PROCUREMENT PRACTICES AND SUSTAINABLE SUPPLY CHAIN PERFORMANCE OF HEALTHCARE NONGOVERNMENTAL ORGANIZATIONS IN KENYA

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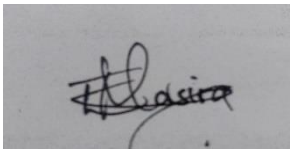
MAY 2025

DECLARATION

Student Declaration:

I declare that this is my original work and has not been presented to any other University for award of a degree. Any works done by other scholars have been recognized. This thesis proposal does not contain any material published by any other researcher



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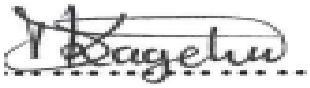
Supervisor's Approval:

This research project has been submitted for examination with my approval as the Student's University Supervisor



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DEDICATION

I dedicate this research paper to my family, whose unwavering support, patience, and encouragement have been the foundation of my academic journey. To my parents, thank you for instilling in me the value of education and perseverance.

I also extend heartfelt gratitude to my supervisor, Dr. Diana Ominde whose guidance, insights, and support have been instrumental throughout this research process. Your mentorship has shaped not only the direction of this study but also my growth as a scholar.

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ABSTRACT

Non-governmental organizations (NGOs) providing healthcare support in Kenya play a critical role in addressing health challenges within the country. Sustainable supply chain management is pivotal for ensuring the consistent and reliable availability of healthcare resources and understanding the specific dynamics within the procurement practices of NGOs is crucial for optimizing their impact. Enhancing the sustainable supply chain performance of these NGOs not only ensures the efficient delivery of healthcare services but also contributes to the broader goal of building resilient and effective healthcare systems in Kenya, thereby positively impacting public health outcomes. The main aim of this study was to assess the effect of procurement practices on sustainable supply chain performance of local NGOs providing healthcare support in Kenya. Specifically, it examined the influence of supplier selection, contract design, and supplier evaluation. Anchored on resource-based view and institutional theory, the study adopted a descriptive cross-sectional research design, targeting heads of procurement in 65 NGOs. Primary data were collected via structured questionnaires and analysed using SPSS. Diagnostic tests ensured the validity of regression assumptions. Results from multiple linear regression indicated that all three procurement practices had significant positive effects on sustainable supply chain performance, with supplier evaluation being the most influential. The study concluded that integrating comprehensive sustainability criteria into supplier selection, contract design, and supplier evaluation significantly improves sustainable supply chain performance. It is recommended that healthcare NGOs strengthen their procurement processes by embedding sustainability considerations into their policies and operations to promote long-term resilience and efficiency in healthcare delivery.

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LIST OF ABBREVIATIONS AND ACRONYMS

CRS	Catholic Relief Services
HO	Humanitarian Organizations
KES	Kenya Shillings
KNBS	Kenya National Bureau of Statistics
NACOSTI	National Commission for Science, Technology & Innovation
NGO	Non-governmental Organization
RBV	Resource Based View
SPSS	Statistical Package for Social Sciences
SSCM	Sustainable Supply Chain Management
TBL	Triple Bottom Line
UN	United Nations

DEFINITION OF TERMS

Contract Design: In the context of this study, it refers to how local NGOs in Kenya structure contracts with their suppliers of healthcare resources. This includes specifying terms, conditions, responsibilities, and performance metrics to ensure the smooth and sustainable flow of resources (Xiao et al., 2021).

Procurement Practices: In the context of this study, procurement practices specifically pertain to the methods and approaches employed by local NGOs in Kenya when obtaining healthcare-related resources (Bakhshi et al., 2023).

Supplier Evaluation: In the context of this study, it involves examining how local NGOs in Kenya assess the performance of their healthcare resource suppliers, considering factors such as quality, timeliness, adherence to sustainability standards, and overall contribution to the sustainable supply chain (Panya & Abuya, 2023).

Supplier Selection: In the context of this study, it refers to the criteria and methods used by local NGOs in Kenya to choose suppliers for healthcare resources, considering factors such as quality, reliability, cost, and sustainability (Barbanti et al., 2022).

Sustainable Supply Chain Performance: In the context of this study, it involves evaluating how well local NGOs providing healthcare support in Kenya manage their supply chains in a manner that is economically viable, environmentally responsible, and socially beneficial over the long term (Oubrahim, Sefiani & Happonen, 2023).

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter introduces the main aim of the research, the objectives, and the scope of the research. It also defines procurement and sustainable supply chain performance and gives an overview of the two concepts within the NGO Healthcare sector.

1.1 Background to the Study

Sustainable supply chain performance is of paramount importance as it signifies the integration of environmental, social, and economic considerations into the core operations of organizations (Panya & Abuya, 2023). A sustainable supply chain ensures the continuous availability and accessibility of critical healthcare resources while minimizing negative impacts on the environment and local communities (Lelei, 2021). This approach not only enhances the resilience and efficiency of healthcare delivery but also contributes to the long-term well-being of the communities served (John & Miriam, 2021). Moreover, sustainable supply chain practices can positively influence an organization's reputation, stakeholder relationships, and compliance with ethical standards, fostering a holistic and responsible approach to healthcare provision that aligns with global sustainability goals and addresses the complex challenges faced by healthcare organizations in resource-constrained settings (Nkirote, 2019).

Procurement practices exert a profound influence on sustainable supply chain performance by shaping the sourcing, utilization, and management of resources within an organization (Panya & Abuya, 2023). The strategic selection of suppliers as per Nyile (2023) impacts the overall quality, reliability, and ethical considerations of the acquired goods and services, directly affecting the environmental and social dimensions of sustainability. The design of procurement contracts dictates the terms, responsibilities, and incentives for all parties involved, influencing the efficiency, transparency, and fairness of transactions (Chen et al., 2023). Additionally, supplier evaluation processes play a pivotal role in assessing and ensuring that suppliers adhere to sustainability criteria, fostering responsible business practices (Subramanian, 2020). Hence, by aligning procurement practices with sustainable principles, organizations can enhance the resilience, ethical standing, and overall effectiveness of their supply chains,

thereby contributing to the broader goals of economic, social, and environmental sustainability (Oke, Maltz & Goentzel, 2023).

In recent years, after the outbreak of the Covid-19 pandemic, there has been a development of research issues in the field of humanitarian supply chains, and researchers focus primarily on supply chain disruption and resilience, transparency, post-disaster activities, information use, the role of NGOs, transportation planning, and block chain technology. Non-governmental organizations have been playing a crucial role in supporting social activities that help society such as poverty eradication, alleviating hunger, relief missions, and health projects. According to John and Miriam (2021) sustainable development cannot be achieved without the support of non-governmental organizations. Non-governmental organizations in Kenya have been contributing greatly to the Kenyan economy specifically the Big Four Agenda. According to the NGO Coordination board, NGOs spent Kes. 50.3 billion in implementing projects that are related to the national development agenda. Despite this great contribution, there has been little research into how NGOs in Kenya have adopted sustainability practices within their operations.

Private companies in the past years have been subjected to sustainability regulations requiring them to report on the integration of sustainability within their operations. (Rashed & Shah, 2021). However, non-governmental organizations are yet to be subjected to the same level of scrutiny. Today, procurement plays a significant role in sustainability because of the vital requirement and demand for improvement in some supply chain processes and procurement practices. In a study carried out by Moshtari, Altay, Heikkila and Goncalves (2021), procurement accounts for over 65% of the cost of operations. Despite its importance procurement in humanitarian organizations has remained under examined.

The motivation behind conducting this study stems from the recognition of the pivotal role played by NGOs in addressing healthcare challenges in Kenya. Acknowledging the critical importance of sustainable supply chain management in ensuring the consistent and reliable availability of healthcare resources, particularly within the NGO sector, highlights the need for a comprehensive understanding of procurement practices. By delving into the dynamics of supplier selection, contract design, and supplier evaluation, this study aims to assess their collective impact on the sustainable

supply chain performance of local NGOs providing healthcare support in Kenya. Optimizing these procurement practices has the potential not only to enhance the efficient delivery of healthcare services but also to contribute significantly to the broader goal of building resilient and effective healthcare systems in Kenya.

1.1.1 Procurement Practices

Procurement practices encompass the systematic processes and strategies organizations employ to acquire goods, services, or resources required for their operations (Bakhshi et al., 2023). This multifaceted discipline involves a series of interconnected activities, including supplier selection, contract negotiation and design, sourcing, purchasing, and supplier relationship management (Nkunda, Kazungu & Changalima, 2023). Effective procurement practices aim to optimize the value and quality of acquired goods and services while considering factors such as cost, risk management, and sustainability. These practices play a pivotal role in shaping an organization's overall performance, impacting its efficiency, cost-effectiveness, and ability to meet strategic objectives (Etse, McMurray& Muenjohn, 2023).

Supplier selection, contract design, and supplier evaluation have a fundamental impact on the efficiency, reliability, and sustainability of healthcare supply chains (Nkunda et al., 2023). Together, these practices form the backbone of effective procurement strategies, directly influencing the ability of NGOs to consistently provide essential healthcare services and contribute to the resilience and effectiveness of healthcare systems in Kenya. This focus aligns with the broader goal of optimizing procurement processes to positively impact public health outcomes and foster sustainable healthcare delivery.

Supplier selection is a critical aspect of procurement practices involving the identification and assessment of potential suppliers based on various criteria such as product quality, reliability, cost, and ethical considerations (Barbanti et al., 2022). In the context of NGOs providing healthcare support in Kenya, the selection of suppliers is crucial for ensuring a dependable and responsible supply chain that aligns with the organizations' mission and values (Maingi, 2022). Effective supplier selection contributes to the overall sustainability of the supply chain by fostering relationships with suppliers who share a commitment to ethical business practices and can consistently provide high-quality goods or services (John & Miriam, 2021).

Contract design refers to the structuring and formulation of agreements between an organization and its suppliers, delineating terms, conditions, and responsibilities (Xiao et al., 2021). In the healthcare sector in Kenya, where the procurement of medical supplies is fundamental, well-designed contracts can mitigate risks, establish clear expectations, and incentivize sustainable practices (Lyimo & Mrema, 2022). Crafting contracts that incorporate sustainability clauses, ethical sourcing requirements, and performance metrics contributes to the long-term resilience of the supply chain and ensures that all parties are aligned with the principles of responsible procurement (Etse et al., 2023).

Supplier evaluation involves the ongoing assessment of supplier performance against predefined criteria to ensure compliance with contractual agreements and to identify areas for improvement. In the realm of healthcare support NGOs in Kenya, where the reliability and quality of medical supplies are paramount, continuous evaluation of suppliers is crucial (Panya & Abuya, 2023). This process helps organizations maintain transparency, address any deviations from sustainability goals, and foster accountability among suppliers. By systematically assessing supplier performance, NGOs can adapt their procurement strategies to enhance the overall sustainability and effectiveness of their supply chains, ultimately contributing to improved healthcare delivery (Maingi, 2022).

1.1.2 Sustainable Supply Chain Performance

Sustainable supply chain performance refers to the systematic integration of economic, social, and environmental considerations into the entire lifecycle of a supply chain, from the sourcing of raw materials to the delivery of final products or services (Oubrahim, Sefiani & Happonen, 2023). As per Piprani et al. (2023), it involves the adoption of practices that optimize resource use, minimize environmental impact, and promote social responsibility, all while maintaining economic viability. A sustainably performing supply chain aims to balance the triple bottom line—economic, social, and environmental aspects—ensuring long-term resilience, ethical practices, and positive contributions to the well-being of communities and the environment (Yang & Wang, 2023). This concept goes beyond traditional efficiency metrics to encompass a holistic approach that recognizes the interconnectedness of economic success, social equity,

and ecological sustainability within the broader context of global responsibility and ethical business practices (Dang & Chang, 2023).

Indicators of sustainable supply chain performance, as utilized by previous researchers, often encompass a range of economic, social, and environmental metrics. Economic indicators may include cost-effectiveness, profitability, and efficiency in resource utilization (Kumar et al., 2023). Social indicators could involve aspects like ethical labour practices, community engagement, and impacts on local economies. Environmental indicators often focus on measures such as carbon footprint, waste reduction, and the use of eco-friendly materials (Ose et al., 2023). The integration of these indicators provides a comprehensive assessment of a supply chain's sustainability, reflecting its ability to balance economic success with social responsibility and environmental stewardship (Kuwornu et al., 2023). Previous research has commonly employed a combination of these indicators to evaluate and benchmark the holistic sustainability performance of supply chains across diverse industries and contexts.

In this study, the indicators of sustainable supply chain performance were assessed through economic viability, social responsibility, and environmental stewardship. Economic viability was gauged by analysing cost-effectiveness, financial efficiency, and the overall economic impact of procurement practices on the NGOs providing healthcare support in Kenya (Oke et al., 2023). Social responsibility indicators encompassed ethical labour practices, community engagement, and the equitable distribution of benefits within local communities (Ahmed & Shafiq, 2022). Lastly, environmental stewardship was evaluated by considering factors such as the carbon footprint, waste reduction strategies, and the eco-friendliness of the supply chain (Yang & Wang, 2023). This threefold approach was justified as it aligns with the holistic principles of sustainable development, ensuring a well-rounded evaluation that captures the interconnected dimensions of economic, social, and environmental sustainability within the specific context of healthcare-focused NGOs in Kenya.

1.1.3 Local NGOs Providing Healthcare Support in Kenya

Local non-governmental organizations (NGOs) in Kenya play a critical role in addressing the gaps in healthcare service delivery, particularly in disadvantaged and marginalized areas. According to the NGO Coordination Board of Kenya (2023), there are over 1,800 NGOs in the health sector, with approximately 65 focused on providing

direct healthcare support. These NGOs operate across the country, with a significant presence in urban centers such as Nairobi, Mombasa, and Kisumu, as well as in underserved counties like Turkana, Garissa, and Marsabit. Their primary focus areas include providing primary healthcare, managing disease-specific interventions such as HIV/AIDS and tuberculosis, and responding to humanitarian emergencies during crises such as disease outbreaks and natural disasters (Masaba et al., 2020; Abiddin, Ibrahim, & Abdul Aziz, 2022). These NGOs often partner with international donors, community-based organizations, and local governments to enhance their impact and extend their reach to populations with limited access to healthcare.

