MOSHI CO-OPERATIVE UNIVERSITY

DETERMINANTS FOR SUSTAINABLE PROCUREMENT PRACTISES IMPLEMENTATION WITHIN COUNTY GOVERNMENTS IN KENYA

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BY

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DECLARATION AND COPYRIGHT

I**, IRENE IKANZU SALAMBA,** declare that this dissertation is my original work and that it has not been presented and will not be presented to any other higher learning institution for a similar or any other academic award.

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Moshi Co-operative University a Dissertation titled "Determinants for Sustainable Procurement Practises Implementation within County Governments in Kenya" in partial fulfilment of the requirements for the award of a degree of Master of Arts in Procurement and Supply Management of Moshi Co-operative University.

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DEDICATION

I dedicate this thesis to God Almighty, whose unwavering presence and guidance have been my constant companions throughout this journey, enriching me with wisdom and strength. Also, to all those who have believed in my capabilities and provided me with unwavering physical, emotional, and mental support during the course of my master's studies. Your belief in me has been a source of motivation and inspiration, and I am deeply thankful for your contributions to my academic pursuit.

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LIST OF ABBREVIATIONS AND ACRONYMS

CoG	:	Council of Governors
CRLM	:	Classical Linear Regression Model
CVI	:	Content Validity Index
Econ.	:	Economic
ENV	:	Environmental
IISD	:	International Institute for Sustainable Development
GHGs	:	Greenhouse Gases
KNBS	:	Kenya National Bureau of Statistics
KIIs	:	Key Informant Interviews
LCC	:	Life Cycle Costing
PP	:	Public Procurement
PPADA	:	Public Procurement and Asset Disposal Act
PRGM	:	Program
RC	:	Resource Capacity
RF	:	Regulatory Framework
SDG	:	Sustainable Development Goals
SP	:	Sustainable Procurement
SPP	:	Sustainable Procurement Practises
UNDP	:	United Nations Developmental Programme
UNEP	:	United Nations Environmental Programme
VBN	:	Value Belief Norm

ABSTRACT

Sustainable Public Procurement is among the key avenues for realising the three pillars of sustainable development globally. In developing and developed countries public procurement has enormous purchasing power which accounts for 12% and 30% respectively of the gross domestic product. County governments in Kenya are allocated between 15 to 45% of the national budget, of which 60% is spent on procurement. This puts the County Government in a better position to drive sustainable development. However, the low rate of implementation of SPP is impeding the realisation of SDGs. This study was guided by institutional theory and adopted a cross-sectional research design. It targeted all the 178 procurement professionals in Western Kenya counties who were studied using census approach. The study found that socio-demographic characteristics of procurement practitioners influence the implementation of sustainable procurement practises. Additionally, the study found that the regulatory framework affects the implementation of sustainable procurement practises within County Governments in Western Kenya. Moreover, the findings revealed that County governments' resource capacity has a significant effect on implementation of sustainable procurement practises within County Governments in Western Kenya. The study also established that procurement professionals' commitment influences the implementation of sustainable procurement practises within County Governments in Western Kenya. Based on the findings, the study concludes that socio-demographic characteristics, regulatory framework, county government resource capacity, procurement managers' commitment have significant effect on the implementation of SPP. The study thus recommends that the county governments should initiate a comprehensive, departmental-wide training and development initiatives that encompasses regulatory compliance, skill development in sustainable practises, and managerial involvement to ensure effective implementation of SPP within County Governments in Western Kenya.

CHAPTER ONE

1.0. INTRODUCTION

1.1 Background to the Study

Sustainable Public Procurement is among the key avenues for realising the three pillars of sustainable development globally. In developing and developed countries public procurement has enormous purchasing power which accounts for 12% and 30% respectively of the gross domestic product (United Nations Environmental Programme, 2022). Leveraging this purchasing power to promote Sustainable Procurement Practises (SPP) can spearhead the realisation of the Sustainable Development Goals (SDG) 12 which emphasises responsible consumption and production (UNEP, 2022). The SDG12 aims to achieve its goal by promoting "public procurement practises that are sustainable, per national policies and priorities," (UNEP, 2022).

Sustainable public procurement can contribute to sustainable development by reducing greenhouse gases emission, reducing poverty, and promoting inclusive development (Manta *et al.*, 2022). Economically, Sustainable Procurement (SP) promotes greater value for money and spurs the governance sector (Kumar, 2022; Manta *et al.*, 2022). Besides, SP improves governance by encouraging public procurement professionals to be accountable and transparent (Shakya and IGI Global, 2019). This promotes public trust in government, resulting in the political stability of a nation. While the public sector is acutely aware of the importance of sustainable procurement practises (Oyebanjo and Tengeh, 2020), their implementation is very low, particularly in the county or subnational governments.

Although many countries around the world have not fully adopted sustainable public procurement, there is significant progress toward the same. European countries are highly committed to implementing SPP. A good practice example is Ghent City Council in Belgium, which established a sustainable procurement strategy in 2012. The strategy has seven SP priority areas covering minimising carbon dioxide emission, growing the social economy sector, encouraging sustainable innovation, and observing international labour standards in supply among others. The city set targets and performance indicators to track its progress. As a result of these efforts, Ghent City was the first one in the world to use 100% renewable energy for all its city services

and procure all its cleaning services from socially disadvantaged groups (United Nations Development Programme, 2017).

According to UNDP (2017), Ghent would not have achieved such results without adequate resources, competent staff, effective change management, and dementing results and lessons along the way. Croatia realised that adopting green procurement will require a review of its tender award criteria. As such, while procuring electricity, the subnational government of Koprivnica city allocated 10% of the award points to bidders with the greenest energy (Maxwell, 2022). Using this criterion, the local government managed to procure 100% green energy for seven buildings and seven streets in the city. Such a change in the award criteria was attributed to the commitment of top leadership and the professionalism of procurement professionals in the city.

In Latin America, Argentina, the government uses e-procurement to create a catalogue system that provides a unique code for every good and service purchased by state agencies. Using the catalogue system, which is also linked to the supplier information system, enables the Argentinian government to monitor the volume of green products and services procured in the public sector. This encourages state agencies to adopt sustainable procurement practises, with the UNDP (2017) report showing that 14% of Argentina's government procurement budget is spent on green procurement. The report identifies supportive legislation and supplier buy-in as enabling factors (UNDP, 2017).

In some Asian countries such as Bhutan, it is the top political leadership that has promoted the adoption of sustainable procurement practises. For instance, to promote sustainability in its procurement process, the Bhutanese government measures gross national happiness instead of gross domestic product, which seeks to promote equitable and sustainable economic development without affecting its natural ecosystem (Shakya, 2019). Consequently, Bhutan is one of the negative emitters of carbon dioxide (Shakya, 2019). South Africa, is one of the sub-Saharan African countries that is using SPP as a tool to achieve sustainable development goals. To spearhead the implementation of SDG, the country clearly outlines the responsibility of each part of the government and private sector in achieving certain SDG targets,

right from the national government, and provincial government to the local municipal government.

At the provincial level, the Western Cape government is leading in efforts to implement SP practises. Western Cape adopted a systematic and deliberate approach to implementing sustainable public procurement practises (Western Cape Government, 2019). First, from 2003 to 2011, the local government conducted internal awareness that was aimed at changing behaviour towards green procurement. In 2011, the Western Cape government started developing its internal systems and moved on to involve external supplier development. The internal system development entailed the creation of the Directorate of Sustainability which enabled more resources and capacity to be allocated to facilitate the implementation of SP.

For instance, the Directorate of sustainability developed the economic procurement policy for the local government that identified five key areas for sustainable procurement including purchasing of local content, support of Micro Small, and Medium Sized Enterprises (MSMEs), ethical procurement, preferential procurement, and green procurement (Western Cape Government, 2019). Therefore, there is a very clear policy and regulation in South Africa guiding the adoption of SP practises. However, there is still a need to ensure that the policies are translated to action, for the gap between policy and action remains the main barrier to realising sustainability in procurement.

There are a lot of Regulations and Policies regarding sustainable procurement within the East African Region. Procurement Acts and Regulations in Tanzania, Uganda, and Rwanda provide for preference and reservation schemes, purchasing of local content, and ethical procurement conduct. Unlike South Africa where there is an emphasis on all three pillars of sustainable development in their public procurement (Oyebanjo and Tengeh, 2020), procurement legal framework and policy in East Africa are social and economically oriented. The green procurement element is not sufficiently covered. However, both Rwanda and Tanzania are currently working on a green public procurement framework with the intention of prioritising environmental sustainability (Global Green Growth Institute, 2021, Shakya, 2019).

Even with the regulations on economic and social aspects of sustainability, there is a policy-action gap, with implementation being done on an ad hoc basis (Shakya 2019).

The mismatch between policy and action observed in most African countries regarding the implementation of SP practises can be attributed to a lack of institutional capacity and political commitment. The Constitution of Kenya, 2010, article 227 and the Public Procurement and Asset Disposal Act (2015) recognizes public procurement as a tool for promoting local and national development (GoK, 2021). Section 156 of PPADA (2015) requires that 30% of all government procurement opportunities be reserved for businesses owned by youth, women, and people living with disabilities.

The government further created Access to Government Procurement Opportunities to fast-track the registration of micro, small, and medium-sized enterprises owned by women, youth, and people with disabilities. The Programme also links the registered business with available procurement opportunities. These regulations, nonetheless, are mostly biased toward social and economic aspects of sustainable procurement. The legal framework does not provide equal directives for environmentally sustainable procurement practises. As of 2022, there is no green public procurement strategy at both national and county governments. As such, the inclusion of the environmental sustainability aspect in procurement tenders has been left to the discretion of accounting officers.

County governments also recognize their role in realising sustainable development at the local level. They have approached this by embedding sustainable development goals in their County Integrated Development Plans, Annual Development Plans, and Performance contracting. A Council of Governors (CoG) 2020 report identified that all 47 counties had mainstreamed SDGs in their development plans. However, the report acknowledged that implementation was lagging due to institutional and leadership shortcomings of most county governments.

The implementation of sustainable procurement practises in county governments is very low (Council of Governors, 2020). Regarding social sustainability, many SMEs and businesses owned by vulnerable groups struggle to win county government procurement opportunities due to the high percentage of kickbacks required to win the contract (Ethics and Anticorruption Commission, 2018). In terms of economic sustainability, while both national and county governments procure from local suppliers, the processing of payment may be delayed for more than five years affecting

the cash flow of most businesses, especially SMEs. As of 2021, national and county governments owed suppliers more than Ksh 435.35 billion according to the office of auditor general report (Mutua, 2021).

The delay in payment of suppliers by the organs of government is affecting the development of local industry and the creation of sustainable jobs. Another report by the World Bank (Gill, 2022) revealed that the Kenyan government was losing 25% of its procurement budget through inefficient procurement practises. The lack of a green public procurement strategy has contributed to poor environment conservation efforts, with the country dropping from position 130 in 2018 to 148 in 2022 according to the Environmental Performance Index (2022).

Sustainable procurement practises have gained significant traction in recent years as organisations strive to minimise their environmental impact and promote social responsibility (Etse *et al.,* 2023; Fernando *et al.,* 2022; Avotra *et al.,* 2021). The adoption and implementation of sustainable procurement practises are influenced by a complex interplay of factors, including sociodemographic characteristics, regulatory frameworks, resource capacity, and management commitment. These factors can shape organisational behaviour and decision-making processes, ultimately impacting the extent to which sustainable procurement practises are embraced. Understanding the interplay between sociodemographic characteristics, regulatory frameworks, resource capacity, and management commitment is paramount in comprehending the dynamics influencing sustainable procurement practises within organisations.

Sociodemographic factors, including age, gender, education, and cultural background, shape individual perceptions and behaviours concerning sustainability, potentially impacting procurement decisions (Witek and Ku´zniar, 2021). Regulatory frameworks established by governments and international bodies set guidelines and standards, influencing the adoption of sustainable procurement practises (Oyewobi, and Jimoh 2022). Additionally, resource capacity, encompassing financial resources, technological capabilities, and human expertise, plays a pivotal role in the execution of sustainable procurement strategies (Martens and Schwarz, 2022; Rosell, 2021). Moreover, the commitment and leadership stance of management are crucial drivers in embedding sustainability principles into procurement processes (Martens and Schwarz, 2022; Anin *et al.,* 2022). Understanding how these variables interact and influence

sustainable procurement practises is essential in developing effective strategies that integrate sustainability into counties' operations, thereby contributing to broader environmental and social objectives.

1.2 Statement of the Problem

County governments in Kenya are allocated between 15 to 45% of the national budget, of which 60% is spent on procurement (Kariuki and Wabala, 2021). This puts the county government in a better position to drive sustainable development at the grass-root level through sustainable public procurement. On the contrary, a recent report by the Council of Governors (2020) showed that the localization of SDGs in county governments was still very low. The report identified that county governments are unable to localise SDGs due to various institutional and leadership inadequacies. Which include a lack of statistical capacity to develop SDG performance indicators and frequent changes in political leadership (CoG, 2020).

The low rate of implementation of sustainable procurement practises is impeding the realisation of SDGs (Council of Governors, 2020; Bokombe, 2020). The 2022 sustainable development index revealed that Kenya earned 0.647 points (Sustainable Development Report, 2022), with high greenhouse gases emission despite not being an industrialised economy. A recent report by the World Bank revealed that the Kenyan government wastes 25% of its procurement budget on "inefficient and shortsighted procurement practises" (Gill, 2022). The World Bank argues that these wasted resources are what is needed to enable the country to invest in sustainable, inclusive and resilient development. Consequently, the role of public procurement in realising sustainable development cannot be underestimated.

The government of Kenya initiated efforts to ensure that sustainable public procurement is adopted in the public sector. Nonetheless, most of the efforts focus on legal, regulatory, and policy frameworks which, though important, are not able to address institutional drivers, hence creating a policy-action gap (Matsumoto, 2019). Studies have examined the implementation and impact of sustainable procurement in the private manufacturing sector (Mutangili, 2021; Kiswili and Ismail, 2016), policy, and managerial factors affecting the adoption of green procurement in the public sector (Ngujiri, 2019). Nevertheless, most of these studies were limited in scope adopting a

single-entity case study design, hence limiting the generalizability of the results. Furthermore, empirical evidence as to which forces affect the implementation of SP practises in county governments, which are under the influence of a lot of multidimensional forces, are inconclusive and scanty. The current study sought to fill this gap by assessing the determinants of sustainable procurement practises implementation in county governments in Western Kenya.

