficient of variation of 20.83%. This depicts great usage of social impact bonds by impact investors in financing initiatives earmarked to SDG 8 in Kenya. The statement that “we finance initiatives substantially reducing the

proportion of youth not in employment, education or training.” had the highest mean (Mean = 4.31, SD = 0.794 and CV = 18.42%) implying that impact investors are contributing greatly to the empowerment of Kenya’s young and active population. However, the statement that “we do not finance enterprises engaged in forced labour, modern slavery and human trafficking” had the lowest mean though above average (Mean = 3.91, SD = 0.984 and CV = 25.10%). The highly varied statement among the sampled impact investors employees was that “we finance enterprises that promote sustainable tourism that creates jobs and promotes local culture and products” having the highest coefficient of variation of 26.31%.

4.5.4 The Effect of Social Impact Bonds on Financing Infrastructure Development and Industrialization Initiatives

SDG 9 focuses on building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation (UN, 2015). Construction of new greener infrastructures, retrofitting or reconfiguring existing infrastructure systems and exploiting the potential of smart technologies is greatly contributing to the reduction of environmental impacts and disaster risks as well as the construction of resilience and the increase of efficiency in the use of natural resources (UNEP, 2020). To determine the extent to which impact investors are using social impact bonds to finance infrastructure development and industrialization initiatives in Kenya, statements relating to SDG 9 indicators were developed to determine impact investors’ employees’ level of agreement on the use of social impact bonds in financing SDG 9 implementation in Kenya.

Table 4. 9: Descriptive Statistics: The use of Social Impact Bonds in Financing SDG 9

Statement – SDG 9 Indicators	N	Mean	Median	SD	CV
We finance the development of quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access.	155	4.34	4.33	0.935	21.54%
We promote inclusive and sustainable industrialization in Kenya by offering affordable credit to small-scale industrial enterprises.	155	3.81	4.33	0.874	22.94%

We finance infrastructure upgrade for sustainable retrofit industries to increase resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes in Kenya.	155	3.95	4.33	0.836	21.16%
We finance scientific research and technological capabilities upgrade of industrial sectors in Kenya.	155	3.73	4.33	0.969	25.98%
We facilitate sustainable and resilient infrastructure development through enhanced financial, technological and technical support.	155	4.09	4.33	0.952	23.28%
We finance domestic technology development, research and innovation in Kenya.	155	3.86	4.33	0.991	25.67%
We finance enterprises increasing access to ICT and striving to provide universal and affordable internet.	155	4.05	4.33	0.859	21.21%
Overall Mean Score	155	4.09	4.33	0.783	23.11%

Source: Primary Data, 2021

The overall mean as far as the use of social impact bonds in financing SDG 9 is concerned was 4.09, standard deviation of 0.783 and the coefficient of variation of 23.11%. This depicts great usage of social impact bonds by impact investors in financing initiatives earmarked to SDG 9 in Kenya. The statement that “we finance the development of quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access.” had the highest mean (Mean = 4.34, SD = 0.935 and CV = 21.54%) implying that impact investors have a great interest in sustainable and resilient infrastructure to support economic development and human well-being, which are key for a sustainable developed society. However, the statement that “we finance domestic technology development, research and innovation in Kenya” had the lowest mean though above average (Mean = 3.73, SD = 0.969 and CV = 25.98%). The highly varied statement among the sampled impact investors employees was that “we finance domestic technology development, research and innovation in Kenya” having the highest coefficient of variation of 25.98%.

4.5.5 Overall Summary of the use of Impact Investment Instruments on Sustainable Development Financing

The study further provided a summary of the descriptive statistics on the use of green bonds and social impact bonds in financing sustainable development according to the responses obtained from impact investors' employees in Kenya. These were the summaries on the use of green bonds to finance SDGs 7 and 13 and on the use of social impact bonds to finance SDGs 8 and 9. The overall summary findings were as indicated in table 4.10.

Table 4. 10: Overall Summary of the use of Impact Investment Instruments on Sustainable Development Financing

	Green_bonds_SDG7	Green_bonds_SDG13	SIBs_SDG8	SIBs_SDG9
N	155	155	155	155
Mean	4.12	4.06	4.02	4.09
Median	4.000	4.167	4.000	4.333
Mode	4.000	4.167	4.000	4.667
SD	0.676	0.561	0.580	0.783
CV	19.54%	21.72%	20.83%	23.11%
Minimum	2.500	2.167	2.250	1.000
Maximum	5.000	5.000	5.000	5.000

Source: Primary Data, 2021

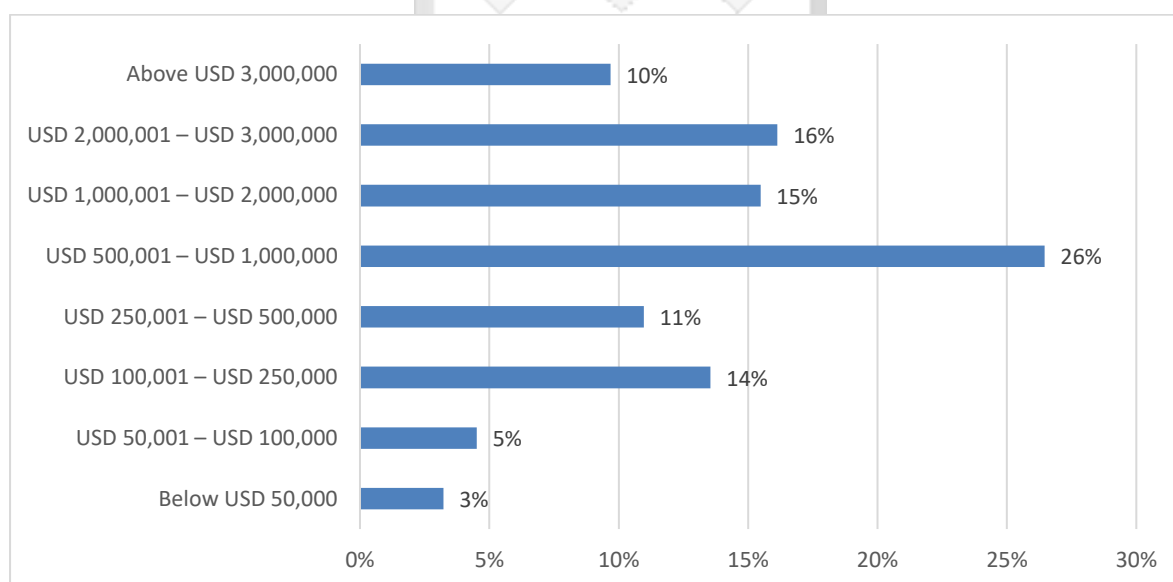
The summary show that the use of green bonds in financing SDG 7 had the highest overall mean score of 4.12, standard deviation of 0.676 and coefficient of variation of 19.54%. This was followed by the use of social impact bonds in financing SDG 9, which had an overall mean score of 4.09, standard deviation of 0.783 and coefficient of variation of 23.11%. The use of green bonds in financing SDG 13 closely followed with an overall mean score of 4.06, standard deviation of 0.561 and coefficient of variation of 21.72%. The use of social impact bonds in financing SDG 8 had the lowest with an overall mean score of 4.02, standard deviation of 0.580 and coefficient of variation of 20.83%.

While all the top four SDGs as identified by C-Change, that have the greatest potential to create social and environmental value which are Sustainable Energy (Goal 7), Economic Growth and Employment Creation (Goal 8), Infrastructure Development and Industrialization (Goal 9) and Climate Change (Goal 13) had an overall mean score above average, the results illustrate that SDG 7, Sustainable Energy, is the most funded goal by impact investors in Kenya.

4.5.6 The Average Size of Sustainable Development Financing in Kenya

The study also determined the average size of sustainable development financing made by impact investors in Kenya. This was determined based on the average size of sustainable development financing made by impact investors in social projects and sustainable enterprises in Kenya.

Figure 4. 2: The average size of sustainable development financing in Kenya



Source: Primary Data, 2021

The results revealed that social projects and sustainable enterprises requiring sustainable development financing ranging between USD 500,001 and 1,000,000 were mostly funded accounting for 26%, followed by 16% on those requiring sustainable development financing ranging between USD 2,000,001 and 3,000,000. The study’s results further revealed that social projects and sustainable enterprises requiring sustainable development financing below USD 50,000 received the least funding accounting for 3%, followed by 5% on those requiring sustainable development financing ranging between USD 50,001 and 100,000. These results agreed with the 2017 British Council report on the state of social enterprises in Kenya, which

observed that 64% of the enterprises were still in their early stage of growth and required small impact investments, but limited impact investment capital was available at that size (British Council, 2017). The results also agreed with the SDG Fund observation that, though impact investors were making great progress in creating social and environmental impact, gaps were still evident. In particular, progress had not been sufficient for the poor and the most vulnerable people. The world still faced a significant funding shortfall to finance to small and medium sized social and sustainable enterprises implementing SDGs in developing countries like Kenya (SDG Fund, 2019).

4.6 Explorative Factor Analysis

Explorative factor analysis was used to extract latent variables that explains the effect of green bonds and social impact bonds on sustainable development financing. Prior to performing explorative factor analysis, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients.