Procurement practices among healthcare NGOs are integral to their operations, ensuring the availability of medical resources while aligning with sustainability objectives. Supplier selection is often a meticulous process guided by criteria such as quality, reliability, cost-effectiveness, and ethical practices. NGOs also place a strong emphasis on designing contracts that promote sustainability through clear deliverables, eco-friendly measures, and risk mitigation strategies (Abiddin et al., 2022; Panya & Abuya, 2023). Supplier evaluation remains an ongoing process that involves assessing adherence to ethical, social, and environmental standards to ensure accountability in the healthcare supply chain. By integrating these practices, NGOs contribute to the development of sustainable procurement systems that prioritize transparency and efficiency, which are critical in healthcare delivery (Lelei, 2021; Masaba et al., 2020).

Healthcare NGOs in Kenya operate within the framework of policies set by the Ministry of Health and the NGO Coordination Board. The Kenya Health Policy 2014–2030 emphasizes partnerships with NGOs to enhance healthcare delivery and achieve universal health coverage. Additionally, the Public Procurement and Asset Disposal Act 2015 provides guidelines for procurement practices, ensuring transparency and accountability. These policy frameworks support NGOs in their efforts to meet sustainability objectives while addressing the immediate healthcare needs of the population (Nkirote, 2019; Abiddin et al., 2022). Despite the supportive policy environment, many NGOs face challenges such as limited funding, insufficient infrastructure, and insecurity, particularly in conflict-prone regions, which hinder their ability to deliver healthcare services effectively (Gee, Vargas, & Foster, 2019; Masaba et al., 2020).

Sustainable supply chain performance among these organizations reflects their commitment to balancing economic, social, and environmental goals. Economic sustainability is achieved by balancing cost-effectiveness with ethical sourcing and financial stability, while social sustainability is characterized by equitable practices, community engagement, and inclusivity in supplier relationships (Panya & Abuya, 2023; Lelei, 2021). Environmental sustainability, on the other hand, involves efforts to minimize waste, reduce the carbon footprint, and promote eco-friendly sourcing. Through this holistic approach, NGOs aim to align with global sustainability goals while improving healthcare outcomes for the communities they serve (Nkirote, 2019; Masaba et al., 2020).

1.2 Statement of the Problem

Sustainable supply chain performance is increasingly recognized as critical to ensuring ethical, environmental, and economic viability across sectors, particularly in health-focused organizations (Xu, Chung, & Yeung, 2022). Healthcare NGOs in Kenya operate in a fragile ecosystem characterized by pressing public health demands, environmental challenges such as poor waste disposal infrastructure, and social inequality (Authority, 2021; Maingi, 2022). Despite their central role in advancing social welfare, many of these NGOs operate in resource-constrained environments where procurement systems are often fragmented, donor-dependent, and poorly aligned with sustainability goals (Nkunda et al., 2023).

While procurement practices such as supplier selection, contract design, and supplier evaluation are widely acknowledged as vital to supply chain efficiency, their integration with sustainability dimensions in the NGO healthcare context remains inadequately explored. Studies such as Baliga, Raut, and Kamble (2019) have primarily focused on individual procurement elements, often in manufacturing settings, without a holistic consideration of how these practices collectively influence SSCP. Moreover, evidence of how sustainability criteria are embedded within procurement processes in NGOs—particularly those handling sensitive healthcare supply chains—remains scarce and scattered across non-health sectors. For example, Cafaggi and Iamiceli (2020) discuss procurement frameworks in broader global supply chains but offer limited insights into how such frameworks can be tailored to the operational realities of healthcare NGOs in low-income countries.

There is also a notable gap in the Kenyan context. Existing literature predominantly addresses procurement reforms in public institutions or multinational settings, neglecting the nuanced operational, financial, and political challenges that local healthcare NGOs contend with. These include irregular donor funding, limited bargaining power in supplier negotiations, and vulnerability to disruptions, all of which hinder the systematic implementation of sustainable procurement practices (Ahmed & Shafiq, 2022; Panya & Abuya, 2023). As such, there is a need to explore procurement strategies that are not only cost-effective but also environmentally and socially responsible within the local NGO healthcare ecosystem.

From a methodological perspective, few studies have adopted integrated models that link supplier selection, contract design, and supplier evaluation to sustainability outcomes in a unified framework. Many adopt reductionist approaches that treat procurement practices as isolated constructs, limiting the depth of analysis on their cumulative influence on sustainable supply chain performance (Ahmed & Shafiq, 2022). The absence of robust empirical evidence and contextualized models limits the ability of NGOs and policy actors to formulate actionable strategies that promote resilience and sustainability in healthcare supply chains.

This study, therefore, sought to bridge these conceptual, contextual, and methodological gaps by empirically examining how supplier selection, contract design, and supplier evaluation affect sustainable supply chain performance in healthcare NGOs in Kenya. The study offers a comprehensive framework to inform NGO procurement strategy, sustainability policy, and donor engagement within the health sector.

1.3.1 General Objective

The objective of this research was to determine the effect of procurement practices on sustainable supply chain performance among NGOs providing healthcare support in Kenya.

1.3.2 Specific Objectives

The specific objectives of this study were:

i. To determine the effect of supplier selection on sustainable supply chain performance among NGOs providing healthcare support in Kenya.
ii. To establish the effect of contract design on sustainable supply chain performance among NGOs providing healthcare support in Kenya.
iii. To determine the effect of supplier evaluation on sustainable supply chain performance among NGOs providing healthcare support in Kenya.

1.4 Research Questions

The study addressed the following research questions:

i. What is the effect of supplier selection on sustainable supply chain performance among NGOs providing healthcare support in Kenya?
ii. What is the effect of contract design on sustainable supply chain performance among NGOs providing healthcare support in Kenya?
iii. What is the effect of supplier evaluation on sustainable supply chain performance among NGOs providing healthcare support in Kenya?

1.5 Significance of the Study

This study is beneficial to policy makers, NGOs as well as scholars and academicians.

1.5.1 Policy Makers

This study holds significant implications for policy development in the healthcare sector, particularly in shaping procurement policies for NGOs providing healthcare support in Kenya. Findings that elucidate the impact of supplier selection, contract design, and supplier evaluation on sustainable supply chain performance can inform the formulation of guidelines and standards for procurement practices within the sector. Policy recommendations derived from this study can contribute to the creation of frameworks that encourage ethical sourcing, social responsibility, and environmental sustainability, fostering a more resilient and responsible healthcare supply chain.

1.5.2 Healthcare NGOs in Kenya

For practitioners, such as heads of procurement in healthcare-focused NGOs in Kenya, this study offers practical insights that can directly influence day-to-day decision-making. Understanding the nuanced effects of supplier selection, contract design, and supplier evaluation on sustainable supply chain performance enables practitioners to

refine their procurement strategies. They can adapt their practices to align with ethical considerations, enhance social impact, and reduce environmental footprints, ultimately contributing to the overall sustainability goals of their organizations.

1.5.3 Researchers and Academicians

The study contributes theoretically by enriching existing literature on sustainable supply chain management, especially within the context of healthcare-focused NGOs in developing regions like Kenya. It builds upon and refines established theories such as the Triple Bottom Line (TBL) theory, Resource-Based View (RBV), and Institutional theory, by applying them to the specific nuances of procurement practices in healthcare NGOs. The findings may also contribute to the evolution of a more context-specific theoretical framework for sustainable supply chain performance, offering an understanding of how economic, social, and environmental factors interact within the unique setting of NGOs providing healthcare support in Kenya.

1.6 Scope of the Study

This study focused on the effect of procurement practices on sustainable supply chain performance among NGOs providing healthcare support in Kenya. The study was limited to supplier selection, contract design, and supplier evaluation. The study covered the 65 NGOs providing healthcare support in Kenya. The target respondents were the head of procurement in each NGO. The study adopted a descriptive cross-sectional research design and relied on primary data collected using questionnaires. The study was conducted between October 2024 and December 2024.

1.7 Organization of the Study

This study is organized into five chapters. Chapter One introduces the research, providing the background, problem statement, objectives, research questions, justification, scope, and significance of the study. Chapter Two presents the literature review, exploring theoretical and empirical studies on procurement practices and sustainable supply chain performance, and concludes with a conceptual framework and identified research gaps. Chapter Three outlines the research methodology, including the research design, population, sampling methods, data collection, analysis procedures, diagnostic tests, and ethical considerations. Chapter Four presents the

findings, including descriptive and inferential statistics, and discusses these results in relation to existing literature. Finally, Chapter Five summarizes the findings, draws conclusions, and provides recommendations for policy, practice, and future research to enhance sustainable supply chain performance in healthcare NGOs in Kenya.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter widely describes the theories on which procurement practices and sustainable supply chain performance is based. It too deliberates the previous empirical studies; knowledge gaps identified, summarizing with a conceptual framework as well as hypotheses depicting the anticipated link among the study variables.

2.2 Theoretical Foundation

Examined in this segment are theories underpinning the research of procurement practices and sustainable supply chain performance. The study reviews the resource-based view theory and institutional theory.

2.2.1 Resource Based View Theory

Barney (1991) is credited with developing the resource-based view theory, which holds that a firm's competitive advantage and performance are largely influenced by its particular set of resources and capabilities. RBV states that resources can be either tangible or intangible, and capabilities refer to the firm's capacity to efficiently deploy and use such resources. According to the idea, resources must be valued, uncommon, difficult to mimic, and non-substitutable in order to contribute to competitive advantage. According to Cooper et al. (2022), RBV highlights the significance of firm heterogeneity and claims that sustained competitive advantage results from resources and competencies that are specific to the business and difficult for rivals to imitate.

Even though it is widely accepted, the RBV hypothesis has several detractors. The absence of precise instructions on how to recognize and gauge important resources has been criticized (Hossain et al., 2023). It can be difficult and subjective to pinpoint exactly how resources contribute to competitive advantage and to measure their worth. The theory has also come under fire for being overly firm-centric and undervaluing the impact of outside causes, such as market dynamics or competitive industry pressures, on competitive advantage (Burt & Soda, 2021). RBV is criticized for failing to fully address how industry structure and environmental variables affect business performance (Gibson, Gibson & Webster, 2021).

The theory was relevant to this study as it provides a theoretical lens to analyze how the strategic management of resources within healthcare-focused NGOs in Kenya can influence sustainable supply chain performance. RBV emphasizes that an organization's competitive advantage is derived from its unique and valuable resources. In the context of procurement practices, the theory can illuminate how the careful selection of suppliers, thoughtful design of contracts, and systematic evaluation of suppliers contribute to the accumulation and utilization of resources that enhance the overall effectiveness and sustainability of the healthcare supply chain.

2.2.2 Institutional Theory

This theory was developed by Meyer and Rowan (1977). Institutional theory postulates that organizations are influenced by the institutional environment in which they operate, and that they must conform to institutional norms and expectations in order to be accepted and legitimate in that environment. The institutional environment includes the formal and informal rules, regulations, and social norms that shape the behavior and expectations of organizations and individuals within a particular context. According to institutional theory, organizations that successfully navigate the institutional environment are more likely to be accepted and legitimate in that environment, and are therefore more likely to achieve their goals (Osinubi, 2020). However, institutional theory also suggests that organizations that are too tightly constrained by institutional norms and expectations may find it difficult to adapt to changing circumstances or to innovate, which can lead to a loss of competitiveness over time (Vadasi, Bekiaris & Andrikopoulos, 2020).

Some scholars have criticized institutional theory for being too descriptive and not providing sufficient explanatory power. Critics argue that institutional theory does not provide a clear understanding of the underlying mechanisms that drive institutional change, and that it tends to focus more on the outcomes of institutional change rather than the causes (Willmott, 2019). Some critics have argued that institutional theory does not pay enough attention to the context in which institutions operate, and may therefore overlook important differences between different institutional environments (Alvesson & Spicer, 2019).

Institutional theory was pertinent to this study as it provides a framework to understand how external institutional pressures shape the procurement practices of healthcare-

focused NGOs in Kenya. Institutions, comprising regulatory frameworks, norms, and societal expectations, significantly influence organizational behavior. In the context of procurement, these external pressures can impact the adoption of sustainable supply chain practices. The study can utilize institutional theory to explore how NGOs navigate and respond to institutional pressures in the healthcare sector, shaping their procurement strategies.

2.3 Empirical Literature Review

This section discusses the relevant empirical literature on the effect of procurement practices on sustainable supply chain performance. The elements of procurement practices covered in this section are supplier selection, contract design, and supplier evaluation.

2.3.1 Supplier Selection and Sustainable Supply Chain Performance

Supplier selection is the process of identifying, evaluating, and choosing suppliers or vendors who can provide the required goods or services to an organization. In the context of this study, it refers to the criteria and methods used by local NGOs in Kenya to choose suppliers for healthcare resources, considering factors such as quality, reliability, cost, and sustainability. Supplier selection is the process by which firms identify, evaluate and contract with suppliers Cui, Wu & Dai, 2023). Organizations can utilize this stage to increase their sustainable supply chain performance by selecting suppliers that promote and enhance environmental and social sustainability. Sustainable supplier selection and evaluation have become a critical part of supply chain management. They can significantly improve the supply chain's operational performance and enhance enterprises' competitiveness. (Zhu, Liu, Li, Yang, & Miao, 2022). Supplier selection is a critical decision that impacts the supply chain.

According to Meena, Katiyar and Kumar (2022) some research has already proven that cooperation with suppliers with strong environmental, societal, and economic awareness can significantly improve the sustainability of supply chains. Therefore, many organizations are gradually paying more attention to economic-ecological-social aspects in supplier selection. One important decision that affects the overall sustainability performance of organizations is the selection of sustainable suppliers (Nsikan, Affiah, Briggs & Koko, 2022).