1.3 Objectives of the Study

1.3.1. Main objective

The study sought to assess the determinants for sustainable procurement practises implementation within County Governments in Western Kenya.

1.3.2. Specific objectives

The study sought to:

i) Determine the influence of socio-demographic characteristics of procurement professionals on the implementation of sustainable procurement practises.

ii) Determine the effect of the regulatory framework on the implementation of sustainable procurement practises.

iii) Determine the effect of county government resource capacity on the implementation of sustainable procurement practises.

iv) Determine the influence of procurement managers' commitment on the implementation of sustainable procurement practises.

1.4 Research Hypotheses

This study was guided by the following hypotheses:

Ho_1: Socio-demographic characteristics of procurement professionals does not influence the implementation of sustainable procurement practises.

Ho_2: Regulatory framework does not affect the implementation of sustainable procurement practises.

Ho_3: County governments' resource capacity does not affect the implementation of sustainable procurement practises.

Ho_4: Procurement professionals' commitment does not influence the implementation of sustainable procurement practises.

1.5 Significance of the Study

County governments in Western Kenya have a key role to play in the realisation of the global vision of 2030 that is premised on SDGs. This study sought to identify the key driver that positions county governments to be a conduit of sustainable development, at the local level through the implementation of SP practises. This study also sought to identify areas of public procurement that require policy and regulations that will inspire action toward the adoption of sustainable procurement.

This study departs significantly from previous studies by focusing on both individual and institutional drivers of sustainable procurement in the public sector. Many of the existing studies address the adoption of sustainable procurement practises from the institutional point of view (Ai Naumin *et al.,* 2020; Rosell, 2021). While this approach provides insights as to how sustainable procurement practises can be implemented (Filho *et al.,* 2022; Mendonca *et al.,* 2021), it fails to address the question of who is more predisposed to implement sustainable procurement practises. This study sought to fill this gap by investigating the socio-demographic characteristics such as the gender of procurement professionals that are most likely to implement SPP. As such, this study does not only recognize employees as internal drivers of SPP, but also the kind of employees inclined to sustainability.

The study also departed from previous studies which used secondary data (Martens and Schwarz, 2022; Rosell, 2021) by using primary data. These data were collected using different methods of data collection including workplace surveys and key informant interviews. The purpose of the triangulating data collection method in the study was to create a more in-depth picture of the research problem while enhancing data validity (Flick, 2018). The findings from the research objectives contributed to a better understanding of how sustainable procurement practises are influenced by human characteristics, regulations, and resource capacities. For example, strong leadership and commitment can be a driving force behind sustainability initiatives within county governments. This knowledge can help policymakers, procurement professionals and governments design more effective strategies to achieve SDGs related to environmental and natural resource preservation, such as SDG 12, Responsible Consumption and Production.

1.6 Organization of the Study

The study was structured into five distinct chapters, each addressing a specific aspect of the research. Chapter one laid the foundation for the study by introducing the background information, research problem, research objectives, hypotheses, and the study's justification. Chapter two delved into an extensive literature review, categorised into Theoretical and Empirical sections. This chapter also explored research gaps and established a conceptual framework for the study. Chapter three provided a detailed overview of the research methodology, encompassing aspects such as research design, target population, sample size determination, sampling techniques, data types and sources, data collection methods, and considerations of validity and reliability in data collection and analysis. Chapter four presented and discussed the research findings in a comprehensive manner. Finally, chapter five served as the conclusion, summarising key points, drawing conclusions based on the findings, offering recommendations, and identifying areas for potential further research.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Operational Definitions of Variables

2.1.1 Sustainable procurement

The United Nations Development Programme (2022) defines sustainable procurement as the purchasing process that ensures products and services are acquired in a way that lowers environmental impact while promoting positive social results. On the other hand, Procuring the Future (2006) defines sustainable procurement as the process that enables organisations to meet their needs for materials, services, utilities, and works in a manner that achieves value for money and on a life cycle basis, creating wealth for the organisation, society, and economy, without damaging the environment. This study adopts the definition of procuring the Future because it emphasises achieving environmental, economic, and social goals which are considered the pillars of sustainable development (Islam *et al.,* 2016).

2.1.2 County governments

Section 176 of chapter eleven of the Constitution of Kenya (2010) defines county governments as subnational governments consisting of the county executive and county assembly. From this definition, this study defines county governments as semi-autonomous units of governance from the national government that enhance service delivery and inclusion of the locals in governance and national development.

2.1.3 Sustainable development

This study adopts the universal definition of sustainable development by the International Institute for Sustainable Development (2022). According to IISD (2022), sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their needs.” This definition implies that current social and economic needs can be met within the viable environmental limits, hence ensuring that future generations can attain a decent standard of living.

Procuring the Future (2006) defines sustainable procurement as; the process that enables organisations to meet their needs in a manner that achieves value for money; on a life cycle basis creating wealth for the organisation and economy, without damaging the environment.

2.1.4 Regulatory framework

Regulatory framework refers to legal mechanisms encompassing Acts, Regulations, and government policies and constitution that requires mandatory adherence (Viinikainen and Bullon, 2019). In this study, the regulatory framework is used to infer all Acts of Parliament and attendant regulations that govern public procurement. These will entail the Public Procurement and Asset Disposal Act 2015, Public Procurement and Asset Disposal Regulation 2020, and Article 227 of the Constitution.

2.1.5 Resource capacity

Resource capacity refers to the maximum amount of tangible materials, funds, labour, and capabilities that an organisation can utilise effectively to achieve its objectives (Ćwiklicki *et al.,* 2021). This study will define resource capacity as the amount of critical resources available in an organisation for the implementation of sustainable procurement practises (Rasool *et al.,* 2019).

2.2 Theoretical Framework

This study was guided by the institutional theory developed by DiMaggio and Powell (1948) and Value-Belief-Norm (VBN) theory as the supporting theory.

2.2.1 Institutional Theory

The institutional theory argues that an organisation's institutional environment strongly influences the adoption and development of formal structures in the organisation. The theory identifies three types of institutional environment forces namely normative, coercive, and, mimetic forces that can influence an organisation’s practises. Normative force is the organisation’s ability to implement certain practises that improve its performance. This ability includes internal financial resources to institute and operationalize structures that enable organisations to implement and adopt new innovative practises. For instance, county governments with committed management can encourage the implementation of SPP by establishing a SP performance measurement framework at county governments.

Coercive forces stem from the external environment specifically from the regulatory authority and lobby groups by making it mandatory to implement certain practises or face sanctions for noncompliance. The third force under institutional theory is mimetic. Organisations may also implement new practises as a result of mimicking

their peers in the industry. There is very little forum for county governments to benchmark and share best practises in public procurement. Consequently, they hardly know what others are doing. However, such a forum can incentivize the implementation of SPP in the counties.

Various studies have supported the assertions of institutional theory in the public sector. A study by Mojumder *et al.* (2022) found that lack of top management commitment to be a major barrier to the adoption of green procurement practises in India's construction industry. Laila and Ermawati (2021) found that pressure from the national government forced local governments to adopt better performance measurement systems. Therefore, this study was anchored on institutional theory. While institutional theory explains all institutional factors that can lead to the adoption of certain practises in the organisation, it does not appreciate that change in an organisation can also be motivated by individual characteristics.

2.2.2 Value-Belief-Norm (VBN) Theory

The Value-Belief-Norm (VBN) in the context of sustainable procurement could involve examining how individual values, beliefs, and norms influence the adoption of sustainable procurement practises within organisations. For instance, to investigate how the personal values of procurement managers influence their beliefs about sustainability and how these beliefs shape their decisions within the procurement process. The theory focuses on the psychological processes underlying pro-environmental behaviour. It suggests that personal values lead to specific beliefs about the consequences of one's actions, which in turn influence norms or perceived social expectations, ultimately shaping behaviour.

VBN theory was used to explain the influence of socio-demographic characteristics on the implementation of SPP. It provides a theoretical framework for understanding how the socio-demographic characteristics of procurement professionals can influence their values, beliefs, and norms, which in turn impact their implementation of sustainable procurement practises. Stern *et al*. (1999) relates values, beliefs, norms, and behaviour in a cause-effect relationship. According to Stern *et al.* (1999) individual values concerning other people and living things (altruistic values) can motivate them to live sustainably.

Belief is the second element of VBN which is the individual knowledge about the environment and human behaviour and consists of two elements; awareness of the consequences of environmental degradation and an individual sense of responsibility to minimise adverse effects of climate change (Ghazali *et al.*, 2019). As such, when individuals hold values and beliefs that are environmentally friendly, it leads to the development of personal norms, which are feelings of moral duty to preserve the environment. Therefore, whereas this theory focuses so much on the environmental aspect of sustainability it conjectures that inherent and acquired individual characteristics can influence sustainability behaviour.

Various studies have supported the assertions of this theory. Kim and Seock (2019) examined the factors influencing purchase intention for recycled products, finding that personal norms, mediated by perceived behavioural control, significantly impact purchase intention. Carfora *et al*. (2021) explored the application of VBN theory to understand Italian women's purchase of sustainable clothing, finding that personal norms, mediated by attitude toward sustainable clothing, influence purchase intention. In the realm of sustainable procurement practises, VBN theory does have some limitations: The theory primarily emphasises individual-level factors in decision-making, potentially overlooking broader systemic issues and power dynamics within supply chains. Sustainable procurement involves multiple stakeholders and complex interactions that might not be fully captured by individual-level psychological processes. This study joined other studies to empirically examine the assertions of this theory.

2.3 Empirical Review

2.3.1 Socio-demographic characteristics

The question of ‘who’ is inclined to implement sustainable procurement practises is largely under-researched in the existing literature. However, understanding the ‘who’ is as important as the ‘how’ to implement SPP. Mansi and Pandey (2016) examined the impact of the demographic characteristics of procurement professionals on the adoption of sustainable procurement practises in public universities. The study found that there was no significant relationship between the age of procurement professionals and the implementation of SPP. However, it found a positive and significant

relationship between procurement professionals with a longer working experience and sustainable procurement compared to those with a shorter tenure. In most cases, the older the individual, the longer the working experience. In effect, Mansi and Pandey (2016) results are contradictory, calling for further analysis using a different methodology.

Gender and environmental conservation are widely researched. Mulidharan and Sheehan (2018) investigated the role of guilt in influencing sustainable pro-environmental behaviours among shoppers in the United Kingdom. The study revealed that women felt guiltier when they failed to carry reusable bags for shopping than men. Yu (2018) on another hand, found that women responded more positively to green advertisements than men counterparts who associated such adverts with the intention to increase profit margins. In the context of public procurement, Mansi and Pandey (2016) found that there was a significant relationship between gender and SPP adoption. Women were more likely to buy products that preserve the environment than men.

Education is considered an important parameter in promoting sustainable development. A study by Wang *et al.* (2022) among the general public in China found that an increase in education level increased pro-environmental attitudes and behaviour. An earlier study by Suarez-Perales (2021) also revealed that higher education in environmental management improved pro-environmental behaviour. Similar findings had earlier been reported by Sun *et al.* (2020) who reported that higher education attainment improved individuals' environmental behaviour. Whereas these studies provide a general view that an increase in education can affect sustainability behaviour, most of them focused on the environmental pillar of sustainable development, leaving out the economic and social pillars. This study will seek to fill this gap by examining procurement professionals' educational attainment and their tendency to procure sustainably.

2.3.2 Regulatory framework

Martens and Schwarz (2022), carried out a nationwide study among 196 local governments in Australia. The study found that environmental regulations were key enablers of the implementation of SPP in local governments. Vluggen *et al.* (2019)

also conducted a qualitative multiple-case study and reported that the non-binding nature of sustainability legislation was a major external hindrance to the adoption of SPP in local governments among Dutch midsize municipalities.

AI Nuaimi *et al.* (2020) also examined the implementation of sustainable procurement in the United Arab Emirates public sector. The study ranked critical factors that affect the implementation of SPP in the public sector using the analytical hierarchy process model. Although the regulatory framework was ranked fourth, it was found as a major critical factor affecting the implementation of SPP in the public sector. In the Nigerian public sector, a study by Oyewobi, and Jimoh (2022) through factor analysis, found the lack of an SP regulatory framework as a major hindrance to the adoption of SPP.

Whereas some of the previous studies considered in this study provide key insights into the role of regulatory requirements on SPP implementation, there is an apparent contextual research gap. Some studies reviewed were examined in the general public sector (AI Nuaimi *et al.*, 2020; Oyewobi and Jimoh, 2022) including state parastatals that have different governance structures from county governments in Kenya. Secondly, although studies by Martens and Schwarz (2022) and Vluggen *et al.* (2019) examined local governments, county governments in Kenya enjoy a high degree of autonomy hence the need for another study to cover the contextual research gap.

2.3.3 Resource capacity

Studies have analysed the effect of resources on sustainable procurement implementation from various dimensions. Rosell (2021) who conducted a cross-country study in Europe involving twenty-five countries found that contractual authorities with enough financial resources are more likely to implement SPP than those facing financial constraints. Another study by Martens and Schwarz (2022) also reported similar findings among Australian local governments. Martens and Schwarz (2022) found that lack of adequate financial resources, lack of training on environmental sustainability, and failure to implement an e-procurement system were major barriers to the adoption of SPP. Another study by AI Nuamin *et al.* (2020) found that the cost of implementing SPP was the highest-ranked factor, corroborating the findings by other studies (Martens and Schwarz, 2022; Rosell, 2021) on the role of

financial resources. The present study will build on these studies to identify critical resources required for the implementation of SPP at the county government.

2.3.4 Procurement managers' commitment

The existing literature report contradicts findings as to the effect of top management and implementation of SPP. An earlier study by Mansi and Pandey (2016) found that the implementation of sustainable procurement practises reduced as one moved higher on the management ladder. The study concluded that top procurement professionals were not keen on applying sustainable procurement practises. However, other studies (Martens and Schwarz, 2022; Anin *et al.*, 2022) found a significant and positive relationship between top management commitment and SPP implementation.

Anin *et al.* (2022) carried out a study among state-owned parastatals and municipal governments on the role of audit and top management commitment to improving procurement quality performance. Based on contingency theory, the self-reported survey was used to collect data, and a moderated multiple regression model was applied in the inferential analysis. Anin *et al.* (2022) found that; top management commitment in terms of allocating resources to support the implementation of SP, and commitment to implement both internal and external procurement audit recommendations, improves procurement quality performance. A study by Martens and Schwarz (2022) also reported similar findings that top management commitment was a key enabler of the adoption of SPP in local governments in Australia.