Table 4. 11: Kaiser-Meyer-Olkin and Bartlett's Test

<i>Constructs</i>	KMO	Approx. Chi-Square	df	Sig.
Green bonds_SDG 7	0.580	37.797	10	0.000
Green bonds_SDG 13	0.612	213.856	15	0.000
Social impact bonds_SDG 8	0.676	98.191	6	0.000
Social impact bonds_SDG 9	0.623	133.617	3	0.000

Source: Primary Data, 2021

Table 4.11 above shows that Kaiser-Meyer-Olkin value was above 0.5 exceeding the recommended value of 0.5 and Bartlett's test of sphericity revealed that the statistical significance supported the factorability of the correlation matrix. The tests indicated that the data was suitable for structure detection.

For SDG 7, principal components analysis revealed the presence of one component with eigenvalues exceeding 1 for all the latent variables, explaining 67.015% of the variance as shown in table 4.12 below. This implies that there were no meaningful multi factor solutions hence only one component, which was meaningful, was used further in the analysis.

Table 4. 12: Total Variance Explained for SDG 7

SDG 7: Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
2	1.342	67.105	67.105	1.342	67.105	67.105
3	0.658	32.895	100.000			

Extraction Method: Principal Component Analysis.

Source: Primary Data, 2021

To aid in the interpretation of this one component, varimax rotation was performed. The rotated solution revealed the presence of simple structure, with this component showing a number of strong loadings and all variables loading substantially on only one component.

The table 4.13 below shows the Communalities for the use of green bonds in financing SDG 7. The questions, which had extraction factor of less than 0.4, were removed from the analysis. Reliability tests were performed using Cronbach’s alpha coefficient to check the internal consistency of the resulting sub-scales.

Table 4. 13: The Communalities for SDG 7

	Statement – SDG 7 Indicators	Initial	Extraction
2	We finance enterprises increasing the share of renewable energy in the global energy mix.	1.000	0.671
3	We finance clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology.	1.000	0.671

Extraction Method: Principal Component Analysis.

Source: Primary Data, 2021

The table 4.13 above shows the Communalities before and after the extraction, where the principal component analysis works on assumption that all variables are common before

extraction at a value of 1.000. After the extraction, the factors for two components were extracted as depicted in table 4.13 above and the information for three components was lost.

For SDG 13, principal components analysis revealed the presence of one component with eigenvalues exceeding 1 for all the latent variables, explaining 51.158% of the variance as shown in table 4.14 below. This implies that there were no meaningful multi factor solutions hence only one component, which was meaningful, was used further in the analysis.

Table 4. 14: Total Variance Explained for SDG 13

SDG 13: Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
1	2.046	51.158	51.158	2.046	51.158	51.158
2	0.787	19.665	70.823			
4	0.707	17.663	88.486			
6	0.461	11.514	100.000			
Extraction Method: Principal Component Analysis.						

Source: Primary Data, 2021

To aid in the interpretation of this one component, varimax rotation was performed. The rotated solution revealed the presence of simple structure, with this component showing a number of strong loadings and all variables loading substantially on only one component.

The table 4.15 below shows the Communalities for the use of green bonds in financing SDG 13. The questions, which had extraction factor of less than 0.4, were removed from the analysis. Reliability tests were performed using Cronbach’s alpha coefficient to check the internal consistency of the resulting sub-scales.

Table 4. 15: The Communalities for SDG 13

	Statement – SDG 13 Indicators	Initial	Extraction
1	We finance initiatives strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in Kenya.	1.000	0.493
2	We finance initiatives fostering climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production.	1.000	0.481
4	We participate in capitalization and operationalization of the Green Climate Fund.	1.000	0.511
6	We finance capacity building initiatives focusing on combating climate change impacts on women, youth and marginalized communities.	1.000	0.724

Source: Primary Data, 2021

Table 4.15 shows the Communalities before and after the extraction, where the principal component analysis works on assumption that all variables are common before extraction at a value of 1.000. After the extraction, the factors for four components were extracted as depicted in table 4.15 above and the information for two components was lost.

For SDG 8, principal components analysis revealed the presence of three component with eigenvalues exceeding 1 for all the latent variables, explaining 63.8% of the variance as shown in table 4.16 below. This implies that there were meaningful multi factor solutions hence the three components, which were meaningful, were used further in the analysis.

Table 4. 16: Total Variance Explained for SDG 8

SDG 8: Total Variance Explained						
Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
1	2.079	25.985	25.985	2.040	25.498	25.498
2	1.721	21.512	47.497	1.663	20.782	46.280

3	1.304	16.304	63.800	1.402	17.520	63.800
4	0.905	11.311	75.111			
5	0.753	9.418	84.529			
6	0.490	6.129	90.658			
7	0.419	5.234	95.892			
8	0.329	4.108	100.000			

Extraction Method: Principal Component Analysis.

Source: Primary Data, 2021

To aid in the interpretation of this component S, varimax rotation was performed. The rotated solution revealed the presence of simple structure, with these components showing a number of strong loadings and all variables loading substantially on three components.

The table 4.17 below shows the Communalities for the use of social impact bonds in financing SDG 8. The questions, which had extraction factor of less than 0.4, were removed from the analysis. Reliability tests were performed using Cronbach’s alpha coefficient to check the internal consistency of the resulting sub-scales.

Table 4. 17: The Communalities for SDG 8

	Statement – SDG 8 Indicators	Initial	Extraction
1	We finance high levels of economic productivity by focusing on high-value adding and labour-intensive sectors.	1.000	0.679
2	We finance enterprises that support productive activities, decent job creation, entrepreneurship, creativity and innovation.	1.000	0.760
3	We encourage the formalization and growth of micro-, small- and medium-sized enterprises through access to financial services.	1.000	0.765
4	We finance enterprises offering full and productive employment and equal pay	1.000	0.598

	for work of equal value to all.		
5	We finance initiatives substantially reducing the proportion of youth not in employment, education or training.	1.000	0.492
6	We do not finance enterprises engaged in forced labour, modern slavery and human trafficking.	1.000	0.703
7	We finance enterprises that promote sustainable tourism that creates jobs and promotes local culture and products.	1.000	0.524
8	We strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.	1.000	0.603
Extraction Method: Principal Component Analysis.			

Source: Primary Data, 2021

Table 4.17 shows the Communalities before and after the extraction, where the principal component analysis works on assumption that all variables are common before extraction at a value of 1.000. After the extraction, the factors for all the components were extracted as depicted in table 4.17 above.

For SDG 9, principal components analysis revealed the presence of one component with eigenvalues exceeding 1 for all the latent variables, explaining 67.054% of the variance respectively as shown in table 4.18. This implies that there were no meaningful multi factor solutions hence only one component, which was meaningful, was used further in the analysis.

Table 4. 18: Total Variance Explained for SDG 9

SDG 9: Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
1	2.012	67.054	67.054	2.012	67.054	67.054

5	0.691	23.042	90.096			
6	0.297	9.904	100.000			

Extraction Method: Principal Component Analysis.

Source: Primary Data, 2021

To aid in the interpretation of this one component in each case, varimax rotation was performed. The rotated solution revealed the presence of simple structure, with this component showing a number of strong loadings and all variables loading substantially on only one component.

The table 4.19 below shows the Communalities for the use of social impact bonds in financing SDG 9. The questions, which had extraction factor of less than 0.4, were removed from the analysis. Reliability tests were performed using Cronbach’s alpha coefficient to check the internal consistency of the resulting sub-scales.

Table 4. 19: The Communalities for SDG 9

	Statement – SDG 9 Indicators	Initial	Extraction
1	We finance the development of quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access.	1.000	0.756
5	We facilitate sustainable and resilient infrastructure development through enhanced financial, technological and technical support.	1.000	0.783
6	We finance domestic technology development, research and innovation in Kenya.	1.000	0.472
Extraction Method: Principal Component Analysis.			

Source: Primary Data, 2021

Table 4.19 shows the Communalities before and after the extraction, where the principal component analysis works on assumption that all variables are common before extraction at a value of 1.000. After the extraction, the factors for three components were extracted as depicted in table 4.19 above and the information for four components was lost.

4.7 Bivariate Analysis

A bivariate analysis is a statistical method for analyzing relationship between two variables (Cui & Graetorex, 2015). Under this section, the study focused on the relationship between the new latent variables extracted using explorative factor analysis and the dependent variable, the average size of sustainable development financing. In this study, a Spearman rank-order correlation test was done on the relationship between the variables. The results are presented in table 4.20 below

Table 4. 20: Spearman's Rank-Order Correlation

Spearman's rho Correlations						
		Size of SDF	Green_bond _SDG7	Green_bond _SDG13	Social_impact _bond_SDG8	Social_impact _bond_SDG9
	N	155	155	155	155	155
The average size of SDF	R	1.000	0.008	-0.065	.296**	0.082
	p value		0.925	0.425	0.000	0.310
Green_bond _SDG7	R			.277**	.194*	.312**
	p value			0.000	0.016	0.000
Green_bond _SDG13	R			1.000	0.152	.278**
	p value				0.058	0.000
Social_impact _bond_SDG8	R				1.000	0.096
	p value					0.236
Social_impact _bond_SDG9	R					1.000
	p value					
**. Correlation is significant at the 0.01 level (2-tailed).						