Empirical studies investigating the effect of supplier selection on sustainable supply chain performance have yielded significant findings across diverse industries. A study by Park, Kim and Lee (2022) in the electronics industry highlighted the importance of considering environmental and social criteria in supplier selection, demonstrating that firms engaging with suppliers exhibiting sustainable practices experienced improved environmental and financial performance. Similarly, a study by Dang et al. (2022) in the automotive sector revealed that supplier selection criteria significantly influenced the environmental and operational performance of supply chains, emphasizing the need for a comprehensive approach to supplier assessment.

In the context of healthcare, a study by Sarasati and Dachyar (2021) explored the impact of supplier selection on sustainability within the pharmaceutical industry. The research emphasized the critical role of strategic supplier partnerships in fostering sustainable practices, such as responsible sourcing of raw materials and ethical manufacturing processes. These findings underscored the potential of supplier selection as a leverage point for improving the sustainability performance of healthcare supply chains.

However, challenges also emerged in studies such as that of Yang and Wang, (2020) in the textile industry, which identified barriers to the integration of sustainability criteria in supplier selection. Factors like limited awareness, resource constraints, and conflicting organizational priorities hindered the effective implementation of sustainable supplier selection practices. While existing studies provide valuable insights, there is a need for further research, especially in the specific context of healthcare-focused NGOs in developing regions like Kenya, to understand the unique challenges and opportunities in enhancing sustainable supply chain performance through supplier selection strategies.

2.3.2 Contract Design and Sustainable Supply Chain Performance

Contract design involves the structuring and formulation of agreements between organizations and their suppliers. In the context of this study, it refers to how local NGOs in Kenya structure contracts with their suppliers of healthcare resources. This includes specifying terms, conditions, responsibilities, and performance metrics to ensure the smooth and sustainable flow of resources. The supplier selection process

culminates in a contract between the buyer and one or more suppliers (Xiao et al., 2021). According to Yun, Liu, Li and Lai (2021) contract terms can either relate to monetary terms (payment terms) or non-monetary terms (How the contract will be executed). Under the non-monetary terms, a contract can highlight how the contract should be executed. For. E.g., the quality of the goods, delivery period, the materials of the goods, the design and manufacture of the goods. Organizations can utilize the contracts they have established with suppliers to increase sustainability within their supply chains.

Empirical studies investigating the effect of contract design on sustainable supply chain performance have offered nuanced insights across various industries. A study by Xiong et al. (2022) in the manufacturing sector emphasized the role of contract design in fostering environmental and social sustainability. Their research revealed that contracts incorporating specific clauses related to environmental responsibility and ethical conduct positively influenced the overall sustainability performance of supply chains. This highlights the importance of integrating sustainability criteria into the contractual framework.

Similarly, a study by Bird and Soundararajan (2020) explored the impact of contract design in the context of global supply chains, demonstrating that the inclusion of sustainability metrics in contracts positively correlated with enhanced environmental and social performance. The findings underscored the potential of contracts as instruments to align suppliers with sustainability goals and drive positive supply chain outcomes. However, the study also acknowledged the need for clear and measurable indicators within contracts to effectively drive sustainable practices.

Contrastingly, research by Etse et al. (2023) in the context of procurement in the service industry revealed that the integration of sustainability criteria in contracts faced challenges. The study identified issues such as vague language, lack of standardization, and a limited focus on social dimensions, which hindered the effectiveness of contract design in promoting sustainable supply chain performance. This indicates that, while contract design holds promise as a lever for sustainability, attention to specific details and potential barriers is crucial for its successful implementation.

While these studies contribute valuable insights to the broader understanding of the impact of contract design on sustainable supply chain performance, further research is

needed, especially within the specific context of healthcare-focused NGOs in developing regions like Kenya, to uncover industry-specific dynamics and tailor recommendations for improved sustainability outcomes in healthcare supply chains.

2.3.3 Supplier Evaluation and Sustainable Supply Chain Performance

Supplier evaluation is the ongoing assessment and monitoring of suppliers' performance based on predefined criteria. In the context of this study, it involves examining how local NGOs in Kenya assess the performance of their healthcare resource suppliers, considering factors such as quality, timeliness, adherence to sustainability standards, and overall contribution to the sustainable supply chain. Supplier evaluation begins with the identification of the dimensions that the organization wishes to evaluate the supplier on. Organizations can develop sustainability dimensions that can be utilized to evaluate supplier performance during the contracted period. According to Piprani et al. (2023), a traditional supply chain will evaluate suppliers based on price, quality and delivery. However, Dimensions that have emerged recently include environmental and social responsibility.

Empirical studies exploring the effect of supplier evaluation on sustainable supply chain performance have provided valuable insights across diverse industries. A study by Bird and Soundararajan (2020) in the context of global supply chains underscored the significance of supplier evaluation in driving sustainability outcomes. The research highlighted that robust supplier evaluation processes positively influenced environmental and social dimensions, fostering responsible practices throughout the supply chain. This study emphasized the critical role of continuous monitoring and feedback mechanisms in supplier relationships to enhance overall sustainability performance.

In the manufacturing sector, Yang and Wang (2023) conducted research that demonstrated the positive impact of supplier evaluation on both economic and environmental dimensions of sustainability. Their findings revealed that effective supplier evaluation contributed to cost reduction and improved environmental practices, indicating that a comprehensive evaluation system aligns economic goals with sustainability objectives. This study underscored the potential of supplier evaluation not only in ensuring responsible practices but also in optimizing the economic efficiency of supply chains.

However, challenges were identified in a study by Cafaggi and Iamiceli (2020) that explored supplier evaluation in the context of global supply chains. The research found that while supplier evaluation positively correlated with economic and environmental sustainability, the integration of social responsibility criteria faced obstacles. Factors such as limited supplier transparency and varying global standards hindered the effective assessment of social performance. This highlights the need for a nuanced approach to supplier evaluation that considers the complexity of social sustainability metrics.

In the specific context of healthcare, there is a scarcity of empirical studies exploring the impact of supplier evaluation on sustainable supply chain performance. Given the unique challenges and priorities within healthcare supply chains, further research in this domain, especially focusing on NGOs in developing regions like Kenya, is crucial to understanding the dynamics of supplier evaluation and its role in enhancing sustainability outcomes in NGO'S in healthcare and their procurement practices.

2.4 Research Gap

In recent years, after the outbreak of the Covid-19 pandemic, there has been a development of research issues in the field of humanitarian supply chains, and researchers focus primarily on supply chain disruption and resilience, transparency, post disasters activities, information use, the role of NGOs, transportation planning, and block chain technology. (Sienkiewicz, 2022). Scholars argue that any study related to procurement in Humanitarian Organizations (Hos) must account for the particularities of the humanitarian context (De Vries and Van Wassenhove, 2020; Kovacs and Moshtari, 2019). Otherwise, the study will be based on assumptions not grounded in practice, and the findings will not provide valuable implications for HO practitioners. (Moshtari, Altay, Heikkila, & Goncalves, 2021)

Most case studies have explored large HOs, especially UN agencies, which raises concerns about the generalizability of their results to the whole population of humanitarian actors. HOs have different missions and mandates, vary widely in size and scope, and differ in their formal status (governmental, NGO, or UN agency (Charles et al., 2016). Governance levels differ depending on the country, with some having national, regional, and local authorities to take into account. (Moshtari, Altay, Heikkila, & Goncalves, 2021).

In the study carried out by (Moshtari, Altay, Heikkila, & Goncalves, 2021) on the procurement in humanitarian organizations the research concluded that further research needs to be conducted in to how Humanitarian organizations need to promote sustainability within their procurement practices. Furthermore, research should also be conducted on the different role's stakeholders like donors and host governments should play in sustainable procurement needs to be explored. Table 2.1 shows a summary of the research gaps.

Table 2.1: Summary of Literature and Research Gaps

Author	Study Objective	Methodology Used	Findings	Research Gaps
Yang and Wang (2023)	Impact of supplier evaluation on both economic and environmental dimensions of sustainability in the manufacturing sector	Descriptive research design, correlational and regression analysis	Effective supplier evaluation contributed to cost reduction and improved environmental practices, indicating that a comprehensive evaluation system aligns economic goals with sustainability objectives	This study was conducted in a developed economy and its findings might not hold in developing economy due to social and economic differences.
Gachau and Moronge (2018)	To establish the influence of green procurement practices on the supply chain performance of humanitarian organizations in Kenya	Descriptive survey research design	There is a strong correlation between green procurement practices and supply chain performance	The study already assumed humanitarian organizations have adopted green procurement practices. The study also did not measure sustainable supply chain which is the focus of the current study

Kahkshan, Asif (2022)	To examine the Impact of procurement strategies on supply chain sustainability in the pharmaceutical industry in Pakistan	This study used a quantitative research method followed by a convenient sampling technique for data collection from 102 respondents.	This study found that procurement strategies significantly influence supply chain sustainability.	Future research may be conducted by using different variables. This can be done in different regions of Pakistan and outside Pakistan. Different areas of the supply chain process for sustainability impact can be focused on highlighting other significant issues for improvement and enhancing research possibilities. The current study focuses on healthcare NGOs in Kenya
Mohammad et al. (2021)	To evaluate Procurement in humanitarian organizations	This study reviewed 51 scholarly articles related to procurement in the context of humanitarian operations and analyzes them from multiple angles: specific procurement tasks, key problems/research	It is important for scholars of humanitarian supply chain management to explore further, how factors like stakeholder expectations, contextual assumptions, organizational	Further research was needed to understand how HOs can promote sustainability in the procurement process. Lastly, the different roles of stakeholders like donors and host governments should play in sustainable procurement needs to be

		questions, data sought, and methods used.	structures, and environmental factors influence procurement practices and policies for HOs	explored.
Njeru (2015)	Establish the procurement practices used by NGOs and their effect on Donor funding.	The descriptive study targeted a sample of 95 NGOs to which questionnaires were shared.	From the study, the most commonly adopted procurement practices were: procurement database, procurement review committee, scorecards for procurement evaluation, prequalification of suppliers, and preparation of procurement plan.	The study did not establish the effect of procurement practices on sustainable supply chain performance, which was the focus of the current study.
Mbonigaba (2023)	To determine how procurement practices, influence the supplier chain performance of	Descriptive study	The study found out that there is a significant and positive relationship between procurement	The study did not include sustainability as a measure of performance which has been adopted in the current study

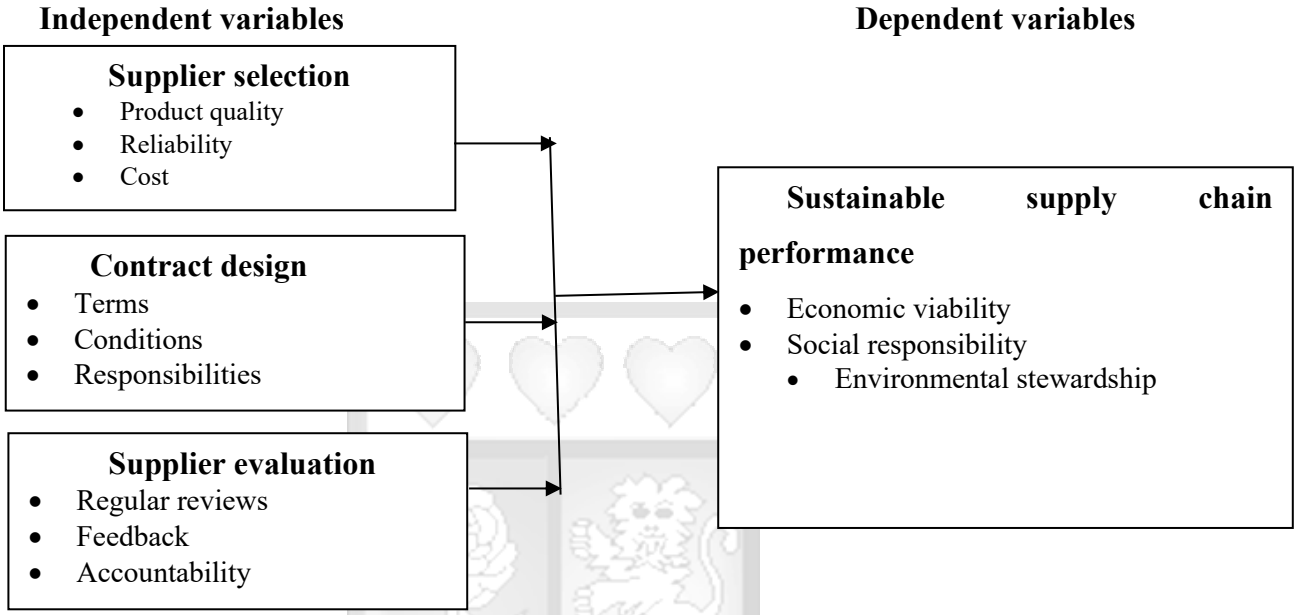
	NGOs in Rwanda. To determine the effect of procurement planning on supply-chain performance, To assess the impact of procurement tendering on supply-chain performance, To establish the effect of supplier selection on supply chain performance and to find out the effect of contract management on supply chain performance		practices and supply chain performance of NGO's in Rwanda	

Source: Researcher (2023)

2.5 Conceptual Framework

The conceptual framework shows the connection between the independent variables: supplier selection, contract design and supplier evaluation; and the dependent variable sustainable supply chain performance. Figure 2.1 shows the conceptual model

Figure 2.1: Conceptual Framework



Source: Researcher (2023)

2.6 Operationalization of Study Variables

This section discusses how the study variables were operationalized. The dependent variable was sustainable supply chain performance. The independent variables were supplier selection, contract design and supplier evaluation as indicated in Table 2.1

Table 2.2: Operationalization of Study Variables

Variable	Nature of Variable	Operational indicators	Measurement scale	Supporting literature
Sustainable supply chain performance	Dependent Variable	• Economic viability • Social responsibility • Environmental stewardship	Ordinal Scale (Likert Scale)	Oke et al. (2023)
Supplier selection	Independent Variable	• Product quality • Reliability • Cost	Ordinal Scale (Likert Scale)	Nkunda et al. (2023)
Contract design	Independent Variable	• Terms • Conditions • Responsibilities	Ordinal Scale (Likert Scale)	Barbanti et al. (2022)
Supplier evaluation	Independent Variable	• Regular reviews • Feedback • Accountability	Ordinal Scale (Likert Scale)	Panya and Abuya (2023)

Source: Author (2024)

2.7 Chapter Summary

This chapter has described the theories on which procurement practices and sustainable supply chain performance are based. It too deliberates the previous empirical studies; knowledge gaps identified, summarizing with a conceptual framework as well as hypotheses depicting the anticipated link among the study variables. The next chapter covers the research methodology adopted in the study.