While these studies provide a key theoretical basis for the current study, there is a clear methodological and contextual research gap. For instance, Anin *et al.* (2022) interpreted their finding based on contingency theory, hence focusing on leadership style, rather than looking at management as an internal resource as espoused by institutional theory. Similarly, Anin *et al.* (2022) acknowledges the limitation of using one method of data collection-self reported surveys and recommend that future studies should employ different methods of data collection. This study will fill this gap by utilising key informant interviews, and survey questionnaires.

Three research gaps can be identified in the extant literature. First, the existing literature exhibits an empirical knowledge gap with studies reporting contradictory findings on various variables; age (Mansi and Pandey, 2016) and management

commitment (Anin *et al.,* 2022; Martens and Schwarz, 2022). There is also a methodological research gap, with most of the studies either solely relying on secondary data such as the cross-country study by Rosell (2021) Australian nationwide study by (Martens and Schwarz, 2022) or one method of data collection (Anin *et al.,* 2022). The current study intended to fill the gap by triangulating different methods of data collection as recommended by Anin *et al.* (2022). The study also sought to fill the theoretical research gap since most of the previous studies were not based on any theory while others relied on leadership theory hence interpreting the findings through the lenses of leadership style.

2.4 Conceptual Framework

The institutional theory posits that institutional forces such as organisational resources, external pressure from regulatory authorities, and pressure from peer organisations affect organisational behaviour in terms of practises and structures it adopts. Similarly, value and belief norm theory also argue that individual values, beliefs, and norms affect their behaviour. Thus, based on institutional and value, belief norm theory, this study conceptualises that socio-demographic characteristics, regulatory framework, resource capacity, and management commitment; the independent variables, affect the implementation of sustainable procurement practises in western county governments. This relationship is represented in Figure 1.

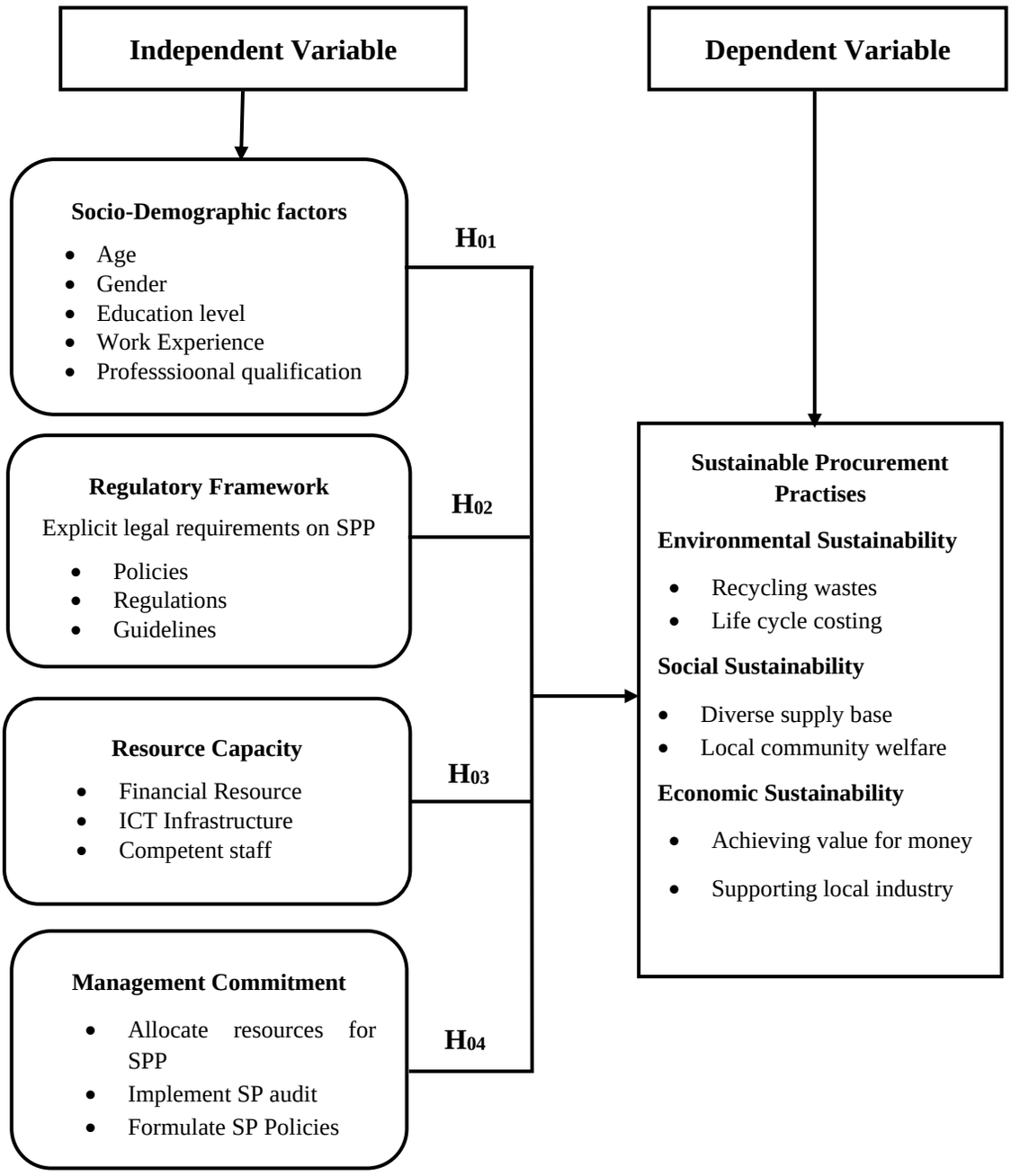


Figure 2: Conceptual Framework

CHAPTER THREE

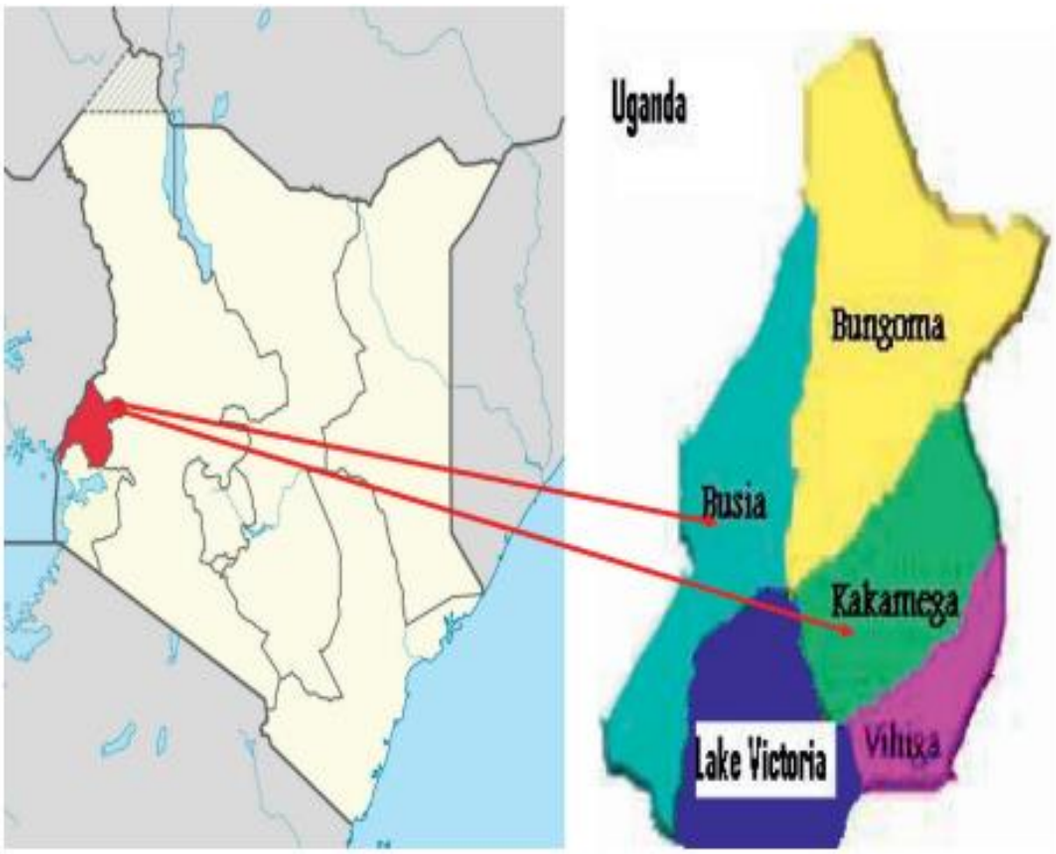
3.0. RESEARCH METHODOLOGY

3.1 Research Design

This study adopted a cross-sectional research design. The design was used because it enabled the study to collect data on a range of variables (Carey *et al.*, 2017) including socio-demographic variables, regulatory framework, resource capacity, and management commitment all in one instance. The collection of data at one instance enabled the study to analyse the determinants of SPP implementation at times when local governments are being recognized as key players in achieving sustainable development. The design involved collection of data from the entire study population of procurement professionals at a single point in time.

3.2 Geographical Coverage

The study was conducted in four county governments of western Kenya namely Kakamega, Vihiga, Busia, and Bungoma county governments. The four county governments were chosen because they are among a few counties in the country that partially implement certain aspects of sustainable procurement, specifically green purchasing, eco-design, and local consumption (Opondi, 2021). The counties were also studied because according to the 2019 census (KEBS, 2019), they are the most populated putting strain on natural resources hence the need to procure and consume sustainably by their respective local governments. For instance, Kakamega and Bungoma counties were ranked fourth and fifth most populated counties in the census (KEBS, 2019).



Map: Western Kenya Four counties indicated in red

Source Kenya National Bureau of Statistics (2019)

3.3 Population, Sample and Sampling Strategies

3.3.1 Target population

The study targeted all procurement professionals in the four counties and the unit of analysis was procurement professionals and the four counties. A study by Odongo and Kazungu (2022) identified that Kakamega county had 46 procurement professionals, Bungoma 36 (Mutoro, Makokha and Namusonge, 2018), Vihiga 40 (Shilungu and Miroga, 2019) and Busia 56 (Obunde, 2019). Thus, the procurement professionals were 178. The procurement professionals were involved in the study because they were directly involved in the implementation of procurement practises hence competent to respond to the study questions.

3.3.2 Sample size

The study adopted a census survey where all 178 procurement professionals were involved in the study. The census was adopted due to a small and manageable

population size of 178 respondents. The Census survey ensured a high number of respondents hence a high degree of statistical confidence in the survey. Appendix III shows how the population was distributed across the four counties as selected using purposive sampling technique.

3.3.3 Sampling Strategies

The study used purposive sampling technique to select the four counties of Western Kenya, namely; Kakamega, Busia, Bungoma and Vihiga. Purposive sampling was used because the four counties of Western Kenya are representative of the population of interest which is county governments of Kenya and the Western Kenya counties are located relatively close to each other, which made it easy to collect data from all of the four counties in the region. The study however used a census survey to select the 178 procurement professionals from the head offices of these counties.

3.4 Data and Data Collection Methods

3.4.1 Sources of data

This study used purely primary data that was collected directly from respondents in line with the study objectives. Primary sources of data increased the reliability of the collected data since the data was collected directly from respondents.

3.4.2 Types of data

The study utilised both quantitative and qualitative data. Quantitative data was collected using a closed-ended questionnaire while qualitative data was collected using the Key Informant Interviews. The KIIs were administered to the senior supply chain managers and procurement managers at each county so as to expound on specific issues that were not fully explored in the survey questionnaire. According to Moon (2019) triangulating these two types of data increased data richness.

3.4.2 Data Collection methods

3.4.2.1 Survey

Primary data was collected using the workplace survey method as the respondents were available at their places of work. The Survey allowed collection of large amounts of data from the estimated population of procurement professionals economically, across all four counties. Data collected using this method was of standard value thus

allowing easy comparison. Furthermore, the survey allowed the study to collect quantitative data that was analysed using descriptive and inferential statistics (Queirós *et al.,* 2017). Questionnaire was used to cover all four objectives of the study and was self-administered unless under circumstances where respondents prefer the assistance of the researcher. As such, the tool increased efficiency and convenience in data collection where respondents would fill them at their own convenient time.

The response rate for the study was established in order to ascertain the representation and the quality of responses for conclusion of the study. A total of one hundred and seventy-eight (178) questionnaires were distributed to the sampled respondents. Out of the 178 questionnaires administered, 166 were duly filled and returned, yielding a response rate of 93.3% which was considered excellent for analysis. This response rate is consistent with the average response rate for empirical studies of 65% of the sample (Stedman *et al.,* 2019). Similarly, this was in line with (Seid and Hussen, 2018) who observed that a response rate above 50% contributes towards gathering sufficient data that could be generalised to represent the opinions of respondents about the study problem in the target population. The results can therefore be generalised and considered representative of the population.

3.4.2.2 Key informant interviews (KIIs)

The study conducted four key informant interviews involving senior procurement managers and supply chain managers at each county to expound on institutional determinants of sustainable procurement practises implementation. KIIs allowed flexibility in the exploration of new ideas that were not anticipated during the study (Akhter, 2022). The method was also inexpensive and simple to conduct.

The interviews were designed to be comprehensive, delving deeply into a broad range of topics relevant to the study. The number of interviews conducted in each county was flexible and adjusted based on when saturation occurred. This adaptability in the research approach ensured a thorough exploration of the topic, with the flexibility to incorporate and explore unforeseen ideas or themes that emerged during the interviews. Consequently, the principle of saturation effectively dictated the extent and depth of data collection, ensuring a deeper and comprehensive understanding of the subject matter.

3.4.3 Data Validity and Reliability

3.4.3.1 Data reliability

A pilot study of 18 procurement professionals from the neighbouring Uasin Gishu County was conducted. The pilot study allowed the testing of the internal consistency reliability of the research instruments and to estimate the duration that the study would take. The 18 participants were chosen according to Connelly's (2008) recommendations that the sample size of the pilot study should be 10% of the actual sample size of the study. Cronbach Alpha coefficient was used to test for the internal consistency of the questionnaire. A value above 0.7 was obtained as recommended by Creswell (2016), otherwise, the instrument would have been modified. Table 1 shows reliability test results. The results revealed a high average Cronbach's alpha value of 0.865 which is greater than the recommended minimum value of 0.7. The research tool was thus considered reliable.