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Primary Data, 2021

The study found that the average size of sustainable development financing had a weak positive and significant correlation with the use of social impact bonds in financing SDG 8, ($r=0.296, p<0.01$). The use of green bond and social impact bond in financing SDG 7, SDG 13 and SDG 9 had a weak negative relationship with the average size of sustainable development financing at 5%.

4.8 Results of the Regression Analysis

4.8.1: Model 1: The Effect of Green Bonds on Sustainable Development Financing

After confirming the existence of relationship between the average size of sustainable development financing and the use of green bonds by impact investors in financing SDG 7 and SDG 13, an ordinal logistic regression was performed to determine the effect of green bonds on the average size of sustainable development financing. According to (Long, 2012), an ordinal logistic regression is a statistical technique used to predict behaviour of ordinal level dependent variables with a set of independent variables. The method was used because the dependent variable was in Likert scale.

The fitted model was defined as;

$$\text{logit} [P(Y = 1)] = \beta_0 + \beta_1 \times GBsSDG7 + \beta_2 \times GBsSDG13 + \varepsilon$$

Where $Y = \begin{cases} 1 = \text{Event happening} \\ 0 = \text{Event not happening} \end{cases}$

Prior to determining the effects of independent variables on the dependent variable, there was need to test whether the model improved ability to predict the desired outcome. This was done by comparing a model without any of the variables, Baseline or “Intercept only” model, against one with the variables, Final, as shown in table 4.21. This comparison was to find out the model that significantly improved the fit to the data.

Table 4. 21: Model 1 Results: The use of Green Bonds in Financing SDG 7 and SDG13

Model Fitting Information

Model		-2 Log Likelihood	Chi-Square	Df	Sig.			
Intercept Only		582.582						
Final		0.000	582.582	17	0.000			
Goodness-of-Fit								
Model		Chi-Square	Df	Sig.				
Pearson		839.462	886	0.866				
Deviance		499.458	886	1.000				
Pseudo R-Square								
Cox and Snell					0.977			
Nagelkerke					0.998			
McFadden					0.976			
Parameter Estimates								
Model		Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[SDF = 1]	-4.073	1.578	6.658	1	0.010	-7.166	-0.979
	[SDF = 2]	-3.567	1.401	6.481	1	0.011	-6.312	-0.821
	[SDF = 3]	-2.930	1.176	6.208	1	0.013	-5.234	-0.625
	[SDF = 4]	-2.705	1.101	6.033	1	0.014	-4.863	-0.546
	[SDF = 5]	-2.121	0.883	5.774	1	0.016	-3.851	-0.391

	[SDF = 6]	-1.806	0.765	5.578	1	0.018	-3.306	-0.307
	[SDF = 7]	-1.208	0.580	4.340	1	0.037	-2.344	-0.071
Location	Green_bond_SDG7	-0.147	0.075	3.795	1	0.051	-0.295	0.001
	Green_bond_SDG13	-0.424	0.174	5.931	1	0.015	-0.765	-0.083
	[Use of SDGYes=0]	-0.290	0.152	3.618	1	0.057	-0.589	0.009
	Gender	0.077	0.072	1.150	1	0.284	-0.064	0.219
	Postgraduate	-0.003	0.066	0.002	1	0.961	-0.132	0.126
	1 to 5 years	-0.075	0.087	0.733	1	0.392	-0.246	0.096
	6 to 10 years	-0.066	0.098	0.453	1	0.501	-0.257	0.126
	Impact investment	0.422	0.187	5.082	1	0.024	0.055	0.789
	26 to 30 Years	-0.495	0.221	5.039	1	0.025	-0.928	-0.063
	31 to 35 Years	-0.464	0.231	4.019	1	0.045	-0.917	-0.010
	36 to 40 Years	-0.475	0.214	4.939	1	0.026	-0.893	-0.056
Scale	Use of SDGYes=0	-3.457	0.642	29.039	1	0.000	-4.714	-2.200
	Gender	-0.008	0.164	0.003	1	0.960	-0.329	0.312
	Postgraduate	-0.027	0.226	0.014	1	0.906	-0.469	0.416
	1 to 5 Years	-0.228	0.273	0.695	1	0.404	-0.764	0.308
	6 to 10 Years	-0.124	0.229	0.295	1	0.587	-0.574	0.325
	11 Years and above	0 ^a			0			
	Impact investment	-0.552	0.287	3.702	1	0.054	-1.115	0.010
	[SecB_12=1]	0 ^a			0			

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Source: Primary Data, 2021

The Omnibus Tests of Model Coefficients was used to check that the new model, with explanatory variables included, was an improvement over the baseline model. It used the chi-square tests to show whether there was a significant difference between the Log-likelihoods of the baseline model and the new model. If the new model had significantly reduced -2LL compared to the baseline then it suggested that the new model was explaining more of the variance in the outcome and was an improvement. The results revealed that the chi-square was highly significant (chi – square = 582.58, df = 17, $p < 0.01$). The new model was therefore significantly better in prediction of the dependent variable.

A goodness of fit test using Pearson’s chi-square statistic and deviance chi-square statistic was done to test whether the observed data was consistent with the fitted model. The null hypothesis being that the fit was good, if the p-value was large, then the null hypothesis was accepted. The results revealed ($p=1.00>0.05$) thus the model fitted very well leading to conclusion that the data and the model predictions were similar, and the model was good. A further analysis of the goodness of fit was assessed using the Pseudo R squared. Two models, Nagelkerke and Cox & Snell, were used for estimating the coefficient of determination. The model with the largest statistic (99.8%) was considered.

The parameter estimates in table 4.21 summarized the effect of each predictor. The sign of the coefficients for factor levels gave important interpretations regarding the effects of the predictors in the model (Yong & Pearce, 2013). A factor level with a greater coefficient indicates a greater probability of being in one of the "higher" cumulative outcome categories. The sign of a coefficient for a factor level was dependent upon that factor level's effect relative to the reference categories.

The use of green bonds in financing SDG 7 was statistically negative and significant ($Wald=3.795$, $df = 1$, $p < 0.01$) indicating that increasing use of green bonds in financing SDG 7 by impact investors was associated with decrease in odds of the average size of sustainable development financing. The Exp (-0.147) tells us that the use of green bonds to finance SDG 7 by impact investors was (0.8632) times less likely to ensure access to affordable, reliable, sustainable, and modern energy for all, holding other factors constant.

The use of green bonds in financing SDG 13 was statistically negative and significant ($Wald=5.931$, $df = 1$, $p < 0.05$) indicating that increasing use of green bonds in SDG 13 by impact investors was associated with decrease in odds of the average size of sustainable development financing. The Exp (-0.424) tells us that the use of green bonds to finance SDG 13 by impact investors was (0.6544) times less likely to contribute to urgent actions combating climate change and its impacts, holding other factors constant.

4.8.2: Model 2: The Effect of Social Impact Bonds on Sustainable Development Financing

An ordinal logistic regression model was used to access relationship between the average size of sustainable development financing and the use of social impact bonds in financing SDG 8 and SDG 9, an ordinal logistic regression was performed. The method was used because the dependent variable was in Likert scale. The model results are presented in table 4.22.

The fitted model was defined as;

$$\text{logit} [P(Y = 1)] = \beta_0 + \beta_1 \times SIBsSDG8 + \beta_4 \times SIBsSDG9 + \varepsilon$$

Where $Y = \begin{cases} 1 = \text{Event happening} \\ 0 = \text{Event not happening} \end{cases}$

Table 4. 22: Model 2 Results: The use of SIBs in Financing SDG 8 and SDG9

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	583.522			
Final	530.696	52.826	17	0.000
Goodness-of-Fit				
	Chi-Square	Df	Sig.	
Pearson	1014.618	886	0.002	
Deviance	520.122	886	1.000	
Pseudo R-Square				

Cox and Snell									0.289
Nagelkerke									0.295
McFadden									0.089
Parameter Estimates									
							95% Confidence Interval		
		Estimate	Std. Error	Wald	Df	Sig.	Lower Bound	Upper Bound	
Threshold	[SDF = 1]	8.620	4.822	3.197	1	0.074	-0.830	18.071	
	[SDF = 2]	11.410	5.479	4.338	1	0.037	0.672	22.148	
	[SDF = 3]	15.105	6.620	5.206	1	0.023	2.130	28.080	
	[SDF = 4]	16.872	7.148	5.571	1	0.018	2.862	30.881	
	[SDF = 5]	19.925	8.107	6.040	1	0.014	4.035	35.815	
	[SDF = 6]	21.704	8.682	6.249	1	0.012	4.687	38.721	
	[SDF = 7]	24.539	9.600	6.534	1	0.011	5.723	43.355	
Location	SIB_SDG8	4.412	1.690	6.812	1	0.009	1.099	7.724	
	SIB_SDG9	1.389	0.667	4.332	1	0.037	0.081	2.697	
	[Use of SDGYes=0]	3.061	1.455	4.424	1	0.035	0.209	5.913	
	Gender	0.106	0.604	0.031	1	0.861	-1.078	1.290	
	Postgraduate	-0.316	0.813	0.151	1	0.697	-1.909	1.277	
	1 to 5 years	-0.676	1.108	0.372	1	0.542	-2.847	1.495	

	6 to 10 years	-0.304	0.897	0.115	1	0.735	-2.062	1.454
	Impact investment	-1.696	0.828	4.195	1	0.041	-3.318	-0.073
	26 to 30 Years	-5.101	2.187	5.442	1	0.020	-9.387	-0.815
	31 to 35 Years	-4.180	1.803	5.373	1	0.020	-7.714	-0.646
	36 to 40 Years	-2.886	1.415	4.159	1	0.041	-5.660	-0.112
Scale	Use of SDGYes=0	-0.260	0.243	1.146	1	0.284	-0.736	0.216
	Gender	0.192	0.161	1.429	1	0.232	-0.123	0.508
	Postgraduate	0 ^a			0			
	1 to 5 Years	-0.182	0.216	0.707	1	0.400	-0.605	0.242
	6 to 10 Years	-0.194	0.261	0.553	1	0.457	-0.707	0.318
	11 Years and above	-0.165	0.225	0.537	1	0.464	-0.605	0.276
	Impact investment	1.126	0.270	17.344	1	0.000	0.596	1.656
	[SecB_12=1]	0 ^a			0			
Link function: Logit.								
a. This parameter is set to zero because it is redundant.								