CHAPTER THREE
RESEARCH METHODLOGY

3.1 Introduction

This chapter outlines the research methodology that was adopted for this study. It details the research design, the target population, sampling frame and the sample and sampling technique. In addition, it outlines the data collection instruments, data collection procedures, data processing and analysis and ethical considerations.

3.2 Research Philosophy

Two extreme survey ideologies can be recognized among the various research methodologies available: a phenomenology as well as a positivistic paradigm (Bell et al., 2022). The research adopted the positivism research philosophy. Implying that research assumes an unambiguous and accurate knowledge. Contrary to the philosophical method of interpretivism where the researcher is subjective, positivism seeks an independent, unconditional and objective viewpoint. Positivism research findings are measurable and observable truths that can be quantified statistically.

3.3 Research Design

This study adopted a descriptive cross-sectional research design. This is a type of research design that is used to establish a causal relationship between two or more variables. The goal of a descriptive cross-sectional research design is to determine whether a change in one variable (the independent variable) leads to a change in another variable (the dependent variable). In a descriptive cross-sectional research design, the researcher manipulates the independent variable and measures the effect on the dependent variable (Blumberg, Cooper & Schindler, 2019).

A descriptive cross-sectional research design requires a clear and precise definition of the variables being studied, as well as a well-designed experimental or quasi-experimental study design. The study design should include appropriate controls to ensure that other factors do not influence the results and should be designed to minimize the risk of bias and confounding. A descriptive cross-sectional research design is used in situations where the researcher wants to understand the cause-and-effect relationship between variables. In this study, the researcher used a descriptive cross-sectional

research design to understand the effect of procurement practices on sustainable supply chain performance.

3.4 Population

Target population refers to the entire group of individuals or objects that the researcher is interested in studying and from which a sample will be drawn (Bell, Bryman & Harley, 2022). The target population should be clearly defined and should correspond to the research question or objectives. In the current study, the target population was the 65 local NGOs providing healthcare support in Kenya as of 31st December 2023. The unit of observation was the head of procurement in each NGO.

3.5 Sampling Technique and Sample Size

This study adopted a census technique. All 65 local NGOs providing healthcare support in Kenya constituted the study population. The census approach was justified to ensure a comprehensive and representative understanding of the procurement practices within the targeted sector. Given the specialized and relatively limited population of interest, a census approach eliminates sampling bias and allows for a detailed examination of each NGO's procurement strategies, providing a holistic view of the sustainable supply chain performance landscape.

The unit of observation in this study was the heads of procurement from each of the 65 local healthcare NGOs, resulting in a total of 65 respondents. This selection ensured that data was obtained from individuals with direct knowledge and expertise in procurement practices, thereby enhancing the accuracy and reliability of the findings. By involving all heads of procurement, the study thoroughly explored variations in procurement practices while accounting for the diverse contexts and operational nuances of the NGOs.

3.6 Data Collection Methods

Data collection refers to the systematic process of gathering relevant information on variables of interest to address research questions and test hypotheses (Cresswell & Cresswell, 2017). In research, data collection instruments are tools, techniques, or methods used to gather data from participants or sources. The choice of instrument depends on the research objectives, study design, and the target population, ensuring

relevance and alignment with the variables being investigated (Bell et al., 2022). Properly designed instruments are essential for collecting accurate and reliable data that addresses the study's objectives.

This study utilized primary data, collected directly from respondents through structured questionnaires. A structured questionnaire with closed-ended questions was employed to ensure uniformity in responses and alignment with the research objectives. Closed-ended questions provide predetermined response options, allowing the researcher to focus the inquiry and obtain standardized data for easier analysis. The questionnaire was organized into five sections: the first section collected demographic data about the respondents, while the subsequent sections gathered data on the specific objectives of the study—supplier selection, contract design, supplier evaluation, and sustainable supply chain performance.

The Google Form questionnaires were targeted at the heads of procurement from each of the 65 healthcare NGOs in Kenya. Google form was preferred as it was an easy way of reaching the respondents and it is also convenient. These individuals were selected because they are directly responsible for designing and implementing procurement strategies within their respective organizations, making them the most knowledgeable about procurement practices and their impact on sustainable supply chain performance. Contacts for the heads of procurement were obtained from the NGOs' official directories, websites, and public records, as well as through direct engagement with organizational representatives during preliminary communication.

3.7 Research Data Quality

Reliability and validity are the two most important quality control objects in research. The following are the explanation of validity and reliability in research and their application in the study.

3.7.1 Reliability

Test of reliability is carried out to check the internal consistency of data measurement instrument. This study will subject the research instrument to reliability test. Reliability is the extent to which results are free from error or degree to which a research instrument yields consistent results (Cooper & Schindler, 2019). The Cronbach alpha was used to ascertain the reliability of the research instrument. Cronbach's Alpha is important to a

researcher since the researcher is able to know if the instruments will give reliable and consistent responses even if the questions are replaced with similar ones. A variable is stable if it gives similar responses from a similar set of questions. The true score also referred to as 'Alpha' has values ranging from 0 to 1. It can also be used to express reliability on questions with two possible answers (dichotomous questions) and questionnaires with rating scales. A high score indicates high reliability, while the value of 0.7 has been accepted as an adequate coefficient of reliability or value of Alpha (Cresswell & Cresswell, 2017). The reliability test results are as shown in Table 3.1.

Table 3.1: Reliability Results

Variables	No. of Items	Cronbach's Alpha	Critical Value	Conclusion
Supplier selection	6	.870	0.7	Reliable
Contract design	6	.871	0.7	Reliable
Supplier evaluation	6	.887	0.7	Reliable
Sustainable supply chain performance	9	.957	0.7	Reliable

Source: Author (2024)

In this study, the Cronbach's Alpha values for all the variables exceed the critical value of 0.7, demonstrating strong reliability. Specifically, supplier selection (0.870), contract design (0.871), supplier evaluation (0.887), and sustainable supply chain performance (0.957) all show high levels of reliability. This indicates that the items used to measure each variable are consistent, thereby enhancing the credibility and robustness of the study's findings.

3.7.2 Validity

Validity of an instrument relates to the ability of the instrument to measure the construct as purported. This study subjected the research instrument to validity test. Construct validity was utilized in testing whether the operational definition of variables is an actual reflection of the true theoretical definition of concept. For this study, the development of the questionnaire was made based on similar early studies that were modified to meet the study objectives. The supervisor also checked the document to make sure theoretical dimensions were like those conceptualized.

3.8 Data Analysis

The data collected from the field was processed manually and the processing stage involved editing, classification and coding. Both descriptive and inferential statistics were carried out. Inferential statistics were used to establish variations and associations between the variables. More specifically, correlation and multiple linear regression analyses were used to establish the link, association, and relationship. The analysis aimed at establishing how procurement practices influence sustainable supply chain performance. The statistical software, Statistical Package for Social Sciences (SPSS) version 27, was utilized for this study's analyses. The general model for sustainable supply chain was represented by the equation below:

$$\mathbf{Y = \alpha + \beta_1 X_{ss} + \beta_2 X_{cd} + \beta_3 X_{se} + \text{Ɛ}}$$

Where:

Y = Sustainable supply chain performance represented by economic, social and environmental sustainability

α - Is the regression constant or intercept,

β_1, β_2, β_3 and β_4– Are regression coefficients or change induced in Y by each X_{ss}, X_{cd} and X_{se} that are predictor variables,

X_{ss} – Supplier selection,

X_{cd} – Contract design,

X_{se} – Supplier evaluation,

Ɛ (Extraneous) - Error term that accounts for the variability in Y that cannot be explained by the linear effect of the predictor variables.

Both descriptive and inferential statistics results were presented in tables and figures which were accompanied by pertinent interpretations and discussions. The significance of the model was tested at 5% significance level.

3.9 Diagnostic Tests

Prior to data analysis, the tests below were performed with the intention of testing and identifying transgression of any type to regression assumptions. The tests are as shown in Table 3.2

Table 3.2: Diagnostic Tests

Assumption	Description	Type of Tests	Interpretations	Treatment
Normality Test	Normally distributed data assumes a bell-shaped curve. It implies that errors should be distributed normally.	Shapiro-Wilk test.	$p > 0.05$ suggest that variables are distributed normally.	Data was transformed using logs and square roots.
Multicollinearity test	Multicollinearity is a situation where the explanatory variables are highly correlated.	Variance Inflation Factor	VIF factor >10 infers presence of multicollinearity.	Obtaining additional data and omitting collinear variables.
Heteroscedasticity test	Presumption that outcome variable exhibits similar magnitude of variation across entire values of explanatory variables.	Breusch Pagan Test	$P > 0.05$ implies homoscedasticity	Data was transformed using logs and reciprocal techniques.
Linearity Test	This occurs when the outcome variable has a linear function of the explanatory variables in addition to the residuals.	ANOVA test	Deviation from linearity of the linear F test $p > 0.05$	Data was transformed using logs and reciprocal techniques.

3.10 Ethical Consideration

Requisite permits, consent, and approvals were sought before data collection since it is an ethical requirement in research. Authority to do the research study was attained from the school (Appendix IV) and a research authorization/permit letter from the NACOSTI (Appendix V) was sought because this is the institution in the country mandated to approve and supervise research in Kenya. Finally, approval to do the study in the NGO providing healthcare support was sought from the management for concurrence and access to staff and offices to conduct study. Having determined both the reliability and the validity of the study-specific data collection tool, the researcher disbursed questionnaires, which were self-administered so that respondent can independently answer the questions. Confidentiality and privacy were observed by not having had to identify information on the questionnaire and allowing the respondents to fill the questionnaire in privacy.

CHAPTER FOUR
DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter provides a comprehensive analysis of the data collected, covering the response rate, reliability tests, demographic details, and descriptive statistics. It also includes correlation and regression analyses aimed at meeting the research objectives.

4.2 Response Rate

The response rate refers to the proportion of distributed questionnaires that were completed and returned by the respondents. It is a critical metric in survey-based research as it reflects the level of participation and the reliability of the collected data (Cresswell & Cresswell, 2017). A higher response rate indicates a greater likelihood that the findings accurately represent the target population, reducing the risk of non-response bias (Baruch & Holtom, 2008).

In this study, 65 questionnaires were distributed, and 59 were returned, resulting in a response rate of 90.8%. According to Baruch and Holtom (2008), a response rate of 50% is acceptable for organizational research, while rates above 70% are considered very good. Therefore, the 90.8% response rate achieved in this study is robust and acceptable, ensuring the reliability and validity of the findings. This high response rate suggests strong engagement from the targeted respondents, which enhances the generalizability of the results to the entire population of healthcare NGOs in Kenya. It also demonstrates the effectiveness of the data collection process, including the choice of an electronic questionnaire administered via Google Forms, which likely contributed to the high response rate. The results are presented in Table 4.1.

Table 4.1: Response Rate

Response Rate	Frequency	Percentage
Returned	59	90.8
Unreturned	6	9.2
Total	**65**	**100**

Source: Author (2024)

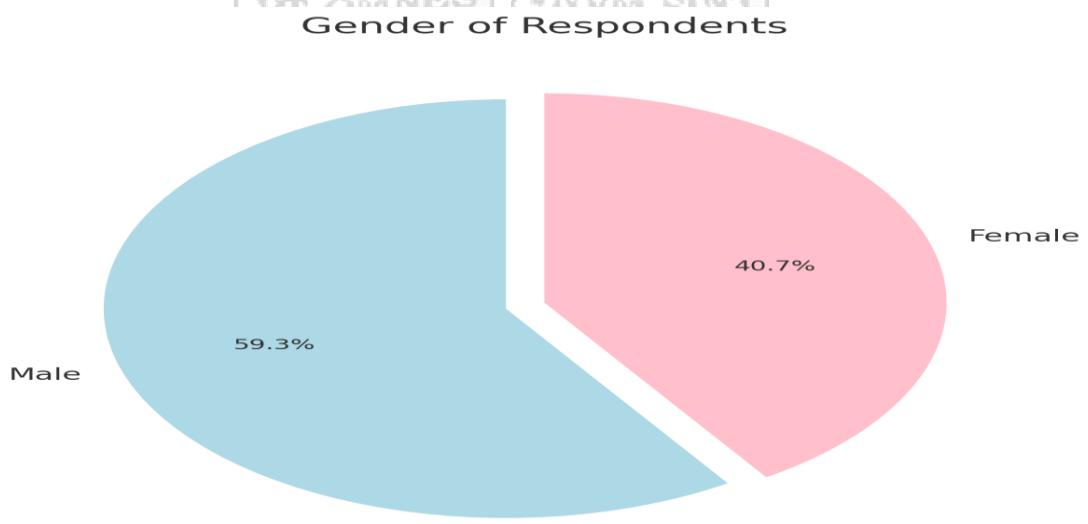
4.3 Demographic Analysis

The study aimed to understand the general characteristics of the respondents surveyed. The demographic characteristics considered in this study include gender, age, education level, number of years with the organization. These factors provide insight into the composition of the respondents and help contextualize the findings within the broader framework of the study.