Table 1: Data reliability

Variable	Cronbach's Alpha	N of Items
Regulatory Framework	0.868	7
Resource Capacity	0.767	7
Managers' Commitment	0.924	7
Implementation of SPP	0.900	16
Average	**0.865**	**9**

3.4.3.2 Data validity

The survey questionnaire was subjected to a content validity test through expert review to ensure that the instruments had enough items to measure the subject under study. Items that were found not to measure the required subject were omitted. Content validity was then tested using a content validity index (CVI), which was determined by dividing the number of valid questions (33) by the number of total questions (37) leading to CVI of 0.892 which was above 0.5 threshold set by Ammari (2022), such that CVI value greater than 0.5 was considered reliable.

$$\text{CVI}= \frac{Number\ of\ Valid\ Questions}{Total\ Number\ of\ Questions} = \frac{33}{37} = 0.892$$

3.5 Data Analysis Techniques

The study collected both quantitative and qualitative data thus, quantitative and qualitative analysis techniques were employed.

Analysis of quantitative data was aided by Statistical Package for Social Sciences (SPSS) software. Quantitative data was analysed using inferential analysis techniques. Ordered logistic regression model was considered since the dependent variable was ordinal in nature having distinct categories with meaningful order. The analysis was conducted in alignment with the study's objectives. First objective intended to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of SPP, second objective intended to determine the effect of the regulatory framework on the implementation of SPP. Third objective intended to determine the effect of county government resource capacity on the implementation of SPP and the fourth intended to determine the influence of procurement managers' commitment on the implementation of SPP. The model was adopted and improved from Parry (2016).

Ordered Logit Model Specification

With regard to the objectives of this study, an ordered logit explanatory model was estimated based on the following specification and all the four study objectives were analysed using this model.

$$Z_i = \beta_{1X1i} + \beta_{2X2i} + \beta_{3X3}\dot{i} + \beta_{4X4i} + \varepsilon_i$$

$$Y_i = \{ 1, if\ Zi < ai\ r, if\ ar - 1 \leq Zi < ar\ 5, if\ Zi > ar$$

The variables were qualified as shown in the variable matrix in Appendix IV.

The data gathered through Key Informant Interviews was thoroughly examined using a content analysis approach focused on thematic categorization. This method allowed for a deeper understanding of the results, as information was initially broken down into distinct codes. These codes were essential in highlighting the underlying patterns within the data. Subsequently, these codes were grouped into sub-themes, which provided a more structured layer of insights into the subject matter. Finally, these sub-themes were amalgamated into overarching themes, serving as a summary and synthesis of the insights obtained. This layered approach not only gave depth to the analysis but also offered a structured way to summarise and interpret the collected qualitative data.

Table 2: Operational Definition of Variables and their measurement levels

Variables	Definition	Measurement	Instrument	Model
Socio-demographic	Age, Sex, Educational level, work experience, professional qualification	Nominal scale, Interval scale, Ordinal scale	Questionnaire	Ordinal regression
Regulatory Framework	Explicit legal requirements on SPP Policies, Regulation & Guidelines	Five-point Likert scale, Ordinal scale	Questionnaire	Ordinal regression
Resource capacity	Financial resources, Competent staff, ICT Infrastructure	Five-point Likert Scale, Ordinal scale	Questionnaire	Ordinal regression
Management Commitment	Allocation of resources, SP audit, SP policies, Sustainability office	Five-point Likert Scale, Ordinal Scale	Questionnaire	Ordinal regression
Implementation of sustainable procurement practises	Integration of economic, environmental & social considerations into purchasing decisions	Five-point Likert Scale, Ordinal Scale	Questionnaire	

3.6 Diagnostic Tests

Prior to running regression analysis, it was necessary to ensure non-violations of the assumptions of the classical linear regression model (CLRM). Estimating these equations when the assumptions of the linear regression are violated runs the risk of obtaining biased, inefficient, and inconsistent parameter estimates (Wilms *et al.,* 2021). This study conducted a test for multicollinearity.

Multicollinearity is usually a situation in which there is a high degree of association between independent variables and dependent variables. Failure to account for perfect multicollinearity results in indeterminate regression coefficients and infinite standard errors while existence of imperfect multicollinearity results in large standard errors (Htun, 2022). Large standard errors affect the precision and accuracy of rejection or failure to reject the null hypothesis. During estimation, the problem is not the presence of multicollinearity but rather its severity. Multicollinearity was tested using variance inflation factor VIF where VIF $\geq$ 10 indicates presence of Multicollinearity (Salmerón *et al.,* 2020). The results are presented in Table 3.

Table 3: Multicollinearity Test

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Regulatory Framework	0.487	2.051
Resource Capacity	0.247	4.047
Manager Commitment	0.396	2.527

The results in Table 3 show that all the variables had a tolerance value >0.2 and VIF values <10 indicating that there was no multicollinearity among the independent variables which were regulatory framework, resource capacity and managers' commitment.

3.7 Ethical Consideration

Ethical research requires a long-term commitment to follow ethical principles not only throughout the research project but also during and after sharing the results. The proposal of the study got approval from Moshi Co-operative University before data collection. The Kenya National Commission for Science, Technology, and Innovation issued the licence to conduct the study at the four counties in Western Kenya. The study also got informed consent from all the respondents who participated in the study. Information gathered was treated as confidential during and after the study. The university approval letter and research permit are attached as Appendix VII and IX.

CHAPTER FOUR

4.0 FINDINGS AND DISCUSSION

4.1 Chapter Overview

This chapter presents data analysis, findings and discussion. This includes the demographic profile of respondents and an in-depth discussion that correlates the data from the various respondents. The discussion of the finding was based on the main objective of the study of assessing the determinants for sustainable procurement practises implementation within County Governments in Western Kenya. Specifically, the study sought to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of SPP, determine the effect of the regulatory framework on the implementation of SPP, determine the effect of county government resource capacity on the implementation of SPP, and to determine the influence of procurement managers' commitment on the implementation of sustainable procurement practises.

4.2 Socio-Demographic Characteristics of the Respondents

To understand the demographic profile of the respondents engaged, the study analysed the characteristics of the study population as it helped in data interpretation. The respondents were asked about their gender, age, level of education, working experience and possession of professional qualifications. These variables were deemed important since they helped the study to understand some critical information about the impact of each respondent on the study and also to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of SPP.

4.2.1 Sex of the respondents

The respondents were asked to indicate their gender as this was necessary because gender analysis can highlight the different roles, responsibilities, and decision-making authority that men and women possess in procurement. This was important in identifying whether there was underrepresentation or overrepresentation of a particular gender in decision-making roles which is deemed to have influence on implementation of sustainable procurement policies. Results on gender of respondent are presented in Table 4.

Table 4: Sex of the respondents

Sex	Frequency	Percentage
Male	99	59.6
Female	67	40.4
Total	**166**	**100**

Based on the results in Table 4, more than a half (59.6%) of the respondents were male, whereas 40.4% were female. The findings imply that men are currently more represented in procurement roles within these county governments. This also points to the fact that the prevailing perceptions and strategies regarding sustainable procurement practises are more influenced by male perspectives.

4.2.2 Age of the respondents

The respondents were also asked to indicate their age brackets. This was necessary because age can often be indicative of professional experience. Typically, older professionals are likely to possess a more comprehensive perspective on procurement practises, informed by years of tackling various challenges and implementing different solutions. Their approach to sustainable procurement could be influenced by historical successes and failures, leading to potentially cautious, practical, or even traditional strategies. The results revealed a median age of 40 years.

The median age of 40 years implies that the respondents were largely made up of mid-career professionals. This age group is considered to be at a stage where they have accrued a substantial amount of professional experience but are also likely open to new ideas and methodologies. They are not beginners in the field, meaning they would have a certain depth of knowledge and hands-on experience in procurement practises. At the same time, they are not at the end of their careers, where one might expect more traditional or cautious approaches. This age bracket offers a balanced viewpoint on sustainable procurement, combining both tried-and-true methods and openness to innovation. Their opinions and practises are likely shaped by a blend of historical successes and failures, making them a valuable resource for insights into effective and sustainable procurement strategies. Thus, these professionals could be instrumental in championing and driving the adoption of sustainable procurement practises.

4.2.3 Level of education of respondents

The level of education of the respondents was categorised into six levels which include; certificate, diploma, Postgraduate diploma, Bachelor's degree, Masters, Doctorate Philosophy and any other level of education. Responses regarding level of education are presented in Table 5.

Table 5: Respondent's level of education

Level	Frequency	Percentage
Certificate	4	2.40
Diploma	11	6.60
Postgraduate Diploma	17	10.2
Bachelor Degree	118	71.1
Masters	14	8.40
PhD	2	1.20
Total	**166**	**100**

From Table 5, it is evident that the majority of the respondents (71.1%) had attained a Bachelor's Degree level of education, 10.2% with a Postgraduate Diploma, 8.4% with a Masters, and 1.2% with a PhD. Moreover, the results show that a small percentage of the respondents had Certificate (2.4%) or Diploma (6.6%). The findings imply that procurement professionals in the county governments are quite educated, which potentially corresponds to a sound understanding of procurement practises. Individuals with a bachelor's degree are typically exposed to a comprehensive curriculum, giving them a broad knowledge base that can support the implementation of sustainable procurement practises. This concurs with the assertion by Wang *et al.* (2022) that education is an important parameter in promoting sustainable development among the general public in China.

4.2.4 Working experience of respondents

The study sought to understand the knowledge of the respondent in procurement related activities by analysing the length of work experience of the respondents, especially in their engagement in procurement related activities. The study calculated the average number of years spent at work and the results revealed an average of 6 years. This implies that most of the procurement professionals in the four counties in Western Kenya had an average of 6 years of experience in their work.

With six years of experience, they likely have a reasonable grasp of day-to-day procurement activities, and it's probable that they have encountered a variety of

situations that required problem-solving and decision-making. However, they may not yet have the long-term experience that comes with decades in the field, which often includes handling large-scale projects or navigating significant changes in industry standards or regulations. This level of experience also implies that while the respondents may be knowledgeable about current best practises, they might lack the extensive historical perspective that comes with more years in the field. This agrees with the findings of a study by Mansi and Pandey (2016) that there exists a positive and significant relationship between procurement professionals with a longer working experience and sustainable procurement compared to those with a shorter tenure. A report by the Institute for Supply Management (2023) also echoes this sentiment, emphasising that work experience in procurement helps professionals understand the dynamics of the global supply chain, fostering their strategic decision-making abilities.

4.2.5 Professional qualification of the respondents

Moreover, the researcher sought information on professional qualification of the respondents in relation to sustainable procurement practises in the counties. The responses were as shown in Table 6.

Table 6: Possession of Professional Qualification

	Frequency	**Percentage**
Yes	141	84.9
No	25	15.1
Total	**166**	**100**

Based on the results in Table 6, the majority (84.9%) of the respondents had professional qualifications, whereas 15.1% of respondents did not have professional qualifications. This implies that a high proportion of procurement professionals within these county governments have gone through formalised and recognized training programs. These qualifications likely contribute to a strong foundational knowledge of procurement processes, standards, and best practises. The professionals' adherence to established norms and their ability to effectively implement procurement policies would have been potentially bolstered by these qualifications. Moreover, professional qualifications often emphasise the importance of ethical practises and may also incorporate elements of sustainability.

As such, the high number of professionals with such qualifications suggested there was likely a significant awareness of the value of sustainable procurement practises. These findings agree with the Chartered Institute of Procurement and Supply (2021) that, having recognized credentials ensures that the practitioner possesses the knowledge and skills to effectively manage the complexities of the procurement process. Furthermore, such qualifications enhance credibility, improve career prospects, and foster trust among stakeholders and peers in the field.

4.3 Implementation of Sustainable Procurement Practises

The dependent variable, Implementation of Sustainable Procurement Practises is a critical step towards localization of SDGs in the county governments in Kenya. This study sought to determine the level of implementation of sustainable procurement practises in the four county governments and the procurement professionals were asked to indicate the extent of applying sustainable procurement practises where a scale of 1= never, 2=rarely, 3= sometimes, 4= very often, and 5=always was used. The findings were as shown in Table 7.

Table 7: Descriptive Statistics on Implementation of SPP

	Never %	**Rarely** %	**Some times** %	**Very often** %	**Always** %	**Mean**	**Std. Dev.**
ENV Sustainability							
Asks suppliers to commit to GHG reduction	11.40	28.30	19.30	24.10	16.90	3.07	1.29
Evaluates supplier waste reduction	15.70	17.50	24.10	19.30	23.50	3.17	1.38
Evaluate use of renewable energy	15.70	19.30	16.30	30.70	18.10	3.16	1.35
Uses LCC in bid evaluation	12.00	22.30	21.10	29.50	15.10	3.13	1.26
Purchases locally recycled products	12.00	21.70	19.90	18.70	27.70	3.28	1.39
Social sustainability							
Purchases from diverse supply base	6.00	4.80	9.60	30.10	49.40	4.12	1.15
Transparent & competitive sourcing	6.00	3.60	12.00	25.30	53.00	4.16	1.15
Evaluates supplier labour practises	19.30	5.40	19.90	31.90	23.50	3.35	1.41
Identifies and develops local suppliers	4.20	2.40	16.30	31.90	45.20	4.11	1.04
Asks suppliers to pay above min wage	19.90	10.20	24.70	24.10	21.10	3.16	1.4
Recommends donation to charity	9.00	21.70	21.70	20.50	27.10	3.35	1.33
Econ. Sustainability							
Procure to achieve value for money	3.60	2.40	7.20	21.10	65.70	4.43	0.99
Prefer competitive methods	6.00	0.00	10.80	21.10	62.00	4.33	1.08
Buys from local suppliers	3.60	4.80	3.60	34.30	53.60	4.3	1
Give preference to local products	4.80	7.20	19.90	12.70	55.40	4.07	1.22
Follow up timely payment of suppliers	3.60	3.00	6.60	38.00	48.80	4.25	0.97
Overall Mean						**3.849**	

Based on the results in Table 7, respondents indicated varying degrees of implementation of sustainable procurement practises across environmental, social, and

economic sustainability. The overall mean of 3.849 suggests that the majority of procurement professionals reported implementing these practises sometimes to very often.