Source: Primary Data, 2021

The Omnibus Tests of Model Coefficients was used to check that the new model, with explanatory variables included, was an improvement over the baseline model. It used the chi-square tests to show whether there was a significant difference between the Log-likelihoods of the baseline model and the new model. If the new model had significantly reduced -2LL

compared to the baseline then it suggested that the new model was explaining more of the variance in the outcome and was an improvement. The results revealed that the chi-square was highly significant (chi – square = 52.826, df = 17, $p < 0.01$). The new model was therefore significantly better in prediction of the dependent variable.

A goodness of fit test using Pearson's chi-square statistic and deviance chi-square statistic was done to test whether the observed data was consistent with the fitted model. The null hypothesis being that the fit was good, if the p-value was large, the null hypothesis was accepted. The results revealed ($p=1.00 > 0.05$) thus the model does fit well leading to conclusion that the data and the model predictions were similar, and the model was good. A further analysis of the goodness of fit was assessed using the Pseudo R squared. Two models, Nagelkerke and Cox & Snell, were used for estimating the coefficient of determination. The model with the largest statistic (29.5%) was considered.

The use of social impact bonds in financing SDG 8 was statistically positive and significant ($Wald=6.8129$, $df = 1$, $p < 0.01$) indicating that increasing financing of SDG 8 by impact investors was associated with the increase in odds of the average size of sustainable development financing. The Exp (4.412) tells us that the use of social impact bonds to finance SDG 8 by impact investors was (82.43) times more likely to promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all in an organization, holding other factors constant.

The use of social impact bonds in financing SDG 9 was statistically positive and significant ($Wald=4.332$, $df = 1$, $p < 0.05$) indicating that increasing financing of SDG 9 by impact investors was associated with the increase in odds of the average size of sustainable development financing. The Exp (1.389) tells us that the use of social impact bonds to finance SDG 9 by impact investors was (4.01) times more likely to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation in an organization, holding other factors constant.

4.8.3: The Overall Model: The Effect of Impact Investment Instruments on Sustainable Development Financing

The ordinal logistic regression model was used to determine the effect of impact investment instruments on sustainable development financing. The model results in presented in table 4.23.

The fitted model was defined as;

$$\text{logit } [P(Y = 1)] = \beta_0 + (\beta_1 \times GBsSDG7) + (\beta_2 \times GBsSDG13) + (\beta_3 \times SIBsSDG8) + (\beta_4 \times SIBsSDG9) + \varepsilon$$

Where $Y = \begin{cases} 1 = \text{Event happening} \\ 0 = \text{Event not happening} \end{cases}$

Table 4. 23: Overall model Results: The use of Impact Investment Instruments in Sustainable Development Financing

Model Fitting Information							
Model	-2 Log Likelihood		Chi-Square	Df	Sig.		
Intercept Only	596.681						
Final	0.000		596.681	16	0.000		
Goodness-of-Fit							
	Chi-Square		Df	Sig.			
Pearson	997.209		950	0.140			
Deviance	502.651		950	1.000			
Pseudo R-Square							
Cox and Snell				0.979			
Nagelkerke				1.000			
McFadden				1.000			
Parameter Estimates							
						95% Confidence Interval	
						Lower Bound	Upper Bound
	Estimate	Std. Error	Wald	Df	Sig.		

Threshold	[SDF = 1]	-1.209	1.401	0.745	1	0.388	-3.955	1.537
	[SDF = 2]	-0.052	1.386	0.001	1	0.970	-2.768	2.664
	[SDF = 3]	1.306	1.419	0.848	1	0.357	-1.474	4.087
	[SDF = 4]	1.752	1.439	1.482	1	0.223	-1.069	4.572
	[SDF = 5]	2.839	1.454	3.815	1	0.051	-0.010	5.688
	[SDF = 6]	3.453	1.479	5.449	1	0.020	0.554	6.352
	[SDF = 7]	4.577	1.550	8.713	1	0.003	1.538	7.615
Location	Green_bond_SDG7	-0.358	0.162	4.907	1	0.027	-0.675	-0.041
	Green_bond_SDG13	-1.211	0.268	20.379	1	0.000	-1.737	-0.685
	SIB_SDG8	1.298	0.285	20.761	1	0.000	0.740	1.856
	SIB_SDG9	1.003	0.250	16.081	1	0.000	0.513	1.493
	SDG for impact	0.528	0.273	3.744	1	0.053	-0.007	1.062
	Gender	0.049	0.139	0.124	1	0.725	-0.224	0.323
	Postgraduate	-0.035	0.141	0.062	1	0.803	-0.311	0.241
	1 to 5 Years	-0.076	0.195	0.153	1	0.696	-0.460	0.307
	6 to 10 Years	-0.043	0.192	0.050	1	0.822	-0.419	0.333
	Impact investment	0.277	0.212	1.704	1	0.192	-0.139	0.692
	26 to 30 Years	-0.911	0.315	8.380	1	0.004	-1.528	-0.294
	31 to 35 Years	-0.914	0.346	6.990	1	0.008	-1.592	-0.236
	36 to 40 Years	-0.878	0.311	7.968	1	0.005	-1.488	-0.268
Scale	SDG for impact	-3.253	1.286	6.401	1	0.011	-5.773	-0.733

	Gender	-0.035	0.164	0.045	1	0.832	-0.357	0.287
	Postgraduate	-0.053	0.166	0.103	1	0.748	-0.378	0.271

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Source: Primary Data, 2021

The Omnibus Tests of Model Coefficients shows that the chi-square was highly significant (chi – square = 596.68, df = 17, p < 0.01). The new model was significantly better in prediction of the dependent variable.

A goodness of fit test also revealed (p=1.00>0.05) that the model does fit very well leading to conclusion that the data and the model predictions were similar, and the model was good. Nagelkerke was very significant at 94.8%, which means 94.8% of the predictors could explain the dependent variable.

The use of green bonds in financing SDG 7 was statistically negative and significant (*Wald*=4.907, *df* =1, *p*<0.01) indicating that increasing financing of SDG 7 by impact investors was associated with decrease in odds of the average size of sustainable development financing. The Exp (-0.358) tells us that the use of green bonds to finance SDG 7 by impact investors was (0.699) times less likely to promote access to affordable, reliable, sustainable, and modern energy for all, holding other factors constant.

The use of green bonds in financing SDG 13 was statistically negative and significant (*Wald*=20.379, *df* =1, *p*<0.01) indicating that increasing financing of SDG 13 by impact investors was associated with decrease in odds of the average size of sustainable development financing. The Exp (-1.211) tells us that the use of green bonds to finance SDG 13 by impact investors was (0.30) times less likely to contribute to actions that combat climate change and its impacts, holding other factors constant.

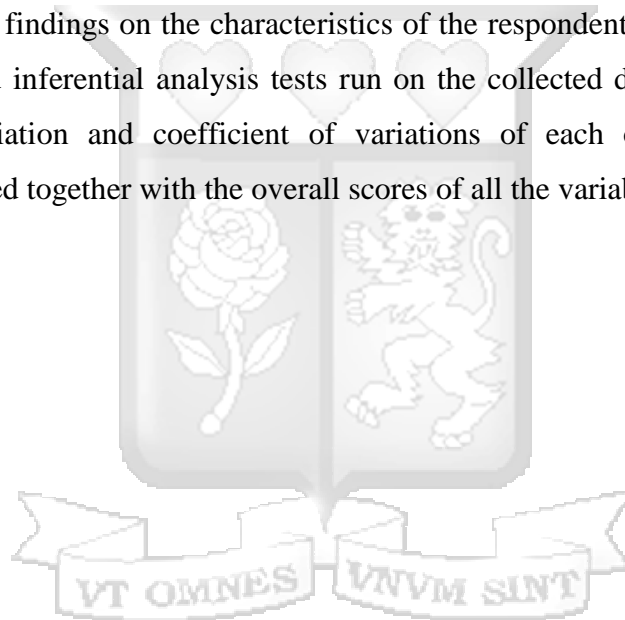
The use of social impact bonds in financing SDG 8 was statistically positive and significant (*Wald*=20.761, *df* =1, *p*<0.01) indicating that increasing financing of SDG 8 by impact investors was associated with the increase in odds of the average size of sustainable development financing. The Exp (1.298) tells us that the use of social impact bonds to finance SDG 8 by impact investors was (3.66) times more likely to promote sustained,

inclusive, and sustainable economic growth, full and productive employment and decent work for all in an organization, holding other factors constant.