4.3.1 Respondents' Gender

Figure 4.1 presents the gender distribution of the respondents who participated in the study. Out of the 59 respondents, 35 (59.3%) were male, and 24 (40.7%) were female. The results indicate a higher participation rate among male respondents compared to female respondents. This gender distribution provides important insights into the demographic composition of individuals involved in procurement practices within healthcare NGOs in Kenya. The male-dominant representation, while relatively balanced, could reflect the actual gender distribution within the organizations studied or highlight potential gender disparities in roles related to procurement and supply chain management. According to Masaba et al. (2020), gender distribution within organizations often reflects broader societal norms and workplace dynamics. This finding suggests that men may hold a majority of procurement-related roles in healthcare NGOs, potentially influencing decision-making patterns and sustainability outcomes.

Figure 4.1: Gender of Respondents



Source: Author (2024)

4.3.2 Age of the Respondents

Table 4.2 illustrates the age distribution of the respondents in the study. The majority of respondents, 32 (54.2%), are between the ages of 41 and 50 years, followed by 17 (28.8%) respondents who are between 31 and 40 years. The age group of respondents above 50 years accounts for 9 (15.3%) of the total, while only 1 respondent (1.7%) is below 30 years.

The age distribution indicates that the majority of respondents are in the mid to late stages of their careers, with over half falling within the 41–50-year age bracket. This finding aligns with Nkirote (2019), who suggest that procurement roles in organizations are often held by individuals with significant career experience. The prevalence of respondents in this age range highlights a more experienced workforce within the procurement departments of healthcare NGOs in Kenya, potentially reflecting the need for expertise in managing complex supply chain processes.

The predominance of respondents in these age groups may influence procurement practices and sustainable supply chain performance, as experience and career maturity often contribute to more informed decision-making. Additionally, the small number of younger respondents suggests a potential gap in the involvement of early-career professionals in procurement roles, which could have implications for succession planning and the integration of innovative approaches.

Table 4.2: Respondents' Age

Number	Frequency	Percentage
Below 30 years	1	1.7%
31- 40 years	17	28.8%
41- 50 years	32	54.2%
Above 50 years	9	15.3%
Total	**59**	**100%**

Source: Author (2024)

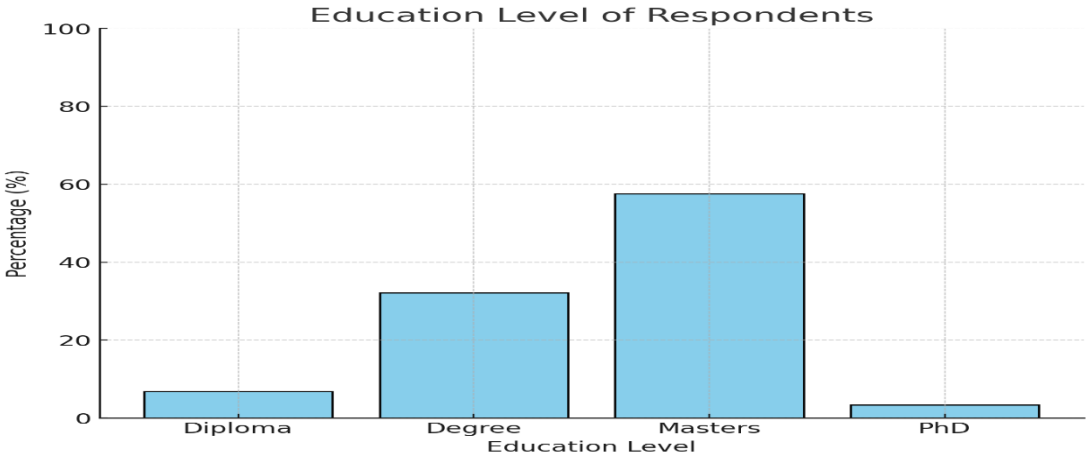
4.3.3 Education Level

Figure 4.2 displays the educational qualifications of the respondents who participated in the study. The largest group of respondents, 34 (57.6%), hold a Master's degree, followed by 19 (32.2%) who have a Bachelor's degree. A smaller portion of respondents, 4 (6.8%), have attained a diploma, while only 2 (3.4%) hold a PhD.

The educational distribution demonstrates that the majority of respondents possess advanced education, with a significant proportion holding master's and bachelor's degrees. This aligns with findings by Lelei (2021), who highlight that positions in procurement and supply chain management often require advanced qualifications to effectively handle the complexities of sourcing, evaluation, and sustainability. A highly educated workforce is likely advantageous for healthcare NGOs in Kenya, as it enhances the capacity to develop and implement effective procurement practices.

The prevalence of respondents with advanced degrees also indicates the emphasis healthcare NGOs place on recruiting individuals with strong academic backgrounds for procurement roles. Higher education levels are often linked to improved analytical and decision-making skills, which can positively influence sustainable supply chain performance. Moreover, the presence of respondents with PhDs, albeit limited, underscores the potential for strategic innovation and research-driven approaches within these organizations.

Figure 4.2: Education Level



Source: Author (2024)

4.3.4 Years of Experience in the Firm

Table 4.3 presents the distribution of respondents based on their years of experience within their respective organizations. The majority of respondents, 26 (44.1%), have 4–7 years of experience, followed by 18 (30.5%) who have 8 years or more. A smaller proportion, 12 (20.3%), have 1–3 years of experience, while the fewest, 3 (5.1%), have less than 1 year of experience.

This distribution indicates that a significant portion of the respondents possess substantial experience, with 74.6% having 4 years or more. According to Masaba et al. (2020), experience plays a critical role in influencing decision-making and the effectiveness of management practices in supply chain operations. The high level of experience among respondents suggests they are likely well-versed in their organizations' procurement practices, making them reliable sources of information for this study.

Furthermore, experienced individuals are more likely to understand the nuances of procurement strategies and their alignment with sustainability goals, thereby enhancing the quality and credibility of the insights provided. The relatively smaller proportion of respondents with less than 4 years of experience may reflect the emphasis healthcare NGOs place on retaining seasoned professionals in procurement roles to maintain consistency and quality in supply chain management.

Table 4.3: Years of Experience in the Firm

Age	Frequency	Percentage
Less than 1 year	3	5.1%
1-3 years	12	20.3%
4-7 years	26	44.1%
8 years and above	18	30.5%
Total	**59**	**100**

Source: Author (2024)

4.4 Descriptive Analysis of Study Variables

This section presents the descriptive analysis of the study variables using mean and standard deviation. These statistical measures provide a summary of the central tendency and dispersion of the data, offering insights into the typical responses and the variability in procurement practices and sustainable supply chain performance within the healthcare NGOs in Kenya.

4.4.1 Supplier Selection

The descriptive statistics for supplier selection provide valuable insights into the respondents' perceptions of procurement practices within their organizations. The mean scores range from 2.41 to 3.54, with standard deviations between 0.96 and 1.10, reflecting varying levels of agreement and consistency across different aspects of

supplier selection. These results highlight areas of strength and areas requiring improvement in supplier selection practices among healthcare NGOs in Kenya.

The highest mean score (3.54) is observed for the statement that the organization assesses the financial stability of potential suppliers before entering into contracts. This indicates that respondents place significant emphasis on ensuring that suppliers have the financial capacity to meet contractual obligations. This practice is critical for mitigating risks associated with supplier insolvency, which could disrupt supply chain performance. Similarly, the relatively high mean score (3.15) for the consideration of ethical business practices suggests a growing recognition of the importance of ethics in fostering responsible supplier relationships, which aligns with global trends in sustainable supply chain management (Masaba et al., 2020).

However, the findings also reveal concerning gaps in supplier selection practices. The statement on aligning supplier selection criteria with the mission and values of the healthcare NGO has the lowest mean score (2.41). This is particularly problematic, as ensuring that suppliers share the organization's mission and values is fundamental for maintaining consistency and integrity in healthcare service delivery. Furthermore, the relatively low mean score (2.76) for the reliability of suppliers in delivering quality goods or services consistently raises concerns about the robustness of supplier evaluation processes. Reliability is a critical factor in procurement, particularly in the healthcare sector, where the timely delivery of quality goods and services can directly impact patient outcomes.

Cost considerations integrated into the supplier selection process without compromising quality also scored low (2.63), suggesting that some organizations may prioritize cost savings over quality. While cost efficiency is important, an overemphasis on cost at the expense of quality could undermine the effectiveness of healthcare services. Similarly, the moderate mean score (3.07) for seeking suppliers committed to environmental sustainability indicates that there is room for greater integration of environmental considerations into supplier selection practices.

The overall mean score of 2.93, with a standard deviation of 0.76, reflects a moderate level of agreement on the effectiveness of the supplier selection process. This suggests that while some procurement practices are implemented effectively, there are critical

areas that require improvement to ensure a more robust and sustainable supplier selection framework. The low scores for mission alignment, reliability, and cost-quality balance highlight specific weaknesses that could impact the overall sustainability and effectiveness of procurement practices. The results are presented in Table 4.4.

Table 4.4: Descriptive Statistics for Supplier Selection

Statements	N	Mean	Std. Dev
The criteria for selecting suppliers in our organization adequately consider their ethical business practices.	59	3.15	1.09
Our supplier selection process gives sufficient weight to the reliability of the suppliers in delivering quality goods or services consistently.	59	2.76	0.98
Cost considerations are effectively integrated into the supplier selection process without compromising on quality.	59	2.63	1.10
Our organization actively seeks suppliers who demonstrate a commitment to environmental sustainability.	59	3.07	1.10
The supplier selection criteria in our procurement process align with the mission and values of our healthcare support NGO.	59	2.41	0.96
The organization assesses the financial stability of potential suppliers before entering into contracts.	59	3.54	1.05
Overall mean Score	**59**	**2.93**	**0.76**

Source: Author (2024)

To address these gaps, healthcare NGOs should prioritize the alignment of supplier selection criteria with their organizational mission and values to ensure consistency in achieving their objectives. Enhanced focus on supplier reliability and consistent delivery of quality goods and services is also essential, as this directly impacts supply chain performance and the quality of healthcare delivery. Additionally, procurement processes should integrate a balanced approach to cost and quality, ensuring that cost-efficiency does not compromise the quality of goods and services. By strengthening these aspects, healthcare NGOs can improve the overall sustainability of their supply chains and better achieve their goals of providing high-quality healthcare support.

4.4.2 Contract Design

The descriptive statistics for contract design offer valuable insights into the perceptions of respondents regarding contract structuring practices within healthcare NGOs in Kenya. The mean scores range from 2.92 to 3.51, with standard deviations between

0.85 and 1.04, indicating varying levels of agreement and consistency among the respondents. The highest mean score (3.51) is associated with the statement that the language and terminology in contracts are clear and easily understood by all parties involved. This finding highlights the importance placed on clarity in contracts, which is essential for minimizing misunderstandings and fostering effective collaboration between parties (Abiddin, Ibrahim, & Abdul Aziz, 2022). Additionally, the relatively high mean score (3.42) for the flexibility of contract design underscores the necessity for adaptability in contracts to address dynamic challenges, such as emergencies or unforeseen circumstances, which are common in the healthcare sector.

Despite these strengths, areas for improvement were also identified. The statement regarding terms and conditions minimizing procurement risks received the lowest mean score (2.92), suggesting that risk mitigation remains a challenge for many healthcare NGOs. Effective risk mitigation strategies are crucial in procurement, as poorly structured contracts can expose organizations to operational and financial vulnerabilities (Lelei, 2021). Similarly, the mean scores for incorporating measurable sustainability performance indicators (3.02) and incentivizing suppliers to adopt ethical and socially responsible practices (3.07) reveal moderate levels of agreement, indicating that while efforts are being made in these areas, there is significant potential for improvement.

The overall mean score of 3.17, with a standard deviation of 0.76, reflects a moderate level of agreement on the effectiveness of contract design in supporting procurement practices and sustainable supply chain performance. This indicates that while certain aspects of contract design, such as clarity and flexibility, are well-implemented, other critical elements, including risk minimization and sustainability indicators, require further enhancement.

To address these gaps, healthcare NGOs should consider strengthening the terms and conditions of their contracts to effectively mitigate risks associated with procurement activities. This could involve conducting comprehensive risk assessments during the contract drafting phase and including clauses that address potential contingencies. Additionally, integrating clear and measurable sustainability performance indicators into contracts will not only enhance accountability but also align procurement practices with broader sustainability goals (Ajide, Adenuga, & Raheem, 2020). Incentivizing

suppliers to adopt ethical and socially responsible practices through performance-based rewards or penalties could further improve contract design and foster sustainable supplier relationships.

By addressing these areas of improvement, healthcare NGOs can enhance the effectiveness of their contract design, ultimately contributing to more robust and sustainable procurement practices that support the efficient delivery of healthcare services. The results are as shown in Table 4.5.

Table 4.5: Descriptive Statistics for Contract Design

Statements	N	Mean	Std. Dev
Contracts in our organization are structured to include clear and measurable sustainability performance indicators.	59	3.02	1.02
The terms and conditions in our contracts are designed to minimize risks associated with procurement activities.	59	2.92	1.03
Contracts are drafted to incentivize suppliers to adopt ethical business practices and social responsibility.	59	3.07	1.04
Our organization ensures that contractual agreements align with the overall mission and goals of the healthcare support NGO.	59	3.08	1.03
Our organization's contract design emphasizes flexibility to adapt to changing circumstances or emergencies.	59	3.42	0.91
The language and terminology in our contracts are clear and easily understood by all parties involved.	59	3.51	0.85
Overall Mean Score	**59**	**3.17**	**0.76**

Source: Author (2024)

4.4.3 Supplier Evaluation

The descriptive statistics for supplier evaluation provide insights into how respondents perceive the role and effectiveness of supplier evaluation practices within healthcare NGOs in Kenya. The mean scores range from 2.56 to 3.61, with standard deviations between 0.92 and 1.09, indicating a moderate to high level of agreement and some variability in responses. These findings reveal both strengths and areas for improvement in supplier evaluation practices within the sector.

The highest mean score (3.61) corresponds to the statement that supplier performance evaluations consider the environmental impact of their operations. This reflects strong agreement among respondents on the importance of integrating environmental sustainability into supplier evaluation processes. Evaluating the environmental impact

of suppliers is critical for ensuring alignment with global sustainability goals and mitigating the negative effects of procurement activities on the environment (Bakhshi et al., 2023). The relatively high score (3.27) for using supplier performance data to inform decision-making and enhance procurement strategies further underscores the strategic importance of supplier evaluations in driving continuous improvement and informed decision-making within the supply chain.