In terms of environmental sustainability, the majority of respondents reported sometimes to very often for; asking suppliers to commit to greenhouse gas emission reduction (mean=3.07, std. dev. =1.29), evaluating suppliers on waste reduction programs (mean=3.17, std. dev. =1.38), and the use of life cycle costing in bid evaluations (mean=3.13, std. dev. =1.26). However, assessing suppliers on the use of renewable energy and purchasing locally recycled products had the following averages (mean=3.16, std. dev. =1.35 and mean=3.28, std. dev. =1.39 respectively), with a higher percentage of the respondents indicating these practises were implemented very often to always.

When discussing social sustainability, the majority of respondents indicated they often purchase from a diverse supply base including youth and women-owned businesses (mean=4.12, std. dev.=1.15) and promoted transparency and competitiveness in sourcing processes (mean=4.16, std. dev.=1.15). Identifying and developing local suppliers (mean=4.11, std. dev. =1.04). Evaluating supplier labour practises like child labour and recommending donations to charity organizations during disposal had lower average scores (mean=3.35, std. dev. =1.41 and mean=3.35, std. dev. =1.33 respectively). Asking suppliers to pay above minimum wage to their employees was reported to occur sometimes to very often (mean=3.16, std. dev. =1.4).

In the economic sustainability category, the majority of respondents reported they very often procured to achieve value for money (mean=4.43, std. dev. =0.99) and preferred competitive procurement methods (mean=4.33, std. dev. =1.08). Buying from local suppliers to create and sustain jobs (mean=4.3, std. dev. =1), giving preference to local products (mean=4.07, std. dev. =1.22), and following up with finance to ensure timely payment of suppliers (mean=4.25, std. dev. =0.97). Most of the distribution in this category is somewhat skewed to "Always."

The findings suggested that while there was reasonable implementation of sustainable procurement practises, areas such as supplier labour practice evaluations, need more

emphasis. The variations in the level of implementation across different practises reflect the unique challenges and opportunities in integrating sustainability into procurement processes. The study thus underscored the importance of continued efforts toward enhancing sustainable procurement practises in county governments. These findings agree with assertions specifically, sustainable public procurement can contribute to sustainable development by reducing greenhouse gases emission, reducing poverty, and promoting inclusive development (Manta *et al.*, 2022). Economically, Sustainable Procurement promotes greater value for money and spurs the governance sector by encouraging public procurement professionals to be accountable and transparent (Shakya and IGI Global, 2019; Kumar, 2022; Manta *et al.*, 2022).

4.4 Influence of Socio-Demographic Characteristics on Implementation of Sustainable Procurement Practises

The first objective of the study was to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of sustainable procurement practises. The study used ordinal logit regression analysis to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of sustainable procurement practises using economic sustainability as a dependent variable. The results were as shown in Tables 8 and 9.

Table 8: Goodness-of-Fit

	Chi-Square	**df**	**Sig.**
Pearson	129.411	115	0.182
Deviance	84.193	115	0.686

Link function: Logit.

The results in Table 8 show Pearson Chi-Square value of 129.411 with 115 degrees of freedom and a significance level of 0.182. This indicates that the model perfectly fits the data. The Deviance statistic, on the other hand is 84.193 and a significance level of 0.686, implying that there is a good fit between the observed values and the values expected under the model. So, the model fits the data well. Table 9 shows the parameter estimates for the effect of socio-demographic characteristics of procurement professionals on economic sustainability.

Table 9: Regression results on the influence of socio-demographic characteristics on economic sustainability

							95% Confidence Interval	
		Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**Lower Bound**	**Upper Bound**
Threshold	[index1 = 1.00]	5.442	3.002	3.287	1	0.070	-0.441	11.325
	[index1 = 2.00]	6.357	3.008	4.465	1	0.035	0.460	12.253
Location	Sex	3.104	1.099	7.972	1	0.005	0.949	5.259
	Age	0.001	0.312	0.000	1	0.997	-0.610	0.612
	Education	0.794	0.338	5.540	1	0.019	0.133	1.456
	W. Exp	0.303	0.305	0.987	1	0.320	-0.295	0.901
	P. Qualification	-1.110	0.591	3.534	1	0.060	-2.268	0.047

Link function: Logit.

In the study, five socio-demographic characteristics were evaluated to understand their association with economic sustainability. Standard interpretation of the logit coefficient here suggests that for a one-unit increase in the predictor, the log-odds of the dependent variable economic sustainability would change by the respective regression coefficient, while holding all other variables constant. Regarding Sex of the respondents, a one-unit change would lead to an increase of 3.104 units in the log-odds of being in a higher category of economic sustainability, keeping all other variables constant. This relationship is statistically significant with a Wald of 7.972 and a p-value of 0.005, well below the conventional 0.05 threshold. The results concur with Mansi and Pandey (2016) who found that there was a significant relationship between gender and SPP adoption.

Concerning age, a one-unit increase would essentially leave the log-odds of economic sustainability unchanged, as indicated by the coefficient of 0.001. The associated Wald statistic is negligible, and the p-value stands at 0.997, suggesting no statistical significance. The findings are in agreement with those of Mansi and Pandey (2016) that there is no significant relationship between the age of procurement professionals and the implementation of SPP.

In the case of Education, a one-unit increase would result in a 0.794 unit increase in the log-odds of achieving higher economic sustainability, holding other variables constant. This is statistically significant, supported by a Wald statistic of 5.540 and a p-value of 0.019. The findings show that the level of education had a significant influence on the implementation of SPP. Professionals with a background in

sustainability-related education might hold values aligned with ethical sourcing and social responsibility. The results agree with assertions by Wang *et al.* (2022) that education is considered an important parameter in promoting sustainable development. An earlier study by Suarez-Perales (2021) also revealed that higher education in environmental management improved pro-environmental behaviour. Similar findings had earlier been reported by Sun *et al.* (2020) who reported that higher education attainment improved individuals' environmental behaviour.

For Work Experience, a one-unit increase results in a 0.303 unit increase in the log-odds, but this lacks statistical significance as evidenced by a Wald statistic of 0.987 and a p-value of 0.320. Work experience can shape beliefs about the feasibility and effectiveness of implementing sustainable practises. More experienced professionals might have a deeper understanding of the potential impacts, while younger professionals might hold more idealistic beliefs about the positive outcomes of sustainability. This finding however contradicts with the conclusion by Mansi and Pandey (2016) who found a positive and significant relationship between procurement professionals' working experience and sustainable procurement.

Moreover, for Professional Qualification, a one-unit increase would result in a 1.110 unit decrease in the log-odds. However, this is borderline significant with a Wald statistic of 3.534 and a p-value of 0.060, just slightly above the 0.05 threshold. This finding may suggest that having a professional qualification leads to better awareness or skills necessary for implementing SPP. It is in support of the findings of an earlier study by Suarez-Perales (2021) who also revealed that professional qualification in environmental management improved pro-environmental behaviour.

The thresholds in the results indicating transitions between different economic sustainability levels showed varied significance. Specifically, the threshold at index1=1.00 had a Wald statistic of 3.287 with a p-value of 0.070, making it not statistically significant. Conversely, the threshold at index1=2.00 is statistically significant with a Wald statistic of 4.465 and a p-value of 0.035. To sum up, among the predictors, Sex and Education emerge as statistically significant in influencing economic sustainability with p-values below 0.05. Age and Work Experience do not show statistical significance. Professional Qualification is borderline significant. Given

the coefficients, Sex has the highest predictive power for economic sustainability among the variables assessed. The study thus rejected H_{01} that socio-demographic characteristics of procurement practitioners does not influence the implementation of sustainable procurement practises. The study thus concluded that socio-demographic characteristics of procurement practitioners influences the implementation of sustainable procurement practises.

The study indicates a complex association between these characteristics and sustainable procurement practises, where underlying factors such as cultural norms, societal expectations, and the personal value systems of procurement professionals may significantly influence their attitudes and actions towards sustainability. For instance, the role of gender in shaping attitudes towards sustainability could be further explored beyond the statistical significance, delving into how societal gender roles and expectations might impact a professional's approach to sustainable procurement. Similarly, while education was found to be significant, the specific areas of education that most strongly influence sustainable practises were not thoroughly examined. This involves a deeper investigation into how different educational backgrounds, especially those not directly related to sustainability, contribute to a professional’s perspective on sustainable procurement.

The findings on work experience and professional qualifications indicates more complex, underlying dynamics than merely the duration or type of experience. It would be important to explore how different types of work experiences, such as those in more traditional versus progressive organisational cultures, shape a professional's approach to sustainability. Additionally, the impact of professional qualifications can be further dissected to understand how specific qualifications, perhaps those not directly linked to sustainability, might still foster a conducive environment for sustainable procurement practises. The role of personal beliefs and norms, as suggested by the VBN Theory, warrants a more in-depth analysis, particularly how these beliefs and norms are shaped over time and how they interact with professional roles and responsibilities. Finally, considering the geographical context of the study, the unique socio-economic and cultural factors of Western Kenya that might influence these relationships would be important in providing a richer, more contextual understanding of the findings.

The findings are also in agreement with the assertion by Ishola, Adeleye and Tanimola (2018) that socio-demographic characteristics such as age, gender, and educational background, can influence the underlying values that procurement professionals hold. They contend that younger professionals have a stronger value for environmental sustainability, driven by a sense of responsibility for the future. Moreover, Akman and Rehan (2014) assert that a diverse workforce, including different genders, can bring a variety of values and perspectives, which may impact the priority placed on sustainable practises. Professionals with a background in sustainability-related education might hold values aligned with ethical sourcing and social responsibility. Furthermore, the findings are in support of the conclusion made by Galappaththi, Armitage and Collins (2022) that gender diversity, for instance, might influence the norms surrounding collaboration and decision-making processes, affecting the integration of sustainable practises.

Work experience and professional qualifications can contribute to the normative expectations of procurement professionals, impacting the extent to which they conform to sustainable procurement guidelines. VBN Theory emphasises personal values, beliefs, and norms as drivers of pro-environmental behaviour. The findings reveal that certain socio-demographic groups have stronger economical values and beliefs, leading to greater commitment to sustainable procurement practises. This understanding can inform strategies for targeted training and awareness campaigns to leverage these values in promoting sustainability in the Western Kenya counties.

4.5 Effect of Regulatory Framework on Implementation of SPP

The second objective of the study was to determine the effect of the regulatory framework on the implementation of sustainable procurement practises. The study conducted ordinal regression analysis to determine the influence of effect of the regulatory framework on the implementation of sustainable procurement practises. The study conducted ordinal regression analysis to determine the effect of the regulatory framework on social sustainability. The results were as shown in Tables 10 and 11 shows ordinal results between regulatory framework and social sustainability.

Table 10: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	249.173	148	0.071
Deviance	233.209	148	0.491

Link function: Logit.

The results in Table 10 indicate that the model has a good fit for studying the effect of the regulatory framework on social sustainability. This is indicated by Chi-Square value of 249.173 and a p-value of 0.071 which is greater than 0.05 showing that the model perfectly fits the data. The study conducted ordinal regression analysis to determine the effect of the regulatory framework on social sustainability.

Table 11: Regression results on effect of the regulatory framework on social sustainability

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Social.S = 1.00]	-0.598	0.896	0.446	1	0.504	-2.354	1.157
	[Social.S = 2.00]	2.147	0.922	5.428	1	0.020	0.341	3.954
Location	RF promotes social sustainability	-0.548	0.205	7.119	1	0.008	-0.951	-0.145
	RF promotes ENV sustainability	0.502	0.206	5.931	1	0.015	0.098	0.905
	RF emphasises econ. sustainability	0.968	0.247	15.341	1	0.000	0.484	1.453
	RF include sustainability criteria in evaluation of contracts	-0.189	0.163	1.355	1	0.244	-0.508	0.129
	RF could be improved to encourage more SPP	0.585	0.234	6.246	1	0.012	0.126	1.044
	Compliance with SP regulations is a driver for SPP	-0.800	0.274	8.534	1	0.003	-1.337	-0.263
	RF could be modified to better align with SPP	0.012	0.227	0.003	1	0.957	-0.432	0.456

Link function: Logit.

The study evaluated seven variables related to public procurement laws and their impact on social sustainability. The standard interpretation of the logit coefficient applies here: a one-unit increase in the predictor variable leads to a corresponding change in the log-odds of social sustainability, while holding all other variables constant. Starting with the thresholds, [Social.S = 1.00] has an estimate of -0.598 with a standard error of 0.896. The Wald statistic is 0.446, and the p-value is 0.504. Since

the p-value is above the conventional 0.05 threshold, this suggests that this specific transition level is not statistically significant. On the other hand, [Social.S = 2.00] has an estimate of 2.147, a Wald statistic of 5.428, and a p-value of 0.020, indicating statistical significance for this threshold level.

In terms of variables, the legal framework that promotes social sustainability shows a coefficient of -0.548, a Wald statistic of 7.119, and a p-value of 0.008. This is statistically significant, implying that enhancements in this framework would actually decrease the log-odds of achieving higher social sustainability. Having a coefficient that is negative and significant suggests that regulatory frameworks that promote social sustainability have a negative effect on social sustainability. Such regulations may impose additional costs and burdens on the counties making it challenging for them to implement social sustainability.

Additionally, the variable legal framework promotes environmental sustainability, the coefficient is 0.502 with a Wald statistic of 5.931 and a p-value of 0.015. This variable is statistically significant, and a one-unit increase would lead to a 0.502 unit increase in the log-odds of achieving better social sustainability. A positive and significant coefficient suggests a positive effect on social sustainability. Regulations that promote environmental sustainability are likely to encourage the counties to adopt more SP that have social benefits such as clean air and water. This finding concurs with Martens and Schwarz (2022), who found that environmental regulations were key enablers of the implementation of SPP in local governments.

The variable on emphasis on economic sustainability in the procurement framework has a coefficient of 0.968, a Wald statistic of 15.341, and a p-value less than 0.001. This variable is highly significant, suggesting a strong positive effect on social sustainability. Such a regulatory framework creates a favourable environment for counties to increase job creation hence have social benefits such as reduced poverty and inequality. For the legal requirement to include sustainability criteria in contract evaluations, the coefficient is -0.189, Wald statistic is 1.355, and p-value is 0.244. This variable is not statistically significant. The notion that the regulatory framework could be improved to encourage more sustainable public procurement has a coefficient of 0.585, a Wald statistic of 6.246, and a p-value of 0.012, indicating statistical significance.