The use of social impact bonds in financing SDG 9 was statistically positive and significant ($Wald=16.081$, $df =1$, $p<0.01$) indicating that increasing financing of SDG 9 by impact investors was associated with the increase in odds of the average size of sustainable development financing. The Exp (1.003) tells us that the use of social impact bonds to finance SDG 9 by impact investors was (2.73) times more likely to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation in an organization, holding other factors constant.

4.9 Chapter Summary

This chapter provides findings on the characteristics of the respondents by presenting results of the descriptive and inferential analysis tests run on the collected data. In addition, mean scores, standard deviation and coefficient of variations of each of the study variable indicators are presented together with the overall scores of all the variables.



CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to examine the effect of impact investment instruments usage on sustainable development financing in Kenya. In this chapter, a discussion of the major findings of the study are presented first, followed by conclusions, theoretical and practical implications of this study and recommendations are suggested thereafter. The chapter further proposes areas for future research and winds up with the disclosure of limitations faced during this study. The study sought to achieve two objectives namely, to examine the effect of green bonds usage on sustainable development financing in Kenya and to examine the effect of social impact bonds usage on sustainable development financing in Kenya. A discussion of the summary of findings on each of these is presented in the next section.

5.2 Discussion of the Findings

5.2.1 The Effect of Green Bonds on Sustainable Development Financing

A strong association between the use of green bonds as impact investment instruments and sustainable development financing has been reported in the extant literature to the extent that green bonds are considered key in financing sustainable energy and climate change initiatives that create environmental and economic value. The first objective of this study was to examine the effect of green bonds usage by impact investors on sustainable development financing in Kenya. This was done by examining the extent to which impact investors are financing social projects and sustainable enterprises implementing SDG 7 and SDG 13 indicators, using green bonds as impact investment instruments.

The descriptive statistics summary showed that the use of green bonds in financing sustainable energy initiatives had the highest overall mean score. This was closely followed by the use of green bonds in financing climate change initiatives. The findings suggest that the use of impact investment instruments in financing sustainable energy and climate change initiatives play a great role in sustainable development financing. This study established that 54% and 46% of the impact investors, finance sustainable energy initiatives and climate change initiatives with green bonds respectively, to create environmental and economic value in Kenya. These findings confirm that the impact investors are harnessing the revolution and

momentum of green bonds towards the financing of 2030 Agenda for sustainable development (Reichelt, 2018).

The results of the regression were somewhat surprising because they indicated that the use of green bonds in financing sustainable energy and climate change initiatives had significant negative relationship to the average size of sustainable development financing. The implication of such results is that, contrary to expectations, a unit increase in the use of green bonds in financing sustainable energy and climate change initiatives causes a decrease in the average size of sustainable development financing.

Additionally, though the finding was unexpected, it denotes that on their own the use of green bonds in financing sustainable energy and climate change initiatives are not good predictors of the average size of sustainable development financing, instead, they seem to depend on other factors to influence the average size of sustainable development financing. This view is supported by (Mogapi, Sutherland, & Prangley, 2019) who established that there were opposing views expressed as to whether the tensions between financial return and social impact result in trade-offs. This implies that the use of green bonds in financing sustainable energy and climate change initiatives cannot be effective in influencing the average size of sustainable development financing without the support of other sustainable development indicators.

Authors like (Pluess, Smruti, & Pelaez, 2015) further pointed out that the growth of impact investing as a means of sustainable development financing was hindered by the paucity of scalable financial products. As the number of impact investors seeking opportunities to generate impact has been growing over time, there has been no enough investment opportunities in social and sustainable enterprises that meet the impact investors risk-return expectations, thereby limiting access to the enormous pools of capital managed by impact investors (GIIN, 2019). Accordingly, innovation is necessary to create new impact investment instruments and strategies that align to the financing needs of social and sustainable enterprises addressing the sustainable development initiatives (Keohane, 2016).

In view of the above, the implication of the findings is that as impact investors strive to target social and sustainable enterprises with green bonds, they should proactively keep an eye on social and sustainable enterprises that act as “good corporate citizen” with the responsibility to sustain the environment for future generations and care about the well-being of the society at large. As pointed out by (Kelman, 2017) there was no reason that existed for climate

change initiatives to be separated from the sustainable development process. The use of green bonds in financing sustainable energy and climate change initiatives should therefore not be viewed as a separate impact investment instrument for sustainable development financing but rather as a core element of the impact investment process and used in combination with other impact investment instruments.

5.2.2 The Effect of Social Impact Bonds on Sustainable Development Financing

There was a strong relationship between the use of social impact bonds as impact investment instruments and sustainable development financing reported in the extant literature to the extent that social impact bonds are considered key in financing economic growth, employment creation, infrastructure development and industrialization initiatives that create social and economic value. The second objective of this study was to examine the effect of social impact bonds usage by impact investors on sustainable development financing in Kenya. This was done by examining the extent to which impact investors are financing social projects and sustainable enterprises implementing SDG 8 and SDG 9 indicators, using social impact bonds as impact investment instruments.

The descriptive statistics summary showed that the use of social impact bonds in financing infrastructure development and industrialization initiatives had the highest overall mean score. This was closely followed by the use of social impact bonds in financing economic growth and employment creation initiatives. The findings suggest that the use of impact investment instruments in financing economic growth, employment creation, infrastructure development and industrialization initiatives play a great role in sustainable development financing in Kenya. This study established that 56% and 44% of the impact investors financed, economic growth and employment creation initiatives and infrastructure development and industrialization initiatives respectively, with social impact bonds, to create social and economic value in Kenya. These findings confirm that the impact investors are dedicated to promoting sustainable economic growth, productive employment creation, infrastructure development and sustainable industrialization (Lancaster, 2016).

The results of the regression indicated that the use of social impact bonds in financing economic growth, employment creation, infrastructure development and industrialization initiatives had significant positive relationship to the average size of sustainable development financing. The results support the SIBs original rationale of supporting social and sustainable projects that result in cost-savings that are large enough to repay the impact investors funds

plus interest (UNDP, 2017). The significant positive relationships of SIBs and sustainable development financing confirms their attractiveness to both social and sustainable enterprises and impact investors (Park, 2018). Additionally, the findings concur with (Castellas, Ormiston, & Findlay, 2018) findings that impact investors focused on social outcomes more than environmental outcomes.

The current study thus supports the assertion that the use of social impact bonds as impact investment instruments has a direct association with sustainable development financing, suggesting that those impact investors who adopt social impact bonds have a better position in creating social and economic value that result in sustainable development. If impact investors are to achieve better levels of sustainable development financing and consequently contribute to the realization of Agenda 2030 for sustainable development in Kenya, then they need to allocate more impact capital to social impact bonds earmarked for economic growth, employment creation, and infrastructure development and industrialization initiatives.

5.3 Conclusions

This study sought to address the issue of the effect of impact investment instruments on sustainable development financing in Kenya. This issue was empirically analysed by examining if the green bonds had statistically significant effect on the financing of sustainable energy and climate change initiatives and whether social impact bonds had statistically significant effect on the financing of economic growth, employment creation, infrastructure development and industrialization initiatives.

In view of the findings, the study concluded that social impact bonds had a significant positive effect on sustainable development financing whereas green bonds had a negative effect on sustainable development financing. The results suggest that social impact bonds are important strategic impact investment instruments and hence impact investors should adopt them in financing social and sustainable initiatives earmarked for sustainable development. The study, however, revealed that sole adoption of green bonds as impact investment instruments negatively affected sustainable development financing in Kenya. The findings showed that between social impact bonds and green bonds, the latter were not direct determinants of sustainable development financing in Kenya. The negative influence of green bonds on sustainable development financing could be attributed to lack of frequent research by the impact investors on the contribution of green bonds in addressing sustainable energy

and climate change initiatives, yet this kind of study would reveal the gaps that if addressed would increase the contribution of green bonds in sustainable development financing.

Impact investors in Kenya should therefore adopt an optimum mix of impact investment instruments in order to have maximum contribution to the realization of the agenda 2030 for sustainable development. Emphasis should be on employing an optimum mix in order to create both social and environmental value while realizing economic returns on impact investments. This calls for impact investors to be both socially and environmentally focused while making impact investments and employ innovation in order to create more impact and contribute to the realization of the SDGs indicators in Kenya.

5.4 Contribution to Knowledge

The current study sought to examine the association of impact investment instruments and sustainable development financing in Kenya. In particular, the study sought to examine the effect of green bonds and social impact bonds usage on sustainable development financing. It also sought to examine whether the joint effect of these variables on sustainable development financing was greater than the individual effect. This section presents the theoretical, practical and policy contributions of the study.