However, the results also highlight notable weaknesses. The statement on systematically evaluating suppliers' adherence to ethical business practices received a mean score of 2.58, while the statement on regularly reviewing and updating evaluation criteria scored the lowest at 2.56. These findings suggest that ethical considerations and the regular revision of evaluation criteria are underdeveloped areas in supplier evaluation processes. Ethical business practices are crucial in ensuring that suppliers operate with integrity and align with the values of healthcare NGOs. Regular updates to evaluation criteria are equally important to maintain relevance and adapt to changes in organizational priorities, industry standards, and sustainability requirements (Lelei, 2021).

The overall mean score of 3.00, with a standard deviation of 0.81, indicates a moderate level of agreement on the effectiveness of supplier evaluation practices. While environmental considerations and the use of performance data are relatively well-implemented, the gaps in addressing ethical compliance and revising evaluation criteria suggest a need for improvement. This is particularly critical in the healthcare sector, where procurement decisions have direct implications for service delivery, sustainability, and community well-being.

To address these gaps, healthcare NGOs should strengthen their supplier evaluation frameworks by systematically incorporating ethical standards into the evaluation process. This can be achieved through the development of comprehensive ethical guidelines, periodic audits, and collaboration with suppliers to improve adherence to ethical practices. Additionally, organizations should establish mechanisms to regularly review and update evaluation criteria to ensure alignment with evolving sustainability goals and industry best practices. Enhancing transparency and providing constructive feedback during supplier evaluations can also foster stronger partnerships and drive continuous improvement among suppliers.

By addressing these areas for improvement, healthcare NGOs can enhance the effectiveness of supplier evaluation practices, contributing to more sustainable procurement processes and improved supply chain performance. The results are shown in Table 4.6.

Table 4.6: Descriptive Statistics for Supplier Evaluation

Statements	N	Mean	Std. Dev
Our organization systematically evaluates suppliers' adherence to ethical business practices.	59	2.58	1.09
Supplier performance evaluations consider the environmental impact of their operations.	59	3.61	1.07
The supplier evaluation process includes a comprehensive assessment of product or service quality.	59	3.22	1.07
The organization regularly reviews and updates the criteria used to evaluate supplier performance.	59	2.56	1.03
Supplier evaluations are conducted transparently, with feedback shared constructively with suppliers.	59	2.76	1.01
The organization uses supplier performance data to inform decision-making and enhance overall procurement strategies.	59	3.27	0.92
Overall Mean Score	**59**	**3.00**	**0.81**

Source: Author (2024)

4.4.4 Sustainable Supply Chain Performance

The descriptive statistics for sustainable supply chain performance offer insights into how respondents perceive the effectiveness of procurement practices in promoting economic viability, social responsibility, and environmental stewardship within healthcare NGOs in Kenya. The mean scores range from 2.81 to 3.25, with standard deviations between 1.00 and 1.11, reflecting a moderate level of agreement and some variability in responses. These findings highlight both strengths and areas for improvement in sustainable supply chain management.

For economic viability, the mean scores range from 2.81 to 2.98. The highest score (2.98) reflects moderate agreement that procurement practices contribute to cost efficiency in acquiring and distributing healthcare resources, suggesting some level of success in achieving financial sustainability. However, the slightly lower score (2.81) for minimizing unnecessary costs without compromising quality points to challenges in cost management, which is crucial for ensuring the efficient use of limited resources in the healthcare sector (Abiddin, Ibrahim, & Abdul Aziz, 2022). The moderate score

(2.92) for regular financial audits highlights that while efforts are being made to ensure adherence to budgetary constraints, there is room for improvement in optimizing resource utilization and cost-saving measures.

In terms of social responsibility, the highest mean score (3.07) indicates positive perceptions of integrating ethical sourcing principles, such as fair labor practices and human rights standards, into procurement strategies. This suggests that healthcare NGOs are making strides in promoting ethical practices within their supply chains. However, the lower scores for promoting diversity and community well-being (2.86) and prioritizing health and safety standards (2.94) highlight gaps in addressing broader social impacts of procurement practices. These areas are particularly critical, as procurement strategies that prioritize social responsibility can enhance community trust and support, contributing to the long-term sustainability of healthcare initiatives (Lelei, 2021).

For environmental stewardship, the highest mean score (3.25) reflects strong agreement that organizations are actively working to reduce their carbon footprint, demonstrating progress in aligning procurement practices with environmental sustainability goals. Nevertheless, the slightly lower scores for minimizing waste (2.86) and prioritizing eco-friendly suppliers (3.00) indicate that there is still room to strengthen efforts to reduce environmental impacts. Effective waste management and prioritizing sustainable suppliers are essential for mitigating environmental degradation and fostering green supply chains (Bakhshi et al., 2023).

The overall mean score of 2.97, with a standard deviation of 0.84, suggests a moderate level of agreement on the sustainable supply chain performance of healthcare NGOs. While respondents recognize progress in areas such as carbon footprint reduction and ethical sourcing, the results point to several areas needing improvement, including cost management, diversity promotion, waste reduction, and eco-friendly procurement practices.

To address these gaps, healthcare NGOs should enhance their focus on minimizing unnecessary costs while maintaining quality by implementing rigorous cost-control mechanisms and engaging suppliers who offer value for money. Additionally, organizations should prioritize initiatives that promote diversity, community well-

being, and health and safety standards in their procurement processes. Strengthening waste management systems and embedding sustainability criteria, such as prioritizing eco-friendly suppliers, into procurement policies can further bolster environmental stewardship. The results are presented in Table 4.7.

Table 4.7: Descriptive Statistics for Sustainable Supply Chain Performance

Statements	N	Mean	Std. Dev
Economic viability			
The procurement practices of our organization contribute to cost efficiency in the acquisition and distribution of healthcare resources.	59	2.98	1.00
Our organization strives to minimize unnecessary costs throughout the supply chain without compromising the quality of healthcare resources.	59	2.81	1.05
The financial aspects of our procurement practices are regularly audited to ensure adherence to budgetary constraints and optimize resource utilization.	59	2.92	1.05
Social Responsibility			
Ethical sourcing principles, including fair labor practices and human rights standards, are integral to our procurement strategies.	59	3.07	1.06
Our organization is committed to promoting diversity and community well-being through its procurement practices.	59	2.86	1.07
Health and safety standards are prioritized in our procurement and supply chain processes to ensure the well-being of workers and communities.	59	2.94	1.04
Environmental Stewardship			
Our organization actively works to reduce its carbon footprint in the procurement and distribution of healthcare resources.	59	3.25	1.05
Efforts are made to minimize waste generation, and sustainable disposal practices are considered in our procurement processes.	59	2.86	1.11
The procurement practices of our organization contribute to environmental stewardship by prioritizing eco-friendly suppliers and practices.	59	3.00	1.03
Overall Mean Score	**59**	**2.97**	**0.84**

Source: Author (2024)

4.5 Diagnostic Tests

This section outlines the diagnostic tests performed to confirm the validity and reliability of the regression analysis used in the study. These tests include checks for normality, multicollinearity, heteroscedasticity, and linearity, all of which are critical in assessing whether the data satisfies the necessary assumptions for a reliable

regression model. Ensuring these conditions are met is key to producing accurate, trustworthy, and meaningful results in the analysis.

4.5.1 Normality Test

The Kolmogorov-Smirnov test is used to assess whether a sample comes from a population that follows a specific distribution, typically a normal distribution. In this analysis, the p-values for all variables are greater than the standard significance level of 0.05. Specifically, the p-values for supplier selection, contract design, supplier evaluation, and sustainable supply chain performance are 0.194, 0.191, 0.201, and 0.194, respectively, all exceeding 0.05. These results indicate that the null hypothesis that the data for each variable follows a normal distribution cannot be rejected.

This implies that the data for supplier selection, contract design, supplier evaluation, and sustainable supply chain performance are normally distributed. Meeting the assumption of normality is essential in regression analysis, and these findings suggest that this assumption is satisfied, thereby supporting the validity of the subsequent regression analysis. The results are presented in Table 4.8.

Table 4.8: Test for Normality

	Kolmogorov-Smirnov	P-value
Supplier selection	0.881	0.194
Contract design	0.874	0.191
Supplier evaluation	0.892	0.201
Sustainable supply chain performance	0.874	0.194

Source: Author (2024)

4.5.2 Multicollinearity Test

Multicollinearity arises when independent variables in a regression model are highly correlated, which can lead to unreliable estimates of the regression coefficients. The VIF and Tolerance values are used to detect multicollinearity. Typically, a VIF value greater than 10 or a Tolerance value below 0.1 suggests problematic multicollinearity.

In this study, the VIF values for supplier selection (1.704), contract design (1.279), and supplier evaluation (1.869) are all well below the threshold of 10. Likewise, the Tolerance values for supplier selection (0.587), contract design (0.782), and supplier evaluation (0.535) are comfortably above 0.1. These results indicate that

multicollinearity is not a concern in this analysis. The independent variables do not exhibit high intercorrelation, ensuring that the regression model can provide reliable estimates of their impact on sustainable supply chain performance. The results are presented in Table 4.9.

Table 4.9: Multicollinearity

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Supplier selection	0.587	1.704
Contract design	0.782	1.279
Supplier evaluation	0.535	1.869

Source: Author (2024)

4.5.3 Heteroskedasticity Test

Heteroskedasticity refers to the presence of non-constant variance in the error terms of a regression model, which can result in inefficient estimates and affect the validity of statistical tests. The Breusch-Pagan / Cook-Weisberg test for heteroskedasticity is used to detect this issue. A significant p-value (typically less than 0.05) indicates the presence of heteroskedasticity.

In this study, the chi-square value for the Breusch-Pagan / Cook-Weisberg test is 0.8317, and the corresponding p-value is 0.6154. Since the p-value is greater than the standard significance level of 0.05, the null hypothesis of homoscedasticity (constant variance) cannot be rejected. This suggests that heteroskedasticity is not a concern in this regression model. The error terms display constant variance, supporting the validity and reliability of the regression analysis results. The results are presented in Table 4.10.

Table 4.10: Heteroskedasticity Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
chi2(1)	=	0.8317
Prob > chi2	=	0.6154

Source: Author (2024)

4.5.4 Linearity Test

The linearity test assesses whether the relationship between independent and dependent variables is linear. A significant p-value for the linearity test (typically less than 0.05)

indicates that a linear relationship exists. The deviation from linearity test checks if the non-linear components of the relationship are significant. For supplier selection and sustainable supply chain performance, the linearity p-value is 0.000, indicating a significant linear relationship. The deviation from linearity p-value is 0.517, which is greater than 0.05, suggesting that the relationship is sufficiently linear without significant non-linear components.

For contract design and sustainable supply chain performance, the linearity p-value is 0.000, confirming a significant linear relationship. The deviation from linearity p-value is 0.089, also greater than 0.05, indicating that the relationship is primarily linear with no significant non-linear components. For supplier evaluation and sustainable supply chain performance, the linearity p-value is 0.000, again showing a significant linear relationship, while the deviation from linearity p-value is 0.61, indicating that the relationship is adequately linear. Overall, these results suggest that the relationships between the independent variables (supplier selection, contract design, and supplier evaluation) and the dependent variable (sustainable supply chain performance) are linear. This supports the use of linear regression analysis to examine the effects of these variables on sustainable supply chain performance within healthcare NGOs in Kenya. The results are presented in Table 4.11.

Table 4.11: Linearity Test Results

Sustainable supply chain performance			Sig.
Supplier selection * Sustainable supply chain performance	Between Groups	(Combined)	0.001
		Linearity	0.000
		Deviation from Linearity	0.517
Contract design * Sustainable supply chain performance	Between Groups	(Combined)	0.000
		Linearity	0.000
		Deviation from Linearity	0.089
Supplier evaluation * Sustainable supply chain performance	Between Groups	(Combined)	0.000
		Linearity	0.000
		Deviation from Linearity	0.61

Source: Author (2024)

4.6 Inferential Statistics

This part presents the results for both correlation and regression analysis.

4.6.1 Correlation Analysis

Table 4.12 presents the correlation results among procurement practices and their relationship with sustainable supply chain performance in healthcare NGOs in Kenya, with a listwise sample size (N) of 59.

The Pearson correlation coefficient between sustainable supply chain performance and supplier selection is 0.751, with a significance level of 0.000. This indicates a strong positive correlation between the two variables, suggesting that improvements in supplier selection are strongly associated with enhancements in sustainable supply chain performance. The significant p-value (less than 0.05) confirms that this relationship is statistically significant, indicating that supplier selection plays a crucial role in driving sustainable supply chain performance within the healthcare NGOs.

The correlation between sustainable supply chain performance and contract design is 0.725, with a significance level of 0.000. This strong positive correlation implies that the adoption of well-structured contract designs is closely linked to better sustainable supply chain performance. The statistically significant p-value suggests that effective contract design significantly contributes to operational efficiency and sustainability.

The Pearson correlation coefficient between sustainable supply chain performance and supplier evaluation is 0.763, with a significance level of 0.000. This very strong positive correlation suggests that implementing thorough supplier evaluation practices is highly associated with enhanced sustainable supply chain performance. The significant p-value confirms the importance of supplier evaluation in achieving high levels of performance in the supply chain.

These correlation results collectively indicate that supplier selection, contract design, and supplier evaluation are all strongly and positively related to sustainable supply chain performance, underscoring the importance of these procurement practices in improving the effectiveness and efficiency of healthcare NGOs' operations. The results are presented in Table 4.12.