Compliance with sustainable procurement regulations shows a coefficient of -0.800, a Wald statistic of 8.534, and a p-value of 0.003, which is also statistically significant. A one-unit increase in compliance would actually result in a decrease in the log-odds of higher social sustainability. Compliance with sustainable procurement regulations has a negative effect on SPP. This suggests that the counties may be viewing the regulations as a burden and may only implement SPP to the extent required by the law. This finding however contradicts with Oyewobi, and Jimoh (2022) who found the lack of an SP regulatory framework as a major hindrance to the adoption of SPP.

Finally, the variable suggesting that the regulatory framework could be better aligned with SPP has a coefficient of 0.012, a Wald statistic virtually at zero, and a p-value of 0.957. This variable is not significant. These findings show that the public procurement frameworks promoting social and environmental sustainability, as well as an emphasis on economic sustainability, are significant predictors of social sustainability. The legal requirements to include sustainability criteria and the idea to better align the framework with SPP are not statistically significant. Compliance with regulations and the need for framework improvement are also significant factors, but they affect social sustainability in a negative and positive manner, respectively.

Based on these findings, laws promoting social sustainability have negative impact, suggesting potential regulatory burdens, while those emphasising environmental sustainability positively influenced social sustainability, indicating a synergistic relationship. Economic sustainability in procurement frameworks strongly and positively impacted social sustainability, highlighting the interconnectedness of economic and social goals. Interestingly, compliance with sustainable procurement regulations had a negative effect, suggesting that mere compliance might not equate to effective sustainable practises. Non-significant findings for the legal requirement to include sustainability criteria in contract evaluations and the idea of better aligning regulatory frameworks with sustainable procurement practises highlighted potential gaps in policy effectiveness. The results imply that regulatory frameworks significantly affect the implementation of sustainable procurement practises, with a nuanced mix of positive and negative influences.

The overall findings of this objective led to the rejection of H_{02} that the regulatory framework does not affect the implementation of sustainable procurement practises. The study thus concluded that the regulatory framework affects the implementation of sustainable procurement practises within County Governments in Western Kenya. The overall findings however are consistent with the findings by Oyewobi and Jimoh (2022) that, regulatory framework was a major critical factor affecting the implementation of SPP in the public sector. In the Nigerian public sector, a study by through factor analysis, found the lack of an SP regulatory framework as a major hindrance to the adoption of SPP.

Moreover, these findings are understood within the context of the institutional theory developed by DiMaggio and Powell in 1948. Institutional theory posits that organisations are influenced by three types of external forces: normative, coercive, and mimetic. Normative forces arise from internal capabilities and resources that allow an organisation to adopt new practises. Mimetic forces involve organisations adopting new practises by imitating industry peers. In the context of sustainable public procurement, the study suggests that governmental entities could be influenced by these forces to adopt sustainable practises. This assertion is supported by prior research, such as a study by Martens and Schwarz (2022) that found environmental regulations as a coercive force to be key enablers of the implementation of SPP in local governments. Therefore, this study provides a robust foundation for understanding the influence of regulatory frameworks on SPP, backed by institutional theory.

During the interviews with senior supply chain managers at each county, the KIIs also responded to issues regarding regulatory framework, indicating that the regulatory framework plays a crucial role in shaping and influencing county sustainable procurement practises and as such it provides the legal and policy framework within which counties operate and make procurement decisions. Appendix V shows codes, sub themes and themes for the thematic analysis. The KIIs indicated that;

> *The regulatory framework outlines the rules our county must follow when buying goods and services. This includes meeting environmental, labour, and human rights standards. We make sure our buying practises match these rules to support ethical and sustainable sourcing. The*

> *national government also provides policy guidance. These national policies help us include social, economic, and environmental considerations in our buying decisions. In this way, we aim for a balanced approach that is good for people, the planet, and the economy. The regulatory framework sometimes specifies sustainability criteria that counties must consider when making procurement decisions, and this includes factors such as environmental impact, energy efficiency, waste reduction, social responsibility, and local economic development. We are required by law to evaluate and prioritise suppliers and contractors based on our ability to meet these sustainability criteria* (KIIs, 20 July, 2023).

They also stated that;

> *The regulatory framework can incentivize or penalise counties based on their sustainable procurement practises. Governments may offer financial incentives, grants, or tax breaks to counties that prioritise sustainable procurement. Conversely, penalties or legal consequences may be imposed on counties that fail to comply with sustainability regulations, fostering compliance and driving sustainable practises. The regulatory framework provides us with the structure and guidelines to integrate sustainability into our procurement practises. It ensures that we consider environmental, social, and economic factors when making purchasing decisions, contributing to the broader goals of sustainable development and responsible resource management* (KIIs, 27 July, 2023).

Moreover, The KIIs responded by indicating that:

> *This is the primary legislation governing public procurement in Kenya and it sets out the legal framework for procurement processes and establishes the obligations and procedures that we must follow. The Act includes provisions that promote sustainable procurement practises, such as requiring the consideration of environmental, social, and economic factors in procurement decisions. This initiative aims to promote the participation of women, youth, and persons with disabilities*

> *in government procurement. The AGPO program sets aside a certain percentage of procurement opportunities specifically for these groups. By including marginalised populations, the program contributes to social sustainability and economic empowerment* (KIIs, 25 July, 2023).

The thematic results imply that the procurement departments in these four counties are adhering to national procurement laws and regulations, specifically the Public Procurement and Asset Disposal Act. This suggests they operate within a legal framework which aims to ensure fair, equitable, transparent, competitive, and cost-effective procurement practises. Also, the emphasis on sustainability in procurement processes reflects a commitment to responsible purchasing. These counties are actively integrating sustainability into their procurement decisions, which includes environmental and social considerations. This could range from sourcing locally to reduce transportation emissions, prioritising suppliers with sustainable practises, or choosing products with less environmental impact.

In conclusion, the collective insights from the KIIs indicate that the county procurement strategies are closely aligned with the regulatory framework, which emphasises sustainability and ethical sourcing. The PPADA and its regulations serve as the primary legislative instruments guiding the procurement processes, underscoring the importance of environmental, social, and economic considerations. Furthermore, the national government's policy guidance supports counties in integrating these sustainable practises into their procurement decisions. The KIIs also illustrate how sustainability criteria are embedded in procurement decisions, mandating counties to prioritise suppliers who adhere to these values, thus fostering a culture of responsibility towards the environment and society. Financial incentives and penalties are mentioned as mechanisms to enforce compliance with sustainability regulations, highlighting a system that rewards sustainable practises and discourages non-compliance.

Additionally, programs like the Access to Government Procurement Opportunities (AGPO) demonstrate a commitment to social sustainability by promoting the inclusion of marginalised groups in government procurement opportunities, contributing to economic empowerment and equality. Moreover, the flexibility afforded to individual counties to develop their own sustainability policies allows for tailored approaches that

can address local needs and priorities, such as supporting local businesses or eco-friendly products.

4.6 Effect of County Government Resource Capacity on Implementation of SPP

The third objective of the study was to evaluate the effect of county government resource capacity on the implementation of sustainable procurement practises. The results in Table 12 and 13 shows the ordinal regression results regarding the effect of county government resource capacity on social sustainability.

Table 12: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	271.119	149	0.201
Deviance	201.801	149	0.645

Link function: Logit.

The goodness-of-fit statistics in Table 12 demonstrate that the model has a highly significant fit, with a Pearson Chi-Square value of 271.119 and a p-value of 0.201. This implies that the model used in this study perfectly fits the data. Similarly, the Deviance Chi-Square value of 201.801 with a p-value of 0.645 confirms the good fit of the data in explaining the variation in the data. Table 16 shows parameter estimates on the effect of county government resource capacity on social sustainability.

Table 13: Regression results on the effect of county government resource capacity on social sustainability

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Social.S = 1.00]	2.213	0.798	7.678	1	0.006	0.648	3.778
	[Social.S = 2.00]	5.338	0.931	32.855	1	0.000	3.513	7.163
Location	Financial resources available for SP	0.134	0.165	0.657	1	0.418	-0.190	0.459
	Procurement process is automated	0.074	0.188	0.155	1	0.694	-0.294	0.442
	Continuous training on SP	0.409	0.194	4.469	1	0.035	0.030	0.788
	Resources committed to sustainable supply base	-0.072	0.214	0.114	1	0.736	-0.491	0.347
	RC constraints SPP	-0.569	0.167	11.561	1	0.001	-0.898	-0.241
	RC influence commitment to SPP	0.711	0.186	14.679	1	0.000	0.347	1.075
	County can overcome resource constraints	0.669	0.177	14.341	1	0.000	0.323	1.016

Link function: Logit.

Based on the results, the threshold [Social.S = 1.00] has an estimate of 2.213 with a standard error of 0.798. The Wald statistic is 7.678, and the p-value is 0.006. This

indicates that the transition level is statistically significant. For [Social.S = 2.00], the estimate is 5.338, the Wald statistic is 32.855, and the p-value is less than 0.001. This also suggests a highly statistically significant transition level for social sustainability.

Regarding the predictor variables, the availability of adequate financial resources for sustainable procurement had a coefficient of 0.134, a Wald statistic of 0.657, and a p-value of 0.418. This variable was not statistically significant, indicating it might not be a strong predictor for social sustainability in this context. For the county's procurement process being fully automated and IT-driven, the coefficient was 0.074, the Wald statistic is 0.155, and the p-value is 0.694. This variable also was not statistically significant, suggesting that automation and IT do not necessarily impact social sustainability. The findings contradict those of Martens and Schwarz (2022) who found that lack of adequate financial resources and failure to implement an e-procurement system was among the major barriers to the adoption of SPP among Australian local governments.

When it comes to continuous staff training on sustainable procurement, the coefficient was 0.409, the Wald statistic is 4.469, and the p-value is 0.035. This is statistically significant, implying that continuous staff training positively impacts the log-odds of higher social sustainability. Meaning that counties with continuous training on SP are more likely to achieve social sustainability. The variable related to resources committed to developing a sustainable supply base showed a coefficient of -0.072, a Wald statistic of 0.114, and a p-value of 0.736. It was not statistically significant, meaning this factor doesn't significantly influence social sustainability.

Resources constraints the county’s ability to effectively implement SPP had a coefficient of -0.569, a Wald statistic of 11.561, and a p-value of 0.001. This was statistically significant and suggests that increasing constraints actually reduces the likelihood of higher social sustainability. This suggests that counties that face resource constraints are less able to invest in programs and initiatives that promote social sustainability. These findings are in agreement with Martens and Schwarz (2022) found that lack of adequate financial resources, lack of training on environmental sustainability, and failure to implement an e-procurement system were major barriers to the adoption of SPP.

Counting resource constraints to effectively implement a coefficient of 0.669 indicates that counties that can overcome resource constraints are more likely to achieve social sustainability. This effect is statistically significant at the 0.05 level. This means that counties with resource capacity constraints on SPP are less likely to achieve social sustainability. It suggests that countries should focus on developing strategies to mitigate resource constraints, such as partnering with other organisations or seeking out grants and other forms of funding. The results support the findings by Rosell (2021) who found that contractual authorities with enough financial resources are more likely to implement SPP than those facing financial constraints.

Resource capacity influence the level of engagement and commitment to SPP shows a coefficient of 0.711, a Wald statistic of 14.679, and a p-value less than 0.001. This is highly significant, indicating that increased resource capacity positively influences social sustainability. Furthermore, the ability of the county to overcome resource constraints to effectively implement SPP had a coefficient of 0.669, a Wald statistic of 14.341, and a p-value less than 0.001. This was also highly significant, implying that overcoming constraints significantly boosts the log-odds of achieving higher levels of social sustainability.

The results on social sustainability levels have shown statistical significance, indicating clear transitions in sustainability levels. However, the availability of adequate financial resources and the automation of procurement processes are not significant predictors of social sustainability, contradicting some previous findings. Significantly, continuous staff training on sustainable procurement emerged as a crucial factor, positively influencing social sustainability. The study also highlights that while resources committed to developing a sustainable supply base does not significantly impact social sustainability, the capacity to overcome resource constraints was highly significant. This suggests that counties facing resource limitations are less likely to achieve social sustainability, but those that can overcome these constraints have a higher likelihood of success. The study found out that factors like continuous training, the ability to overcome resource constraints, and resource capacity significantly influence the implementation of sustainable procurement practises in County governments, leading to the rejection of the hypothesis that resource capacity does not affect the implementation of sustainable procurement practises.

The findings imply that continuous staff training, resource capacity influence commitment to SPP, resources constraints the ability to implement SPP, and overcoming those constraints are statistically significant predictors of social sustainability. The availability of financial resources, automation of procurement, and resources committed to a sustainable supply base do not prove to be significant factors in this context. This led to the rejection of H_{03} that County governments' resource capacity does not affect the implementation of sustainable procurement practises. The study thus concluded that County governments' resource capacity does affect the implementation of sustainable procurement practises within County Governments in Western Kenya. These findings agree with the findings by AI Nuamin *et al.* (2020) which found that the cost of implementing SPP was the highest-ranked factor, corroborating the findings by other studies (Martens and Schwarz, 2022; Rosell, 2021) on the role of financial resources.

Moreover, these findings are consistent with institutional theory by DiMaggio and Powell which suggests that organisations are influenced by their institutional environment in adopting certain practises. According to the theory, normative forces, such as continuous staff training, can help an organisation like a county government implement and adopt new practises like SPP effectively. The above results align with this theory, as counties with strong training programs and the ability to overcome constraints show higher levels of social sustainability. This supports the idea that an institutional environment, which includes training and resource allocation, plays a significant role in influencing the implementation of sustainable procurement practises in county governments.

During the interviews with senior supply chain managers at each county, the KIIs also responded to questions regarding resource capacity by stating that the allocation of resources for supporting SPP in their counties varies depending on the specific priorities, and available resources. Appendix VI shows codes, sub themes and themes for the thematic analysis.

KIIs stated that;

> *Our county allocates personnel dedicated to procurement and sustainability-related roles, and these include procurement officers, sustainability officers, and specialists who are responsible for implementing and monitoring*

> *sustainable procurement practises. These staff members ensure compliance, conduct supplier evaluations, monitor sustainability criteria, and provide training and guidance to other staff involved in procurement. Our county allocates resources for training and capacity-building programs to enhance the knowledge and skills of procurement staff involved in sustainable procurement. This includes workshops, seminars, and certification programs focused on sustainable sourcing, environmental impact assessment, social responsibility, and compliance with relevant regulations and policies. Also, our county invests in technology and information systems to support sustainable procurement practises* (KIIs, 20 July, 2023).