This study sought to contribute to the theoretical foundation on impact investments and sustainable development financing by conceptualizing and obtaining empirical evidence on the direct and joint effect of the study variables, green bonds and social impact bonds, on sustainable development financing. Conceptually, existing literature on impact investment instruments suggests that both green bonds and social impact bonds have direct positive effect on sustainable development financing. The current study has established that only social impact bonds have direct positive effect, green bonds on the other hand, have direct negative effect. The joint effect of the two variables on sustainable development financing is direct and positive.

Aside from the aforementioned conceptual contribution, the current study makes an empirical contribution by providing evidence on the nature of direct and joint effect existing between the study variables, green bonds, social impact bonds and sustainable development financing. Most previous empirical studies only shown that global impact investors are engaging in language consistent with the Agenda 2030 for sustainable development (OECD, 2019), (Castellas & Ormiston, 2018) and (Pomare, 2018). They, however, did not conclusively examine the extent, which impact investment instruments influence sustainable development

financing in developing countries. Although (KPMG, 2018) and (UNDP, 2016) showed that green bonds and social impact bonds were the common impact investment instruments used to finance social and sustainable enterprises implementing sustainable development initiatives, empirical evidence on the direct and joint effect of these variables was lacking. This study therefore fills this research gap by providing empirical evidence on: first, green bonds as a predictor of sustainable development financing; second, on social impact bonds as a predictor of sustainable development financing; and finally, empirical evidence on the joint effect of these variables.

The positive and significance findings on the effect of social impact bonds on sustainable development financing are consistent with existing studies hence affirming the contribution of social impact bonds in the realization of the Agenda 2030 for sustainable development (Greene, 2014), (Bartholomew, 2017) and (Sustainalytics, 2017). The results of this study support the hypothesized direct relationship between social impact bonds and sustainable development financing. The unexpected negative findings on the effect of green bonds on sustainable development financing contributes to the body of literature on green bonds and sustainable development financing by revealing the complementary role of impact investment instruments on sustainable development financing. The current study therefore contributes to the contextual gap by providing a new understanding of the relationship between impact investment instruments and sustainable development financing, with respect to the impact investment industry in a developing country context.

The study results provide valuable insights into how impact investment instruments may be designed and implemented by impact investors to attain maximum contribution to sustainable development financing. The study findings suggest that impact investors that adopt optimum mix of impact investment instruments perform better in contributing to the Agenda 2030 for sustainable development than those, which adopt individual impact investment instrument.

5.5 Recommendations

Impact investors play a significant role in economies by seeking both financial returns and measurable social and environmental value from social and sustainable enterprises (Roundy, Holzhauser, & Dai, 2017). The findings suggest that impact investment instruments have statistical influence on sustainable development financing with social impact bonds having a positive influence and green bonds having a negative influence. The study results have some

implications that inform recommendations for practice and policy in the impact investment industry in Kenya as discussed in the next section.

5.5.1 Recommendations for Practice

This study recommends that impact investors adopt optimum mix of impact investment instruments to achieve maximum impact and contribute greatly to the attainment of the Agenda 2030 for sustainable development in Kenya. Additionally, the study recommends further impact investment industry research to add to the body of knowledge, the relationship of other impact investment instruments such as development bonds and equity-like debt used by impact investors on sustainable development financing. This is because although findings of the current study support that there is a relationship between impact investment instruments, social impact bonds and green bonds, and sustainable development financing, they do not address the effect of other impact investment instruments used by impact investors to finance sustainable development.

5.5.2 Recommendations for Policy

Governments widely recognize impact investors for their role hence making their scope of operations and performance a matter of policy concern. The current study makes the following noteworthy contributions to policy makers.

First, the study revealed that most impact investors were investor based organizations, implying that majority may be driven to pursue financial goals at the expense of social and environmental goals; this means it may be necessary for the government to step in and develop deliberate policies aimed at encouraging impact investors to give equal attention to achieving their fundamental mission of achieving both financial returns and measurable social and environmental returns from social and sustainable enterprises.

Secondly, the study findings revealed the negative relationship between green bonds and sustainable development financing, therefore policy makers could formulate deliberate policy measures which mandate impact investors to develop social and environment performance management practices for measuring and reporting their social and environment performance. This will ensure that the impact investors are not financing social and sustainable enterprises in part due to branding value only, but also contribute to the attainment of the Agenda 2030 for sustainable development.

Finally, policy makers can formulate and enact policies that encourage commercial financial services provider to embrace impact investment instruments in order to accelerate the

realization of the Agenda 2030 for sustainable development. Such policy interventions would go a long way in promoting the growth and development of the impact investment industry in Kenya and catalysing their contribution to the realization of the Agenda 2030 for sustainable development. This would result to economic and social empowerment of vulnerable Kenyans.

5.6 Areas of Further Research

The findings of the current study add to the existing conceptual and empirical evidence which suggests that impact investment instruments affect sustainable development financing in Kenya by providing evidence on the direct and joint effects of social impact bonds and green bonds. Additional studies are, however, necessary to establish the effect of other impact investment instruments on sustainable development financing. Methodically, future research is recommended to determine the cause-effect of the study variables in order to further understand the association. This is because the current study used a cross sectional study approach, which was limiting in as far as ability to detect casual effects of variables.

A longitudinal study in particular would generate evidence on the causal linkages, which cannot be obtained in cross sectional research design. Additionally, a qualitative research approach could be used to establish the in-depth perceptions and opinions of employees of impact investors with regard to the relationship between the variables. Future studies could collect and analyse secondary data on the study variables over a period of time.

Contextually, future studies could replicate this research, but on commercial and philanthropy oriented sectors such as commercial investors, banks, NGOs and foundations or replicate it in other developing countries to determine the universality and significance of impact investment instruments on sustainable development financing. Such examination will shed more light into the contribution of different sectors to the Agenda 2030 for sustainable development.

5.7 Limitations of the Research

Even though this study contributes to theoretical foundation and provides empirical evidence on the relationship between impact investment instruments and sustainable development financing, the findings are not without some limitations.

The first limitation was that the study focused on a limited number of variables yet the sustainable development financing might be influenced by many other factors. This limitation, however, provides opportunity for further studies to investigate other variables,

which may help explain further the connection between impact investment instruments and sustainable development financing.

Secondly, the study used a quantitative cross-sectional research design in which respondents were required to respond to questionnaires once, thus placing a constraint on determining the actual contribution of impact investment instruments to sustainable development financing in the long term. An interview guide would have produced in-depth opinions and perceptions by respondents on the study variables, which would provide further insights into the nature of association between the variables.

Finally, the current study used a relatively small population in comparison with the target population because many impact investors in Kenya were not registered with the umbrella body GIIN. This restricted the number of impact investors that participated in the survey.



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APPENDICES

Appendix 1: Introductory Letter from Strathmore University

Old Strathmore Rd, Moshi on Fa 016,
P.O. Box 59657 00200, Nairobi Kenya.
Cell: +254 703 41 1000, Twitter: @Strathmore
Email: info@strathmore.ac.ke or vis. www.strathmore.edu



Friday, 08 May 2020

RE: FACILITATION OF RESEARCH – MATI BENSON NJIRU

This is to introduce Mati Benson Njiru who is a Master of Science in Development Finance student at Strathmore University Business School, admission number MDF 54346 /17. As part of our MDF Program, Benson is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MDF course. To this effect, he would like to request for appropriate data from your organization.

Benson is undertaking a research paper on “The Effect of Impact Investment Instruments on Sustainable Development Financing in Kenya.” The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MDF seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

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

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Veronica Muniu".

Veronica Muniu,
Manager | Graduate Programmes, Strathmore University Business School

Appendix 2: Ethical Clearance from Strathmore University



Strathmore
UNIVERSITY

7th May 2020

Mr Njiru, Benson
benson.mati@strathmore.edu

Dear Mr Njiru,

RE: The Effect of Impact Investment Instruments on Sustainable Development Financing in Kenya

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0779/20**. The approval period is **7th May 2020 to 6th May 2021**.

This approval is subject to compliance with the following requirements:

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

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

Yours sincerely,



Dr Virginia Gichuru,
Secretary: SU-IERC


Cc: Prof Fred Were,
Chairperson; SU-IERC



Old Sangale Rd, Madaraka Estate, PO Box 58857-00200, Nairobi, Kenya. Tel +254 (0)703 094000
Email info@strathmore.edu www.strathmore.edu


Appendix 3: Permit from National Commission for Science, Technology and Innovation


REPUBLIC OF KENYA


**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

RefNo: **439201** Date of Issue: **15/May/2020**


RESEARCH LICENSE




This is to Certify that Mr.. Benson Njiru Mati of Strathmore University, has been licensed to conduct research in Nairobi on the topic: The Effect of Impact Investment Instruments on Sustainable Development Financing in Kenya for the period ending : 15/May/2021.

License No: **NACOSTI/P/20/4959**

439201
Applicant Identification Number


Director General
**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

Verification QR Code



**NOTE: This is a computer generated License. To verify the authenticity of this document,
Scan the QR Code using QR scanner application.**

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix 4: Research Instrument – Questionnaire

Serial Number.....

The questionnaire aims to collect data from Impact Investors in Kenya with the goal of examining “**The Effect of Impact Investment Instruments on Sustainable Development Financing in Kenya**”. Data obtained will be held in confidence and the identity of respondents will be kept anonymous. Your cooperation in this data collection exercise is highly appreciated.