Table 4.12: Correlation Results

		Sustainable supply chain performance	Supplier selection	Contract design	Supplier evaluation
Sustainable supply chain performance	Pearson Correlation	1			
	Sig. (2-tailed)				
Supplier selection	Pearson Correlation	.751**	1		
	Sig. (2-tailed)	.000			
Contract design	Pearson Correlation	.725**	.649**	1	
	Sig. (2-tailed)	.000	.000		
Supplier evaluation	Pearson Correlation	.763**	.734**	.684**	1
	Sig. (2-tailed)	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).
b. Listwise N=59

Source: Author (2024)

4.6.2 Regression Analysis

The regression results presented in Tables 4.13 and 4.14 provide valuable insights into the relationship between the dependent variable and the independent variables. The model summary shows an R value of 0.839, indicating a strong positive correlation between the predictors (supplier selection, contract design, and supplier evaluation) and the dependent variable (sustainable supply chain performance). The R Square value of 0.703 means that approximately 70.3% of the variance in sustainable supply chain performance can be explained by the model, which includes these three predictors. These results suggest that the model is a strong fit and explains a substantial portion of the variance in sustainable supply chain performance. The results are as shown in Table 4.13

Table 4.13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.839[a]	.703	.687	.470

a. Predictors: (Constant), Supplier evaluation, Contract design, Supplier selection

Source: Author (2024)

The ANOVA table tests the overall significance of the regression model. The regression model has a sum of squares of 28.725 with 3 degrees of freedom, while the residual sum of squares is 12.129 with 55 degrees of freedom. The F-statistic is 43.417 with a significance level of 0.000, indicating that the model is statistically significant. This suggests that the predictors—supplier selection, contract design, and supplier evaluation—reliably explain a significant portion of the variance in sustainable supply chain performance. Therefore, the combination of these predictors significantly contributes to predicting sustainable supply chain performance. The results are presented in Table 4.14.

Table 4.14: ANOVA and Model Coefficients

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.725	3	9.575	43.417	.000[b]
	Residual	12.129	55	.221		
	Total	40.854	58			

a. Dependent Variable: Sustainable supply chain performance

b. Predictors: (Constant), Supplier evaluation, Contract design, Supplier selection

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.117	.194		-.604	.547
	Supplier selection	.342	.087	.309	3.929	.000
	Contract design	.326	.080	.296	4.075	.000
	supplier evaluation	.350	.085	.338	4.129	.000

a. Dependent Variable: Sustainable supply chain performance

Source: Author (2024)

The coefficients table provides details on the relationship between each predictor and the dependent variable, sustainable supply chain performance.

Supplier selection has an unstandardized coefficient (B) of 0.342, indicating that a one-unit increase in supplier selection practices leads to a 0.342-unit increase in sustainable supply chain performance, holding other factors constant. The standardized coefficient (Beta) of 0.309 and a t-value of 3.929 with a significance level of 0.000 confirm that supplier selection significantly and positively influences sustainable supply chain

performance. This implies that effective supplier selection practices, such as assessing suppliers' financial stability, reliability, and alignment with organizational values, contribute to enhanced supply chain sustainability. The results emphasize the importance of selecting suppliers who meet ethical, environmental, and operational standards to improve supply chain performance.

Contract design has an unstandardized coefficient (B) of 0.326, signifying that a one-unit improvement in contract design practices results in a 0.326-unit increase in sustainable supply chain performance, holding other variables constant. The standardized coefficient (Beta) of 0.296 and a t-value of 4.075 with a significance level of 0.000 indicate that contract design has a significant positive impact on sustainable supply chain performance. These findings highlight the critical role of clear, flexible, and well-structured contracts in supporting sustainable procurement practices. Contracts that include measurable sustainability indicators, risk mitigation clauses, and adaptability to changing circumstances contribute to the overall efficiency and effectiveness of supply chain operations.

Supplier evaluation has the highest impact among the three predictors, with an unstandardized coefficient (B) of 0.350. This means that a one-unit enhancement in supplier evaluation practices leads to a 0.350-unit increase in sustainable supply chain performance, holding other variables constant. The standardized coefficient (Beta) of 0.338 and a t-value of 4.129 with a significance level of 0.000 confirm the strong and significant positive influence of supplier evaluation on sustainable supply chain performance. These results underscore the importance of systematically assessing supplier performance, including their adherence to ethical practices, environmental sustainability, and product quality. Regular evaluations provide critical data that organizations can use to inform decision-making and drive continuous improvements in their supply chains.

Overall, all three predictors supplier selection, contract design, and supplier evaluation significantly contribute to enhancing sustainable supply chain performance.

From the Table 4:14, the following model has been developed:

$Y = -0.117 + 0.342X_1 + 0.326X_2 + 0.350X_3$

Where:

Y = Sustainable supply chain performance

X_1 = Supplier selection

X_2 = Contract design

X_3 = Supplier evaluation

Overall, the regression results indicate that supplier selection, contract design, and supplier evaluation all have significant positive effects on the sustainable supply chain performance of healthcare NGOs in Kenya, with supplier evaluation having the strongest effect.

4.7 Chapter Summary

This chapter has described the comprehensive analysis of the data collected, covering the response rate, reliability tests, demographic details, and descriptive statistics. It also included correlation and regression analyses aimed at meeting the research objectives. The next chapter covers the summary of findings, conclusions, implications and recommendations.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings, followed by the conclusions and implications of the study. It also provides recommendations based on the research outcomes, along with the study's limitations and suggestions for future research.

5.2 Summary of Findings

The objective of this study was to determine the effect of procurement practices on sustainable supply chain performance among NGOs providing healthcare support in Kenya. The study was anchored on the resource-based view theory and institutional theory. A census research design was adopted, targeting all 65 NGOs providing healthcare support in Kenya. Data was collected using structured questionnaires, with supplier selection, contract design, and supplier evaluation as the independent variables, and sustainable supply chain performance as the dependent variable.

The descriptive analysis provided insights into the procurement practices and their impact on sustainable supply chain performance. Supplier selection had a moderate overall mean score of 2.93, suggesting room for improvement in aligning supplier selection criteria with sustainability objectives. Contract design had a higher overall mean score of 3.17, indicating that contract terms are relatively well-structured, emphasizing transparency and flexibility. Supplier evaluation had an overall mean score of 3.00, reflecting the importance of supplier performance monitoring, but also highlighting gaps in evaluating sustainability criteria. Sustainable supply chain performance had an overall mean score of 2.97, showing moderate effectiveness in economic viability, social responsibility, and environmental stewardship.

The correlation analysis revealed strong positive relationships between the independent variables and sustainable supply chain performance. Supplier selection ($r = .751$), contract design ($r = .725$), and supplier evaluation ($r = .763$) were all significantly correlated with sustainable supply chain performance at the 0.01 level. These findings suggest that improvements in procurement practices are strongly associated with better sustainable supply chain performance among healthcare NGOs.

The regression analysis confirmed the significant impact of the independent variables on sustainable supply chain performance. The model summary indicated that 70.3% of the variance in sustainable supply chain performance could be explained by the model ($R^2 = .703$). The ANOVA results showed that the model was statistically significant ($F = 43.417$, $p = .000$). The coefficients revealed that all three predictors—supplier selection ($B = .342$, $p = .000$), contract design ($B = .326$, $p = .000$), and supplier evaluation ($B = .350$, $p = .000$) had significant positive effects on sustainable supply chain performance, with supplier evaluation having the strongest effect. These findings highlight the critical role of procurement practices in enhancing the sustainability of healthcare NGOs' supply chains.

5.3 Discussion of Findings

The findings of this study reveal that procurement practices, particularly supplier selection, contract design, and supplier evaluation, have a significant positive impact on the sustainable supply chain performance of healthcare NGOs in Kenya.

5.3.1 Supplier Selection and Sustainable Supply Chain Performance

The findings of this study indicate that supplier selection significantly influences the sustainable supply chain performance of healthcare NGOs in Kenya. The study revealed a strong positive correlation between supplier selection and sustainable supply chain performance, as evidenced by a positive unstandardized coefficient (B) of 0.342 and a significance level of 0.000. These results underscore the critical role that a well-structured supplier selection process plays in enhancing sustainability outcomes. By ensuring that suppliers meet ethical and sustainability criteria, healthcare NGOs in Kenya can achieve substantial improvements in their sustainable supply chain performance.

The findings of this study align with those of Cui, Wu, and Dai (2023), who emphasized the critical role of supplier selection in improving sustainable supply chain performance. Like their research, this study found that selecting suppliers with strong environmental and social sustainability practices significantly enhances the sustainability of supply chains. Both studies highlight how organizations can leverage supplier selection as a strategic tool to promote sustainability and operational efficiency.

Additionally, this study's results are consistent with the findings of Meena, Katiyar, and Kumar (2022), who demonstrated that collaboration with suppliers focused on environmental, social, and economic awareness can significantly improve supply chain sustainability. Similar to their conclusions, this study confirms that NGOs in Kenya benefit from selecting suppliers who prioritize sustainable practices, which in turn improves the overall performance of their supply chains.

This study also supports the work of Park, Kim, and Lee (2022), who found that incorporating environmental and social criteria in supplier selection positively impacts both environmental and financial performance. Although their study was conducted in the electronics industry, the importance of sustainable supplier selection holds true across different sectors, including healthcare-focused NGOs in Kenya, as shown in this study.

Moreover, the findings are in line with those of Sarasati and Dachyar (2021), who examined the pharmaceutical industry and found that strategic supplier partnerships are key to fostering sustainable supply chain practices. Like their research, this study underscores the importance of forming partnerships with suppliers who align with sustainability goals to drive better environmental and social outcomes in supply chains.

While these studies focus on different industries and regions, the consistent finding is that supplier selection plays a crucial role in promoting sustainable supply chain performance. This study further expands on this knowledge by emphasizing the unique context of healthcare NGOs in Kenya and the opportunities for improving sustainability through careful supplier selection.

5.3.2 Contract Design and Sustainable Supply Chain Performance

The second objective of this study was to establish the effect of contract design on sustainable supply chain performance among NGOs providing healthcare support in Kenya. The findings revealed that contract design has a significant positive impact on sustainable supply chain performance, as evidenced by a positive unstandardized coefficient (B) of 0.326 and a significance level (Sig.) of 0.000. This indicates that well-structured contracts, which include clear terms, responsibilities, and sustainability clauses, contribute to improved accountability, efficiency, and alignment with sustainability goals. By carefully designing contracts that promote transparency and

ethical practices, healthcare NGOs can enhance their overall supply chain performance, ensuring economic viability, social responsibility, and environmental stewardship.

The findings of this study regarding the significant effect of contract design on sustainable supply chain performance are consistent with previous research. For instance, Xiong et al. (2022) in the manufacturing sector emphasized the importance of contract design in promoting environmental and social sustainability, showing that contracts with specific environmental and ethical clauses positively influenced supply chain sustainability.

Similarly, this study found that healthcare NGOs in Kenya benefit from well-structured contracts that include clear sustainability terms, which enhance accountability and efficiency in their supply chains. Additionally, Bird and Soundararajan (2020) demonstrated the positive correlation between sustainability metrics in contracts and improved environmental and social performance in global supply chains, aligning with this study's conclusion that contracts designed with sustainability in mind drive better supply chain outcomes.

However, the challenges highlighted by Etse et al. (2023), particularly the issues of vague language and lack of standardization in contract design, reinforce the importance of clear, measurable indicators in contracts for healthcare NGOs to fully realize their sustainability goals. This suggests that while contract design is a powerful tool for enhancing sustainable supply chain performance, attention to detail and overcoming implementation barriers are essential for its success.

5.3.3 Supplier Evaluation and Sustainable Supply Chain Performance

The third objective of this study was to determine the effect of supplier evaluation on sustainable supply chain performance among NGOs providing healthcare support in Kenya. The findings indicate that supplier evaluation has a significant positive impact on sustainable supply chain performance, as evidenced by a positive unstandardized coefficient (B) of 0.350 and a significance level (Sig.) of 0.000. This demonstrates that regularly assessing suppliers based on performance criteria, including sustainability, accountability, and quality, contributes to improved outcomes in economic viability, social responsibility, and environmental stewardship. Effective supplier evaluation

ensures that NGOs maintain high standards within their supply chains, driving greater efficiency and alignment with sustainability objectives.

The findings of this study regarding the significant effect of supplier evaluation on sustainable supply chain performance align with existing empirical research. Bird and Soundararajan (2020) emphasized the importance of robust supplier evaluation processes in driving sustainability outcomes within global supply chains. Similarly, this study found that healthcare NGOs in Kenya benefit from continuous monitoring and feedback mechanisms in supplier relationships, leading to improved economic, environmental, and social outcomes.

Additionally, Yang and Wang (2023) demonstrated that effective supplier evaluation contributes to both cost reduction and enhanced environmental practices, which aligns with this study's finding that comprehensive supplier evaluation optimizes sustainability objectives while promoting economic efficiency.

However, this study also recognizes the challenges highlighted by Cafaggi and Iamiceli (2020), who pointed out the difficulties in integrating social responsibility criteria due to limited supplier transparency and varying standards. This underscores the importance of a nuanced approach in evaluating suppliers, particularly when assessing social sustainability, to overcome these obstacles and ensure a holistic assessment. Overall, this study confirms that supplier evaluation is critical for enhancing sustainable supply chain performance but requires careful consideration of all sustainability dimensions to achieve comprehensive success.

5.4 Conclusion of the Study

This study highlights the critical role of procurement practices in enhancing sustainable supply chain performance among healthcare NGOs in Kenya. Guided by the Resource-Based View and Institutional Theory, the research focused on three key objectives: supplier selection, contract design, and supplier evaluation, and their influence on sustainability outcomes. The conclusions for each specific objective are as follows:

5.4.1 Supplier Selection and Sustainable Supply Chain Performance

The study concludes that supplier selection significantly and positively affects sustainable supply chain performance. The findings demonstrate that healthcare NGOs

that prioritize supplier selection criteria such as financial stability, reliability, ethical practices, and environmental sustainability achieve better economic, social, and environmental outcomes. Effective supplier selection was shown to improve operational efficiency, enhance accountability, and align supplier capabilities with the organizations' sustainability goals. These results emphasize the importance of integrating comprehensive and sustainability-focused criteria into supplier selection processes to achieve superior supply chain performance.