The respondents also stated that;

> *Our county allocates resources for establishing monitoring and reporting systems to track and assess the implementation of sustainable procurement practises, which includes the development and maintenance of data collection mechanisms, reporting templates, and indicators to measure progress in meeting sustainability goals. Resources are also allocated to ensure compliance with reporting requirements stipulated by relevant regulatory bodies. Our county invests in technology and information systems to support sustainable procurement practises such as procurement management software, electronic procurement systems, and database systems that enable tracking and reporting of sustainability criteria. These systems help us streamline procurement processes, improve data management, and facilitate monitoring and evaluation of sustainable procurement practises* (KIIs, 27 July, 2023).

During the interviews with senior supply chain managers at each county, they were asked if there were any specific challenges or limitations in terms of resource capacity that impact their counties' ability to implement sustainable procurement practises effectively or not. In response, they stated that;

> *Yes, there are specific challenges and limitations in terms of resource capacity that can impact our ability as a county to implement sustainable procurement practises effectively. I would start with Financial Constraints. As a county we face limited financial resources, making it challenging for us to allocate adequate budgets for sustainable procurement initiatives. Insufficient funds*

> *hinder investment in training programs, technology infrastructure, data management systems, and the implementation of sustainable procurement strategies. We face the challenge of limited staffing and expertise. As a county, we have a limited number of staff members dedicated to procurement and sustainability-related roles. This leads to a lack of expertise and capacity in implementing sustainable procurement practises effectively. In addition, we face acute awareness and knowledge gaps* (KIIs, 27 July, 2023).

Senior supply chain managers were further asked to give their opinions regarding how their respective counties were prioritising and allocating resources to support sustainable procurement practises. KIIs stated that;

> *Our county develops policies and strategic plans that explicitly prioritises sustainable procurement practises. These documents outline our county's commitment to sustainability, define goals and targets, and allocate resources accordingly. By including sustainable procurement as a strategic priority, we signal the importance of allocating resources to support its implementation. Our county allocates a portion of their annual budget to sustainable procurement practises including allocating funds for training and capacity building programs, technology infrastructure, data management systems, supplier evaluation processes, and other activities related to sustainable procurement. Our county also monitors and evaluates the performance of sustainable procurement practises to assess their effectiveness. By analysing the outcomes and impacts of sustainable procurement initiatives, our county is able to identify areas that require additional resources and make adjustments to resource allocation accordingly. Resource allocation for sustainable procurement practises depends on factors such as available budget, county size, and development priorities. Our county determines resource allocation based on our unique circumstances and the desired outcomes of sustainable procurement initiatives* (KIIs, 27 July 2023).

The KII responses above depicts that financial constraints pose a significant hurdle to counties in Western Kenya. Limited budgets prevent the allocation of sufficient resources towards initiatives promoting sustainable procurement. A lack of financial

resources can thereby slow the progress towards a more sustainable procurement approach, despite the existing understanding and willingness to move in that direction. In addition, the findings suggest a supply-side issue in terms of the availability of qualified suppliers that adhere to sustainability standards. To successfully implement SPP, it is crucial to have a pool of suppliers that are both capable of meeting the demands of the county and compliant with sustainability standards. If such suppliers are limited or non-existent, it poses a significant barrier to the adoption of sustainable procurement, despite the best intentions or policies. This suggests that there might be a need to work with suppliers to help them understand and meet these sustainability criteria, which could involve additional investment and time.

In conclusion, the findings from the key informants highlight a concerted effort by the county to integrate sustainable procurement practises into its operations, showing a clear prioritisation of SPP in both policy and resource allocation. The county has dedicated personnel like procurement and sustainability officers to ensure compliance, conduct evaluations, and provide training, which underscores the strategic importance placed on SPP. Investments in technology and systems for monitoring and reporting are also indicative of a commitment to operationalizing and enhancing SPP. However, the KIIs acknowledge significant challenges, notably financial constraints and limited staffing, which impede the effective implementation of SPP.

Despite these challenges, the county continues to prioritise SPP in its strategic plans, allocating a portion of the budget towards SPP-related activities and continuously evaluating the effectiveness of these practises to adjust resource allocation as necessary. This approach is adapted to each county's specific circumstances and strategic goals, aiming to overcome the identified limitations and support the successful implementation of SPP.

4.7 Effect of Management Commitment on Implementation of SPP

The fourth objective of the study was to determine the influence of procurement managers' commitment on the implementation of sustainable procurement practises. The results in Table 14 and 15 shows the ordinal regression results on the effect of managers' commitment on social sustainability.

Table 14: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	183.053	121	00.113
Deviance	190.312	121	00.095

Link function: Logit.

The results in Table 14 shows that the model fits the data well in explaining the relationship between managers' commitment and social sustainability in procurement practises, with both Pearson and Deviance Chi-Square values indicating values of 183.053 and 190.312 respectively and both having insignificance level (p-value) of 0.0.113 and 0.095 respectively. This suggests that the model fitted the data well and was effective in capturing the relationships between managers' commitment and social sustainability.

Table 15: Regression results on the influence of procurement managers' commitment on social sustainability

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Threshold	[Social.S = 1.00]	0.763	0.591	1.666	1	0.197	-0.395	1.921
	[Social.S = 2.00]	3.497	0.651	28.807	1	0.000	2.220	4.774
Location	Mgt allocates resources for SPP	0.247	0.196	1.597	1	0.206	-0.136	0.631
	Mgt conducts SP audits	0.802	0.265	9.164	1	0.002	0.283	1.321
	County has SP policies	-1.034	0.359	8.286	1	0.004	-1.737	-0.330
	Reward for implementing SP	0.604	0.174	12.071	1	0.001	0.263	0.945
	Mgt demonstrate commitment to SPP	0.917	0.296	9.625	1	0.002	0.338	1.496
	Mgt prioritises SPP	-0.981	0.316	9.608	1	0.002	-1.601	-0.361
	Mgt builds and supports the culture of SPP	0.479	0.258	3.450	1	0.063	-0.026	0.984

Link function: Logit.

The results in the table shows that the coefficient for [Social.S = 1.00] was 0.763 with a standard error of 0.591. The Wald statistic was 1.666, and the p-value was 0.197. This indicated that this particular transition level was not statistically significant. On the other hand, for [Social.S = 2.00], the coefficient was 3.497, the Wald statistic was 28.807, and the p-value was less than 0.001, suggesting a highly statistically significant effect on social sustainability.

Focusing on the predictor variables, the allocation of resources for sustainable public procurement by county procurement management had a coefficient of 0.247, a Wald statistic of 1.597, and a p-value of 0.206. This means that counties with management that allocates resources for SPP are more likely to achieve social sustainability. However, this effect is not statistically significant at the 0.05 level, suggesting that resource allocation by itself wasn't a strong determinant of social sustainability. The finding contradicts Anin *et al.* (2022) who found that top management commitment in terms of allocating resources to support the implementation of SP, improves procurement quality performance.

When it came to top management conducting sustainable procurement audits, the coefficient was 0.802, the Wald statistic was 9.164, and the p-value was 0.002. This was statistically significant, indicating that such audits positively influenced social sustainability and counties with management that conducts SP audits are more likely to achieve social sustainability. This finding conjectures the findings by Anin *et al.* (2022) that top management commitment to implement both internal and external procurement audit recommendations improve procurement quality performance.

The presence of sustainable procurement policies in the county had a coefficient of -1.034, a Wald statistic of 8.286, and a p-value of 0.004. This variable was statistically significant and implied a negative relationship with social sustainability, meaning that counties that have SP policies are less likely to achieve social sustainability. Procurement staff being rewarded for implementing sustainable procurement had a coefficient of 0.604, a Wald statistic of 12.071, and a p-value of 0.001. This was highly significant, signalling those rewards for staff positively affected social sustainability. This implies that counties that reward implementing SP are more likely to achieve social sustainability.

Management's action to demonstrate commitment to SPP had a coefficient of 0.917, a Wald statistic of 9.625, and a p-value of 0.002. This also was highly significant, indicating a positive influence on social sustainability and implies that counties with management that demonstrates commitment to SPP are more likely to achieve social sustainability. Management prioritising SPP relative to other organisational objectives had a coefficient of -0.981, a Wald statistic of 9.608, and a p-value of 0.002. This was statistically significant and suggested a negative influence on social sustainability.

Moreover, the building and support of a culture of SPP within the county by management had a coefficient of 0.479, a Wald statistic of 3.450, and a p-value of 0.063. This was borderline significant, implying that it could potentially influence social sustainability positively thus implying that counties that build and support a culture of SPP are more likely to achieve social sustainability. This led to the rejection of H_{04} that procurement professionals' commitment does not influence the implementation of sustainable procurement practises. The study thus concluded that procurement professionals' commitment influences the implementation of sustainable procurement practises.

Based on these results, it is evident that top management conducting sustainable procurement audits, rewarding procurement staff for implementing sustainable procurement, and management taking action to demonstrate commitment to SPP emerged as highly significant positive influencers on social sustainability. The presence of sustainable procurement policies and management prioritising SPP negatively influenced social sustainability. Other factors like the allocation of resources and building a culture of SPP did not show significant impact in this context.

The findings of the study as discussed highlights the varying influence of different management practises on social sustainability in public procurement. While the transition to a higher level of social sustainability was highly significant, the initial transition was not. Also, top management practises like conducting sustainable procurement audits and rewarding staff for implementing sustainable practises were significant positive predictors of social sustainability. Conversely, the presence of sustainable procurement policies and management's prioritisation of sustainable procurement over other objectives showed a negative correlation with social sustainability. Although resource allocation for sustainable procurement and building a culture of sustainable procurement practises by management were explored, they did not demonstrate a significant impact. The study thus shows that procurement professionals' commitment, especially in certain management actions, significantly influences the implementation of sustainable procurement practises, leading to the rejection of the hypothesis that such commitment does not affect sustainable procurement practises.

The correlation results are consistent with findings by Anin *et al.* (2022) which indicated that, top management commitment in terms of allocating resources to support the implementation of SP, and commitment to implement both internal and external procurement audit recommendations, improve procurement quality performance. A study by Martens and Schwarz (2022) also reported similar findings that top management commitment was a key enabler of the adoption of SPP in local governments in Australia. In addition, these findings are in support of institutional theory which posits that managerial practises and commitments strongly influence an organisation's ability to adopt new practises and norms. These findings confirm this, showing that managerial commitment, either through audits, rewards, or explicit actions, significantly impacts the success of SPP initiatives in a county setting. This highlights the importance of leadership in setting institutional practises, further validating the theoretical framework for this study.

During the interviews with senior supply chain managers at each county, they were asked to give their views regarding procurement managers' commitment. They stated that Management in Kenyan counties demonstrates commitment to sustainable procurement practises in various ways. Appendix VI shows codes, sub themes and themes for the thematic analysis.

KII 1 stated that;

> *The management of our county develops policies and guidelines that emphasise the importance of sustainable procurement. These policies articulate our county's commitment to sustainability, define the objectives and principles of sustainable procurement, and outline the specific actions and requirements to be followed. These policies provide a clear direction and demonstrate management's commitment to integrating sustainability into procurement processes. Also, the top management of our county incorporates sustainable procurement practises into the county's strategic plans and development agendas* (KIIs, 27 July, 2023).

In addition, KII 2 and 3 shared similar sentiments by explaining that;

> *Our county top management ensures the allocation of resources, including staff, budget, and technology, to support sustainable*

> *procurement practises. They prioritise the necessary resources and ensure that adequate funding and personnel are dedicated to sustainable procurement initiatives. This commitment demonstrates that management recognizes the importance of resource allocation for the effective implementation of sustainable procurement practises* (KII 2, 3) (20, 25 July 2023).

During the interviews the senior supply chain managers were asked to give their views regarding how their management was ensuring that SPP were integrated into the overall strategy and operations of the county. KII 1 and 4 stated that;

> *In our county, we align the sustainable procurement policies and guidelines with the overall strategic goals and objectives of the county. By embedding sustainability principles and targets into the county's strategic plans, management ensures that sustainable procurement becomes an integral part of the broader organisational strategy. In addition, our top management incorporates sustainable procurement as a key component in our county's strategic planning processes* (KII 1, 4) (12, 27 July, 2023).

In addition, KII 2 stated that;

> *Our county management team fosters awareness and understanding of sustainable procurement practises among staff and relevant stakeholders. They communicate the importance of sustainable procurement, its alignment with the county's vision and values, and the potential benefits it offers. This communication ensures that sustainable procurement becomes a shared objective across departments and functions. Moreover, management ensures that sustainable procurement practises are integrated into the standard procurement processes of the county* (KII 2, 20 July, 2023).

KII 3 corroborated the views of the other KIIs and added that;

> *We invest in training and capacity-building programs to equip staff with the necessary knowledge and skills for implementing sustainable procurement practises. We provide training on sustainability concepts, regulations, evaluation methods, and the integration of sustainability*

> *criteria into procurement decision-making. This empowers staff to apply sustainable procurement practises effectively. The management establishes systems for monitoring and reporting on sustainable procurement performance. They set clear indicators and targets to measure progress and regularly assess the impact of sustainable procurement practises. By monitoring performance, management can identify areas for improvement and take corrective actions to ensure integration into operations* (KII 3, 25 July, 2023).

These responses from the interviews show that the managements of these four counties emphasise aligning their sustainable procurement policies with their overarching strategic goals and objectives. This strategic alignment indicates that sustainable procurement is not merely an afterthought or a peripheral activity; it is central to the counties' broader objectives and vision. The management's commitment is evident as they embed sustainability targets within strategic plans and incorporate SPP as a fundamental component of the county's strategic planning process. This approach ensures that sustainable procurement practises get the necessary attention and resources, making them an integral part of the county's operations and future plans.

In conclusion, the key informants' responses collectively suggest that the management of the county has taken proactive and strategic measures to integrate SPP into the core of the county's operations and ethos which is in support of the quantitative findings. With policies that emphasise the county's commitment to sustainability, the management has provided clear guidelines and actions to follow, indicating a strong commitment to integrating SPP within the county's strategic framework. Resources are allocated specifically for SPP, reflecting its prioritisation. Furthermore, there is a concerted effort to foster a culture of sustainability through communication and training, ensuring that all staff are aligned with the county's sustainability goals. The establishment of monitoring systems indicates a robust approach to maintaining and improving SPP, emphasising accountability and continuous improvement. This holistic approach demonstrates a clear acknowledgment of the importance of sustainable practises within the county's procurement processes.