Section A: Demographic Information

Respondent Details:

- 1) What is the name of your organization?
.....
- 2) Respondent’s Department
- 3) Respondent’s Designation
- 4) Respondent’s Gender (tick the appropriate one)
Female []
Male []
- 5) Are you involved in impact investment in your organization? (tick the appropriate one)
Yes []
No []
- 6) Number of years of service in the Impact Investment Industry (tick the appropriate one)
1 to 5 Years []
6 to 10 Years []
11 Years and above []
- 7) Respondent’s Age (tick the appropriate one)
26 to 30 Years []
31 to 35 Years []
36 to 40 Years []
41 Years and above []
- 8) Respondent’s highest education level attained (tick the appropriate one)
Postgraduate degree []
Undergraduate degree []
Other.....

Section B: Sustainable Development Financing

9) Does your organization finance social enterprises and projects aligned to the United Nations SDGs in Kenya?

Yes []

No []

10) If the answer in Question 9 above is yes, what are the SDGs that your organization finances with green bonds and social impact bonds, and perceives to have the greatest potential to create social and environmental impact in Kenya?

SDG 1: No Poverty []

SDG 2: Zero Hunger []

SDG 3: Good Health and Well-being []

SDG 4: Quality Education []

SDG 5: Gender Equality []

SDG 6: Clean Water and Sanitation []

SDG 7: Affordable and Clean Energy []

SDG 8: Decent Work and Economic Growth []

SDG 9: Industry, Innovation and Infrastructure []

SDG 10: Reduced Inequalities []

SDG 11: Sustainable Cities and Communities []

SDG 12: Responsible Consumption and Production []

SDG 13: Climate Change []

SDG 14: Life Below Water []

SDG 15: Life on Land []

SDG 16: Peace, Justice and Institutions []

SDG 17: Partnerships for the Goals []

11) Does your organization use the United Nations SDGs as a 'field-level frame' for measuring and reporting 'impact' on investments?

Yes []

No []

12) Does your organization consider Kenya saturated with impact investments that are financing initiatives aligned to the United Nations SDGs?

Yes []

No []

13) How many social projects and social and sustainable enterprises has your organization financed with green bonds and social impact bonds in Kenya since 2016?

Green bonds []
 Social impact bonds []

14) What is the average size of sustainable development financing made by your organization in a social project and social and sustainable enterprise in Kenya?

Below USD 50,000 []
 USD 50,001 – USD 100,000 []
 USD 100,001 – USD 250,000 []
 USD 250,001 – USD 500,000 []
 USD 500,001 – USD 1,000,000 []
 USD 1,000,001 – USD 2,000,000 []
 USD 2,000,001 – USD 3,000,000 []
 Above USD 3,000,000 []

Section C: The Effect of Green Bonds on Sustainable Development Financing

15) Please indicate the extent of your agreement with the following statements in relationship to the use of green bonds in financing SDG 7, “Ensure access to affordable, reliable, sustainable and modern energy for all”, by your organization.

	Statement	Not at all (1)	Small Extent (2)	Average Extent (3)	Large Extent (4)	Very Large Extent (5)
1.	We finance enterprises providing universal access to affordable, reliable and modern energy services.					
2.	We finance enterprises increasing the share of renewable energy in the global energy mix.					
3.	We finance clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology.					

4.	We promote investment in energy infrastructure and clean energy technology.					
5.	We finance technology upgrade and expansion of infrastructure for supplying modern and sustainable energy services for all in Kenya.					

16) Please indicate the extent of your agreement with the following statements in relationship to the use of green bonds in financing SDG 13, “Take urgent action to combat climate change and its impacts”, by your organization.

	Statement	Not at all (1)	Small Extent (2)	Average Extent (3)	Large Extent (4)	Very Large Extent (5)
1.	We finance initiatives strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in Kenya.					
2.	We finance initiatives fostering climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production.					
3.	We finance institutions educating and raising awareness on climate change mitigation, adaptation, impact reduction and early warning.					
4.	We participate in capitalization and operationalization of the Green Climate Fund.					
5.	We finance mechanisms for raising capacity for effective climate change-related planning and management in Kenya.					

6.	We finance capacity building initiatives focusing on combating climate change impacts on women, youth and marginalized communities.					
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Section D: The Effect of Social Impact Bonds on Sustainable Development Financing

17) Please indicate the extent of your agreement with the following statements in relationship to the use of social impact bonds in financing SDG 8, “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, by your organization.

	Statement	Not at all (1)	Small Extent (2)	Average Extent (3)	Large Extent (4)	Very Large Extent (5)
1.	We finance high levels of economic productivity by focusing on high-value adding and labour-intensive sectors.					
2.	We finance enterprises that support productive activities, decent job creation, entrepreneurship, creativity and innovation.					
3.	We encourage the formalization and growth of micro-, small- and medium-sized enterprises through access to financial services.					
4.	We finance enterprises offering full and productive employment and equal pay for work of equal value to all.					
5.	We finance initiatives substantially reducing the proportion of youth not in employment, education or training.					

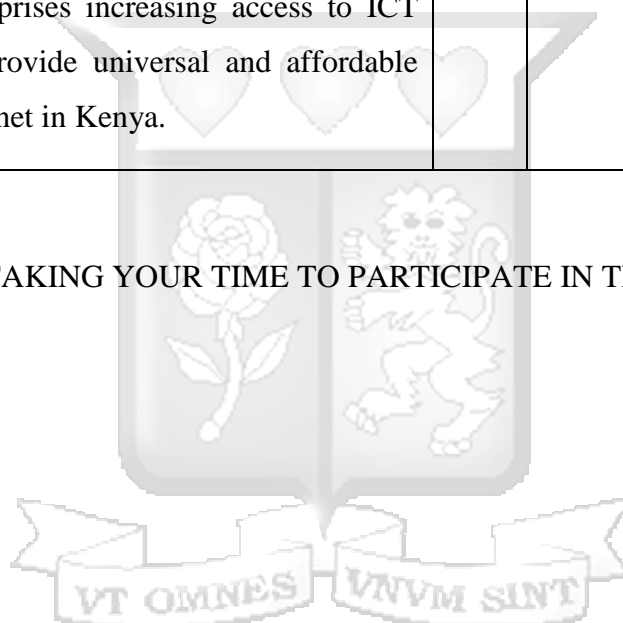
6.	We do not finance enterprises engaged in forced labour, modern slavery and human trafficking.					
7.	We finance enterprises that promote sustainable tourism that creates jobs and promotes local culture and products.					
8.	We strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.					

18) Please indicate the extent of your agreement with the following statements in relationship to the use of social impact bonds in financing SDG 9, “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”, by your organization.

	Statement	Not at all (1)	Small Extent (2)	Average Extent (3)	Large Extent (4)	Very Large Extent (5)
1.	We finance the development of quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access.					
2.	We promote inclusive and sustainable industrialization in Kenya by offering affordable credit to small-scale industrial enterprises.					
3.	We finance infrastructure upgrade for sustainable retrofit industries to increase resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial					

	processes in Kenya.					
4.	We finance scientific research and technological capabilities upgrade of industrial sectors in Kenya.					
5.	We facilitate sustainable and resilient infrastructure development through enhanced financial, technological and technical support.					
6.	We finance domestic technology development, research and innovation in Kenya.					
7.	We finance enterprises increasing access to ICT and striving to provide universal and affordable access to the internet in Kenya.					

THANK YOU FOR TAKING YOUR TIME TO PARTICIPATE IN THE STUDY



Appendix 5: List of Impact Investors in Kenya that were members of the GIIN as at 31st December 2019

	Name	Contacts
	Asset Owners	
1.	African Development Bank Group	Khushee Tower, Longonot Road, Upper Hill, Nairobi, Kenya Phone: (254) 20 2712925/ (254) 20 2712926/ (254) 20 2712928 n.nwabufo@afdb.org
2.	AgDevCo	Peer House, Nairobi, Kenya info.kenya@agdevco.com
3.	Absa Bank Kenya (Formerly Barclays Investment Bank)	3rd Floor, Acacia Building, Westlands Office Park, Off Waiyaki Way, Westlands Nairobi, Kenya P.O. Box 1140 – 00100 absa.kenya@absa.africa
4.	Belgian Investment Company for Developing Countries (BIO)	Muthangari Dr, Off Waiyaki Way Nairobi T: +254 709 875 532 nairobi@bio-invest.be
5.	Bestseller Foundation	Nairobi, Kenya info@bestsellerfoundation.org
6.	Ford Foundation	Rahimtulla Towers, Upper Hill, Nairobi P.O. Box 41081, 00100 Nairobi, Kenya T: (+254) 20-6619200
7.	Global Alliance for Improved Nutrition	1st Floor, 197 Lenana Place, Lenana Road P.O. Box 13733 – 00800 Nairobi, Kenya