5.4.2 Contract Design and Sustainable Supply Chain Performance

The research concludes that contract design plays a pivotal role in driving sustainable supply chain performance. Contracts that are clear, flexible, and incorporate measurable sustainability indicators were found to enhance accountability, mitigate procurement risks, and support adaptability in dynamic environments. The study highlights that healthcare NGOs that invest in well-structured contract designs can better align procurement activities with their mission and sustainability objectives, thereby improving cost efficiency, transparency, and social responsibility in their supply chains. This underscores the need for NGOs to continually enhance their contract design practices to achieve greater sustainability.

5.4.3 Supplier Evaluation and Sustainable Supply Chain Performance

The study concludes that supplier evaluation has the strongest influence on sustainable supply chain performance among the three procurement practices examined. Organizations that conduct systematic and transparent supplier evaluations—assessing ethical adherence, environmental impact, and product quality—achieve superior supply chain performance. Regular reviews and the use of performance data to inform procurement strategies were found to drive continuous improvement and foster stronger supplier relationships. The findings underline the importance of supplier evaluation in ensuring accountability, promoting sustainability, and maintaining the resilience of supply chains.

5.5 Recommendations of the Study

Based on the findings of this study, the following recommendations are proposed, categorized into policy-related and practice-related recommendations to ensure clarity and applicability:

5.5.1 Policy Recommendations

Government bodies and regulatory agencies, in collaboration with healthcare NGOs, should develop and enforce comprehensive procurement policies that prioritize sustainability. These policies should mandate the inclusion of criteria such as ethical business practices, environmental responsibility, and supplier reliability in supplier selection processes. This will ensure that all NGOs adhere to a uniform standard for sustainable procurement.

Regulatory authorities should encourage NGOs to standardize the inclusion of sustainability clauses in their contracts. These clauses should define measurable sustainability performance metrics, such as carbon footprint reduction, waste management, and community impact. Policymakers should also provide templates or frameworks to guide NGOs in aligning contract terms with global sustainability goals.

Policy frameworks should facilitate training and development programs aimed at building the capacity of procurement teams in NGOs. This can include workshops, certification programs, and access to resources that equip staff with the skills needed for effective supplier selection, contract design, and supplier evaluation.

5.5.2 Practice Recommendations

Healthcare NGOs should enhance their supplier selection processes by establishing detailed guidelines that incorporate sustainability criteria. These should include assessments of suppliers' ethical practices, environmental stewardship, financial stability, and reliability. NGOs should adopt a more rigorous and standardized supplier prequalification process to ensure alignment with organizational goals.

NGOs should improve contract design by integrating sustainability performance metrics that promote transparency and accountability. Regular reviews of contract terms should be conducted to address evolving sustainability standards and mitigate procurement risks. Contracts should include incentives for suppliers who demonstrate exceptional commitment to sustainability, such as bonuses or longer contract terms.

NGOs should adopt robust supplier evaluation systems that include regular assessments against sustainability benchmarks. Evaluation practices should focus on ethical adherence, environmental impact, and the quality of goods and services delivered.

Additionally, NGOs should provide constructive feedback to suppliers and establish mechanisms to assist underperforming suppliers in meeting sustainability requirements.

Healthcare NGOs should invest in training procurement teams to enhance their capacity for conducting sustainability-focused evaluations. Further, adopting digital tools and technologies, such as supplier management software, can help streamline the evaluation process and ensure data-driven decision-making.

5.6 Limitations of the Study

While this study provides valuable insights, several limitations should be considered. One notable limitation is the relatively small sample size of 59 respondents, which may limit the generalizability of the findings even within the healthcare NGO sector in Kenya. While the census approach ensured inclusion of all eligible organizations, the small number of respondents may not fully capture the diversity of procurement practices and sustainability outcomes within the broader NGO healthcare context. Future studies could consider expanding the sample size or including additional sectors to enhance the robustness of the findings.

Another limitation is the cross-sectional nature of the research, which gathers data at a single point in time. This restricts the ability to observe how procurement practices affect sustainable supply chain performance over an extended period. A longitudinal study could provide more comprehensive insights into how these practices evolve and their long-term impact on supply chain performance.

The reliance on self-reported data through structured questionnaires also presents a limitation. Although efforts were made to ensure respondents provided accurate information, self-reported data can be subject to biases such as social desirability, where participants may present a more favorable view of their practices. Furthermore, the structured nature of the questionnaire, with its closed-ended questions, may have restricted the depth of responses, potentially overlooking more nuanced aspects of procurement practices and sustainability considerations.

Lastly, the study focuses exclusively on healthcare NGOs in Kenya, which may limit the applicability of the findings to other sectors or regions. The specific challenges, operational environments, and cultural factors within these organizations may differ

significantly from those faced by NGOs in other sectors or in different geographical contexts. As such, the results may not be universally generalizable, and future research could consider comparative studies across multiple sectors or countries to validate and extend these findings.

5.7 Suggestions for Further Research

Building on the insights from this study, future research should consider adopting a longitudinal design to examine the effects of procurement practices on sustainable supply chain performance over an extended period. This would allow researchers to observe trends and changes over time, offering a more dynamic perspective on how these practices evolve and impact long-term performance. Longitudinal studies could also reveal potential challenges or benefits that may not be captured in a single cross-sectional study.

Further research should explore procurement practices in different organizational and regional contexts. Comparative studies across various NGOs, sectors, or geographic regions could provide insights into how different environmental, cultural, and operational factors affect the effectiveness of procurement practices. This could enhance the generalizability of the findings and offer more tailored recommendations for different settings. Expanding the scope to include private sector organizations or NGOs in other sectors would provide valuable comparisons and help identify best practices that can be adapted across various sectors.

Incorporating qualitative research methods, such as interviews, focus groups, or case studies, would also provide a more nuanced understanding of procurement practices. These methods could uncover in-depth insights into the challenges, successes, and contextual factors influencing the implementation and effectiveness of procurement strategies. Combining qualitative data with quantitative findings would provide a richer, more comprehensive view of how procurement practices contribute to sustainable supply chain performance. Additionally, investigating the impact of emerging technologies, such as blockchain or artificial intelligence, on procurement processes could offer forward-looking insights into innovative solutions for enhancing sustainability in supply chains.

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APPENDICES

Appendix I: Letter of Introduction

November 2023

Dear Respondent,

RE: REQUEST FOR RESEARCH DATA

I am a student at Strathmore Business School where I am undertaking a degree in Master of Commerce. I am required to submit as part of my course work assessment, research on **"PROCUREMENT PRACTICES AND SUSTAINABLE SUPPLY CHAIN PERFORMANCE OF LOCAL NONGOVERNMENTAL ORGANIZATIONS PROVIDING HEALTHCARE SUPPORT IN KENYA".**
You have been selected for generating data needed for this study. The purpose of this information will be only for academia and nowhere in the report will your name be mentioned. In case you need the findings of this research we shall avail it to you.

Your assistance will be truly valued.

Thank you in advance.

EVALYNE BOSIBORI MASIRA

Appendix II: Questionnaire

Dear respondent,

This questionnaire has been designed to collect information on the effect of procurement practices on sustainable supply chain performance of local NGOs providing healthcare support in Kenya. Kindly read the questions thoroughly and respond as truthfully as possible. The information collected will be used only for scholarly study purposes and will be held in strict confidentiality.

Instructions

1. Tick appropriately
2. Please feel free to add some additional appropriate information to the study.

PART A: BACKGROUND INFORMATION

1 Gender: Male [ ] Female [ ]

2 Under which age brackets are you?

Below 30	[ ]	31 - 40 Years	[ ]
41 - 50 years	[ ]	Above 50 Years	[ ]

3 What is the greatest level of schooling you have achieved?

Diploma	[ ]
Degree	[ ]
Masters	[ ]
PhD	[ ]

Any other (Please specify) ……..

4 How many years have you worked in your firm?

Less than one year	[ ]	1-3 years	[ ]
4-7 years	[ ]	8 years and above	[ ]

PART B: SUPPLIER SELECTION

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

STATEMENT	1	2	3	4	5

The criteria for selecting suppliers in our organization adequately consider their ethical business practices.					
Our supplier selection process gives sufficient weight to the reliability of the suppliers in delivering quality goods or services consistently.					
Cost considerations are effectively integrated into the supplier selection process without compromising on quality.					
Our organization actively seeks suppliers who demonstrate a commitment to environmental sustainability.					
The supplier selection criteria in our procurement process align with the mission and values of our healthcare support NGO.					
The organization assesses the financial stability of potential suppliers before entering into contracts.					

PART C: CONTRACT DESIGN

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

STATEMENT	**1**	**2**	**3**	**4**	**5**
Contracts in our organization are structured to include clear and measurable sustainability performance indicators.					
The terms and conditions in our contracts are designed to minimize risks associated with procurement activities.					
Contracts are drafted to incentivize suppliers to adopt ethical business practices and social responsibility.					

Our organization ensures that contractual agreements align with the overall mission and goals of the healthcare support NGO.					
Our organization's contract design emphasizes flexibility to adapt to changing circumstances or emergencies.					
The language and terminology in our contracts are clear and easily understood by all parties involved.					

PART D: SUPPLIER EVALUATION

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

STATEMENT	**1**	**2**	**3**	**4**	**5**
Our organization systematically evaluates suppliers' adherence to ethical business practices.					
Supplier performance evaluations consider the environmental impact of their operations.					
The supplier evaluation process includes a comprehensive assessment of product or service quality.					
The organization regularly reviews and updates the criteria used to evaluate supplier performance.					
Supplier evaluations are conducted transparently, with feedback shared constructively with suppliers.					
The organization uses supplier performance data to inform decision-making and enhance overall procurement strategies.					

PART E: SUSTAINABLE SUPPLY CHAIN PERFORMANCE

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

STATEMENT	1	2	3	4	5
Economic Viability					
The procurement practices of our organization contribute to cost efficiency in the acquisition and distribution of healthcare resources.					
Our organization strives to minimize unnecessary costs throughout the supply chain without compromising the quality of healthcare resources.					
The financial aspects of our procurement practices are regularly audited to ensure adherence to budgetary constraints and optimize resource utilization.					
Social responsibility					
Ethical sourcing principles, including fair labor practices and human rights standards, are integral to our procurement strategies.					
Our organization is committed to promoting diversity and community well-being through its procurement practices.					
Health and safety standards are prioritized in our procurement and supply chain processes to ensure the well-being of workers and communities.					
Environmental Stewardship					
Our organization actively works to reduce its carbon footprint in the procurement and distribution of healthcare resources.					
Efforts are made to minimize waste generation, and sustainable disposal practices are considered in our procurement processes.					

The procurement practices of our organization contribute to environmental stewardship by prioritizing eco-friendly suppliers and practices.					

Thank you very much!

Appendix III: NGOs Providing Healthcare Support in Kenya

1. Centre for Health Solutions-Kenya
2. Africa Inland Church Health Ministries
3. Africa Mental Health Foundation
4. African Palliative Care Association (APCA)
5. Africare
6. Aga Khan University Hospital
7. Aids Healthcare Foundation
8. American Refugee Committee
9. Amos Trust
10. Care International
11. Carolina for Kibera
12. Catholic Relief Services (CRS)
13. ChildFund International
14. Christian Aid Kenya
15. Doctors Without Borders
16. Education Development Trust
17. Elizabeth Glaser Pediatric AIDS Foundation
18. Family Health Options Kenya (FHOK)
19. Food for the Hungry
20. Global Communities
21. Grameen Foundation
22. Handicap International
23. HealthRight International
24. Hope Worldwide Kenya
25. International AIDS Vaccine Initiative (IAVI)
26. International Centre for Reproductive Health Kenya
27. International Medical Corps (IMC)
28. International Planned Parenthood Federation (IPPF)
29. International Rescue Committee (IRC)
30. IntraHealth International
31. Jhpiego Corporation
32. Kenya Hospices and Palliative Care Association (KEHPCA)

33. Centre for international health, Education and Bio-Security- Kenya
34. Mercy Corps Kenya
35. Kenya Red Cross Society
36. Kenyatta National Hospital
37. LVCT Health
38. Management Sciences for Health (MSH)
39. Marie Stopes Kenya
40. Medecins Sans Frontieres (MSF)
41. Mothers2mothers
42. PATH Kenya
43. Penda Health
44. PharmAccess Foundation
45. Plan International
46. Save the Children
47. SolidarMed
48. Terre des Hommes Foundation
49. The African Institute for Development Policy (AFIDEP)
50. The African Medical and Research Foundation (AMREF)
51. The African Network for the Prevention and Protection against Child Abuse and Neglect (ANPPCAN)
52. The Fred Hollows Foundation
53. The International Centre for Eye Health (ICEH)
54. The Leverage Group
55. The Liverpool School of Tropical Medicine (LSTM)
56. The Ogra Foundation.
57. The Population Council
58. Tiba Foundation
59. Water Aid Kenya
60. World Lung Foundation
61. World Neighbors
62. World Vision Kenya
63. World Wide Fund for Nature (WWF)
64. Kenya Conference of Catholic Bishops

65. FIND International-Kenya

Source: NGO Coordination Board (2023)

Appendix IV: Ethical Approval Letter

Strathmore UNIVERSITY

19th July 2024

Ms Masira Evalyne,
evalyne.masira@strathmore.edu

Dear Ms Masira,

RE: Procurement Practices and Sustainability Supply Chain Performance of Healthcare Nongovernmental Organizations in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2212/24.** The approval period is from **19th July 2024 to 18th July 2025.**

This approval is subject to compliance with the following requirements:

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

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

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Appendix V: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **592653**

Date of Issue: **31/July/2024**

RESEARCH LICENSE

This is to Certify that Miss.. Evalyne Bosibori Masira of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Embu, Garissa, Homabay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makueni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Tanariver, Tharaka-Nithi, Transnzoia, Turkana, Uasin-Gishu, Vihiga, Wajir, Westpokot on the topic: Procurement Practices and Sustainability Supply Chain Performance of Healthcare Nongovernmental Organizations in Kenya for the period ending : 31/July/2025.

License No: **NACOSTI/P/24/38430**

592653

Applicant Identification Number

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