		T: +254 773 572 103
8.	International Finance Corporation (IFC)	Delta Center, Menengai Road, Upper Hill P.O Box 30577-00100 Nairobi, Kenya T: +254 20 293-7000/7200 Email: jomoke@ifc.org
9.	The MasterCard Foundation	Nairobi Garage Office, 3rd Floor The Promenade, General Mathenge Drive Nairobi, Kenya Email: info@mastercardfdn.org
10.	Medical Credit Fund Kenya Ltd	52 El Molo Drive, Off Naushad Merali Drive, Lavington, T: +254 (0) 20 444 2120 Email: contactkenya@medicalcreditfund.org
11.	The Rockefeller Foundation	Capitol Hill Square, Western Wing, 3rd Floor, Chyulu Road, off Haile Selassie Avenue, Upper Hill P.O. Box 14531-00800 Nairobi, Kenya T: +254-20-498-7000/ 272 2610
12.	Standard Chartered Bank	Number 48, Westlands Road P.O. Box 30003 – 00100 Nairobi Kenya. T: +254 203 293 900 Email: straight2bank.ke@sc.com
13.	Swedfund International AB	Eden Square, 3rd Floor, Block A Westland Rd, Westlands, Nairobi, Kenya Email: audrey.obara@swedfund.se

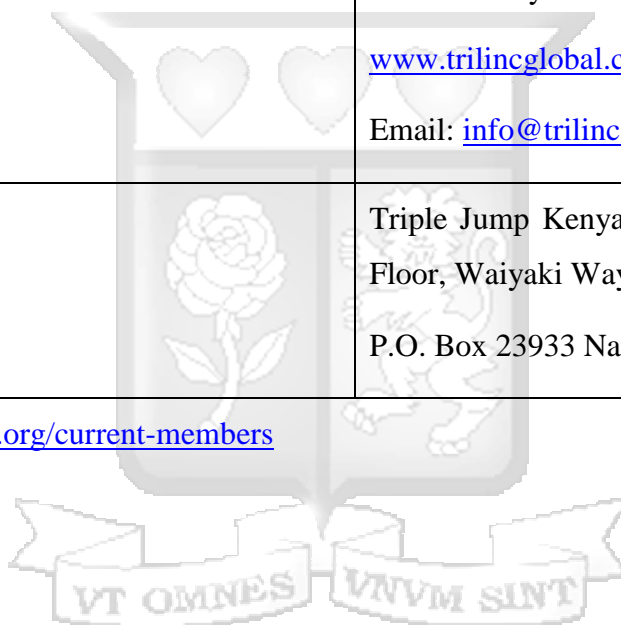
Asset Managers		
14.	Acumen East Africa	1st Floor, Cape Office Park Opposite Yaya Centre, Ring Road, Kilimani P.O. Box 101883-00101 Nairobi, Kenya T: +254 716 252 802 / +254 703 663 868
15.	AHL Venture Partners	http://www.ahlventurepartners.com/contact
16.	AlphaMundi Group Kenya	S.K Offices, Rhapta Road, Nairobi https://www.alphamundi.ch/contact Email: info@alphamundi.ch
17.	Ascent Capital Africa	3rd Floor Block E, ABC Place Waiyaki Way, Nairobi, Kenya T: +254 795 737 720 / 21 Email: corporate@ascent-africa.com
18.	Bamboo Capital Partners	Workable Nairobi, Suite 25 Sanlam Tower, Waiyaki Way, Nairobi, Kenya T: +254 20 2000695 Email: contact@bamboocp.com
19.	BlueOrchard Finance Impact Investment Managers	9th Floor – Unit 22, Pine Tree Plaza, Kaburu Dr, off Ngong Rd Nairobi Kenya Email: Yann.Groeger@blueorchard.com
20.	Convergence Partners	3rd Floor, Rosebank Tower, Waiyaki Way, Nairobi, Kenya Email: info@convergencepartners.com
21.	Cordaid	PMU Nairobi, New Rehema House, 5th floor, Rhapta Road, Westlands, Nairobi, Kenya

		Email: cordaidke@cordaid.org
22.	CrossBoundary	ABC Place, Waiyaki Way, Nairobi, Kenya Email: contact@crossboundary.com
23.	Finance in Motion GmbH	Hurlingham Park, Argwings Kodhek Rd Nairobi, Kenya. Phone:+254706909296 E-mail: Kenya@finance-in-motion.com
24.	Helios Investment Partners	4B Grosvenor Suite, 14 Riverside Drive, Nairobi, Kenya. T: +254 708 985818, +254 7333 393082 Email: info@helioslp.com
25.	Incofin Investment Management	Baobab Suite, 3 rd Floor, Riverside Green Office Park, Riverside Dr, Westlands. P.O. Box 13986 – 00800 Nairobi. T: +254 (0) 796 112 606 Email: investorrelations@incofin.com
26.	Kenya Climate Innovation Centre	Strathmore Business School, Madaraka P.O. Box 49162 - 00200 Nairobi Kenya T: +254 703 034 701 Email: info@kenyacic.org
27.	Kiva Capital Management	Hurlingham-Starwood Apts Apt. No. A4, Argwings Kodhek Rd P.O. Box 27603-00506 Nairobi T: +254 722 926 774 Email: contactus@kiva.org

28.	Lendable	Mayfox House, Garden Road, Off Riverside Drive, Nairobi, Kenya P.O. Box 2635-00606 Nairobi. info@lendable.io
29.	Oikocredit	Methodist Ministries Centre, 2nd floor Oloitokitok Road, Lavington P.O. Box 30328-00100 Nairobi T: +254 20 3862314/8 Email: rdc.ea.office.ke@oikocredit.org
30.	Omidyar Network	Omidyar Network, Nairobi, Kenya T: + 254 730 112 150 Email: info@omidyar.com
31.	Phatisa	Seventh Floor, Longonot Place, Kijabe Street, Nairobi, Kenya T: +254 (0) 20 232 7657 Email: groupexecutivepepa@phatisa.com
32.	responsAbility Investments AG	ABC Towers, 4th Floor Waiyaki Way, Westlands, Nairobi, Kenya T: +254 709 803 000 Email: africa@responsAbility.com
33.	The Rise Fund	Cellulant Corporation, Delta Towers, Waiyaki Way, Nairobi T: +254 720 996366
34.	Root Capital	The Arch Place, Nyangumi Road, Kilimani, Nairobi, Kenya

		T: (254) 207 601 005 / 6 / 7 / 8 / +254 736 864 892 Email: info@rootcapital.co.uk
35.	Sanlam Investments	Africa Re Centre, 5th Floor, Hospital Rd, P. O. Box 67262, 00200 Nairobi, Kenya T: +254 20 496 7000 +254 719 067 000 +254 722 207 842 +254 733 207 842 E-mail: info@sanlameastafrica.com
36.	TriLinc Global	Nairobi Kenya www.trilincglobal.com/location/kenya/ Email: info@trilincglobal.com
37.	Triple Jump	Triple Jump Kenya, West End Towers, 5th Floor, Waiyaki Way, P.O. Box 23933 Nairobi, Kenya.

Source: <https://thegiin.org/current-members>



Appendix 6: Sustainable Development Goals

According to (UN, 2015) General Assembly, SDGs, set to achieve by 2030 are as follows;

GOAL 1: End Poverty in all its forms everywhere

GOAL 2: End hunger, achieve food security, improve nutrition and promote sustainable agriculture

GOAL 3: Ensure healthy lives and promote well-being for all lives at all ages

GOAL 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

GOAL 5: Achieve gender equality and empower all women and girls

GOAL 6: Ensure availability and sustainable management of water and sanitation for all

GOAL 7: Ensure access to affordable, reliable, sustainable and modern energy for all

GOAL 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

GOAL 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

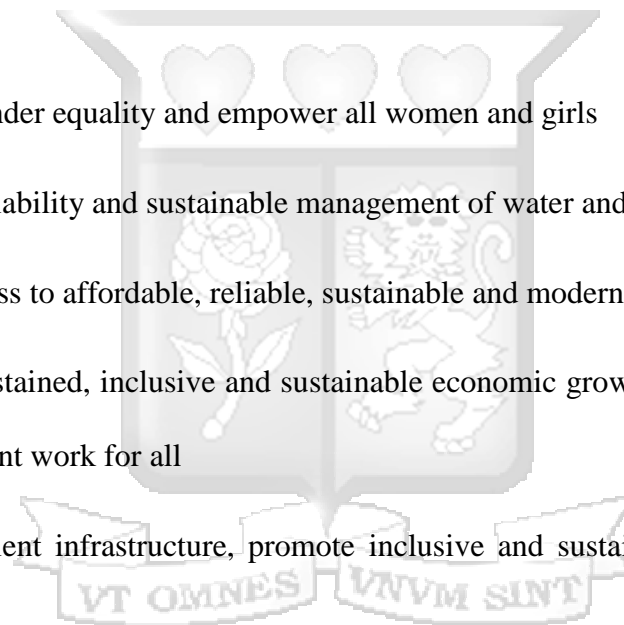
GOAL 10: Reduce inequality within and among countries

GOAL 11: Make Cities and human settlements inclusive, safe, resilient and sustainable

GOAL 12: Ensure sustainable consumption and production patterns

GOAL 13: Take urgent action to combat climate change and its impacts

GOAL 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development



GOAL 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forest, combat desertification, reverse land degradation and halt biodiversity loss

GOAL 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

GOAL 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.



Appendix 7: Turnitin Report

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