4.8 Summary of Hypotheses

The study provided a comprehensive summary of the hypotheses tested, along with the conclusions regarding whether each null hypothesis was rejected or not. This information is detailed in Table 14, which serves as a summary of the outcomes for each hypothesis tested.

Table 16: Summary of Hypotheses Tests

Hypothesis	Reject H_0/Fail to reject H_0
H_{01}: Socio-demographic characteristics of procurement professionals does not influence the implementation of sustainable procurement practises.	Rejected H_{01}
H_{02}: Regulatory framework does not affect the implementation of sustainable procurement practises.	Rejected H_{02}
H_{03}: County governments' resource capacity does not affect the implementation of sustainable procurement practises.	Rejected H_{03}
H_{04}: Procurement professionals' commitment does not influence the implementation of sustainable procurement practises.	Rejected H_{04}

Source: Researcher, 2023

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presents the summary of the findings, conclusions, recommendations, and areas for further research.

5.1 Summary of the Key Findings

The aim of this study was to assess the determinants of sustainable procurement practises implementation within County Governments in Western Kenya. This was achieved by analysing the four research objectives. The first research objective was to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of sustainable procurement practises. The study findings revealed male predominance in procurement roles in the four counties in Western, with 59.6% of respondents being male. This suggested that sustainable procurement strategies and perspectives were largely male-influenced at the time of the study.

The study also found that the median age of the respondents was 40 years. These mid-career professionals were open to innovative approaches while also relying on their substantial work experience. This indicated that this age group could have been a significant driving force in implementing sustainable procurement practises during the period of study. The education level of the respondents was also a notable finding. A significant majority, 71.1%, held a Bachelor's Degree, suggesting a strong foundational understanding of procurement practises. Moreover, the study revealed that a high percentage of respondents, 84.9%, had professional qualifications in procurement. This suggested that a large majority of professionals were likely well-versed in both the ethical and practical aspects of procurement, including sustainability.

5.1.1 Socio-demographic characteristics and implementation

The first objective of the study was to determine the influence of socio-demographic characteristics of procurement professionals on the implementation of sustainable procurement practises. Analysis results using ordinal regression showed variable results when focusing on economic sustainability. The study found that gender and education positively influenced economic sustainability (Gender Estimate=3.104,

p=0.005; Education Estimate=0.794, p=0.019). On the other hand, professional qualification had a negative but significant influence on economic sustainability (Estimate=-1.110, p=0.060).

5.1.2 Regulatory framework and implementation

The second objective was to determine the effect of the regulatory framework on the implementation of sustainable procurement practises. The study delved into the impact of the regulatory framework on Sustainable Procurement Practises, examining social sustainability. Specifically, a focus on environmental and economic sustainability within the public procurement legal framework positively influenced social sustainability (Environmental Estimate = 0.502, p-value = 0.015; Economic Estimate = 0.968, p-value = 0.000). Furthermore, compliance with existing sustainable procurement regulations had a negative effect on social sustainability (Estimate = -0.800, p-value = 0.003). These findings highlight the complex interplay between the regulatory framework and the different dimensions of sustainability in procurement practises.

5.1.3 County government resource capacity and implementation

Moreover, the study evaluated the influence of county government resource capacity on the implementation of sustainable procurement practises. In terms of social sustainability, continuous staff training significantly influenced positive outcomes (Estimate=0.409, p-value=0.035). Both higher resource capacity (Estimate=0.711, p-value=0.000) and the ability to overcome resource constraints (Estimate=0.669, p-value=0.000) were significant in positively affecting social sustainability.

5.1.4 Managers' commitment and implementation

Finally, the study aimed to assess the impact of managers' commitment on implementing SPP in the dimension of social sustainability. The study found that rewarding procurement staff for implementing sustainable practises had a strong positive effect on social sustainability (Estimate: 1.019, p=0.003). Conversely, if management prioritises SPP over other organisational objectives, it negatively influences the social sustainability aspect. Positive impacts were found for top management conducting sustainable procurement audits (Estimate: 0.802, p=0.002), rewarding procurement staff (Estimate: 0.604, p=0.001), and management taking

action to show commitment (Estimate: 0.917, p=0.002). However, having sustainable procurement policies (Estimate: -1.034, p=0.004) and prioritising SPP (Estimate: -0.981, p=0.002) were negatively associated with social sustainability. The study emphasises the crucial role of managerial commitment in implementing SPP. It also highlights the nuanced ways in which different managerial actions can either support or hinder sustainability across economic, environmental, and social dimensions.

This study provides insights into the importance of both individual and institutional factors in implementing SPP within County Governments in Western Kenya, a critical step toward realising the global vision of the 2030 Sustainable Development Goals. By identifying key socio-demographic traits, such as education level and gender, that influence SPP implementation, the study provides actionable insights for hiring and training programs. Furthermore, it highlights the pivotal role of regulatory frameworks and resource capacity in local governments. Unlike previous research that mainly focused on institutional drivers, this study enriches the existing literature by emphasising the role of individual procurement professionals, thereby offering a comprehensive view that can guide future policy and regulations in fostering sustainable procurement.

5.2 Conclusion

Based on the study objectives and findings the following conclusions were drawn in relation to determinants of sustainable procurement practises implementation within County Governments in Western Kenya. Regarding the first objective, the study concludes that socio-demographic characteristics play a pivotal role in the implementation of sustainable procurement practises. In light of these findings, the initial hypothesis asserting no influence of socio-demographic characteristics on SPP implementation was rejected. Overall, understanding these characteristics is crucial for promoting wider adoption and refinement of sustainable practises in procurement sectors in these counties within Western Kenya.

As for the second objective, the study concludes that there is a shared belief in the positive role of an enhanced regulatory framework in promoting SPP among procurement professionals within the counties. Consequently, any efforts towards regulatory reforms should consider these views to ensure the implementation and success of such practises. The study also quantifies the considerable influence of the

regulatory framework, justifying the need for a focused approach on the part of policymakers, government officials, and procurement professionals in enhancing the regulations governing procurement processes. It indicates that regulatory changes can serve as an effective means to boost SPP, thereby advancing sustainability goals within the region. Additionally, the study finds that while the regulatory framework is important, it does not fully explain the differences in SPP across counties in Western Kenya. This implies that other factors, possibly including organisational culture or resource availability, also play a significant role and should be part of future policy considerations.

On the third objective, the study concludes that most of the procurement professionals in the Western Kenya counties are optimistic about the county government's resource capacity and its effect on implementing SPP. This implies that policymakers and professionals must prioritise strengthening the resource capacity of county governments. A strong link between resource capacity and successful implementation suggests that improvements in this area could lead to significant gains in sustainable procurement practises. Further, the study concludes that there is a strong positive and significant association between county government resource capacity and the implementation of SPP. Therefore, it becomes vital for the county governments to maintain or increase their resource allocation towards sustainable procurement to ensure its effective implementation.

On the fourth objective, the study concludes that managerial commitment within county governments in Western Kenya is substantial and plays a crucial role in the effective implementation of sustainable procurement practises. In particular, rewarding staff for implementing these practises and demonstrating management commitment were found to be particularly effective strategies. The presence of specific policies around sustainable procurement within these county governments reinforces the critical role of management in driving these initiatives. The study therefore suggests that sustainable procurement is not merely a functional requirement but also an organisational priority, backed by the commitment of management.

This study provides substantial evidence pointing towards the influential role of procurement managers' commitment in this regard. This underlines the need for

management to remain engaged and proactive in supporting sustainable procurement, which in turn, will be essential for achieving broader sustainability goals within these county governments. It emphasises the role of socio-demographic factors, regulatory frameworks, resource capacity, and management commitment as key drivers. As such, a multi-faceted approach that addresses these various aspects will be crucial for the effective implementation and sustainability of procurement practises in these counties.

Based on the findings, the study concludes that SPP within County Governments in Western Kenya are influenced by a range of interconnected factors. Firstly, socio-demographic aspects such as gender, age, and education level have a noteworthy effect on the approach to SPP. While it's promising that mid-career professionals and those with higher education levels are leading the charge, the male predominance raises questions about the diversity of perspectives in decision-making. Also, the regulatory framework is a double-edged sword. On one hand, it boosts economic sustainability, but on the other, it sometimes hampers social sustainability. This suggests that while laws and policies are vital for enforcing sustainability practises, they need to be well-balanced to avoid unintended negative consequences on certain aspects of sustainability.

Moreover, resource capacity and technological infrastructure are pivotal for effective SPP implementation. The more resources available, such as advanced IT systems and well-trained staff, the better the outcomes in both environmental and social sustainability. This implies that investments into resource capacity aren't just operational necessities but strategic imperatives for sustainable procurement. The study further concludes that managerial commitment is essential for the all-around implementation of SPP. The role of top management is crucial in either supporting or hindering sustainability across its economic, environmental, and social dimensions. This calls for a more improved, informed approach by leaders to understand how their actions can influence different facets of sustainability.

5.3 Recommendations

Based on the findings and the conclusion presented above, this study makes a number of recommendations. Firstly, the study recommends that the top leaderships of the County Governments in Western Kenya should strive to focus on initiatives that

enhance the understanding and skills of procurement professionals regarding SPP. As the study found, the level of education and professional qualifications significantly influence the implementation of SPP. Therefore, the study recommends that the county leadership should strive to provide regular training programs and professional development opportunities to their procurement staff. Also, the county management should engage with institutions of higher learning to introduce or strengthen the focus on sustainability in their procurement-related courses that can prove to be beneficial. Moreover, the county management should initiate mentoring programs where younger professionals learn from the experiences of seasoned professionals, and vice versa, could also foster a more effective exchange of ideas.

Moreover, the impact of work experience on the implementation of SPP calls for recognizing and leveraging the practical knowledge and skills gained over the years. The county governments should consider establishing a rewards and recognition system that motivates procurement professionals to utilise their experience in implementing SPP. Such a system could involve incentives for implementing sustainable procurement projects or for contributing innovative ideas to enhance sustainability. In addition, the governments should encourage the participation of procurement professionals in policy development and decision-making processes related to SPP. Given that the professionals' socio-demographic characteristics influence SPP implementation, their input would be crucial in creating policies that cater to the diverse perspectives within the profession. This could include forming committees or forums where procurement professionals can discuss challenges, exchange ideas, and propose solutions to enhance the implementation of SPP.

Given the positive and significant effect of the regulatory framework on the implementation of SPP, it is recommended that County Governments in Western Kenya should continuously review and enhance their procurement regulations. This should be geared towards incorporating more clear, comprehensive, and supportive provisions for sustainability. Periodic regulatory reviews would ensure that the framework remains relevant and effective in promoting sustainable procurement amid evolving sustainability standards and practises.

It also recommended that the leadership of county governments in Western Kenya should implement robust enforcement mechanisms to ensure adherence to these

sustainable procurement regulations. This should be achieved through regular audits, inspections, and penalties for non-compliance. Also, training programs, workshops, and informational resources should be regularly provided to ensure that professionals are well-versed in the regulatory requirements and are equipped to effectively implement them in their procurement activities. Based on the finding that county government resource capacity has a significant effect on the implementation of SPP, it is recommended that the top leadership of the counties take measures that optimise their resources towards the enhancement of these practises. This should include strategic budget allocations, manpower optimization, and technological investments directed towards the implementation of sustainable procurement.

Developing a long-term sustainability plan that encompasses resource allocation can be beneficial in ensuring a consistent and targeted approach. Furthermore, it is recommended that they also focus on capacity building, which should involve training procurement staff on the effective utilisation of resources, promoting skill development for implementing SPP, and investing in technological tools that can facilitate more efficient procurement processes. In particular, leveraging technology could enable more accurate tracking of sustainability performance, automate certain procurement activities, and provide data-driven insights for decision making. Capacity building also extends to fostering a culture of sustainability within the procurement department, which can encourage all staff to actively contribute to the implementation of SPP.

The study findings highlight the crucial role of procurement managers' commitment to implementing SPP. Thus, it is recommended that the leadership of the four County Governments in Western Kenya prioritise initiatives aimed at enhancing this commitment. This should include introducing an incentive scheme to reward procurement staff who successfully implement SPP, thereby encouraging further adoption and commitment towards these practises. Such recognition could take the form of promotions, monetary rewards, or acknowledgment in internal communications.

Finally, this study recommends that the leadership of County Governments in Western Kenya should create an environment that fosters a culture of sustainability within the

procurement departments. This should be achieved through frequent communication about the importance of sustainability, integration of sustainable procurement goals into the overall organisational objectives, and the provision of continuous training and resources needed for sustainable procurement. In essence, sustainable procurement should be made an inherent part of the organisation's culture, with visible commitment demonstrated by the management through their actions and decisions. Demonstrating a commitment to sustainability at all levels of management can also serve to inspire and motivate procurement staff to follow suit.

5.4 Limitations of the Study

The study used purposive sampling technique to select the four county governments of Western Kenya as the study area. This sampling technique is a non-random selection process that raises concerns about generalizability as the findings cannot be directly extrapolated to the entire counties of the government of Kenya. While Western Kenya counties might offer unique insights due to their diversity and specific characteristics, focusing solely on this region might limit the generalizability of findings to other counties in Kenya. Each county in Kenya has distinct socio-economic, cultural, and geographical attributes that might differ significantly from Western Kenya. Therefore, findings derived from this region might not accurately represent the broader Kenyan context.

5.5 Areas for further studies

The study focused on the influence of socio-demographic characteristics of procurement professionals on the implementation of SPP. Future research could explore the specific role of education and training on the uptake and effectiveness of SPP within these demographics. In addition, as this study examined the current effect of the regulatory framework on the implementation of SPP, future researchers should consider assessing the influence of potential regulatory changes, or compare the influence of regulatory frameworks across different regions or countries.

Moreover, this study focused on the effect of county government resource capacity on the implementation of SPP, future research should be looking into the impact of technological advancements and digital resources on enhancing SPP implementation. The influence of procurement managers' commitment was assessed in this study.

Further research is recommended to evaluate the perceptions and commitment of other stakeholders involved in the procurement process, such as suppliers or the broader community, and their potential role in supporting SPP.

Furthermore, the current study did not use either moderating or mediating variables. It is therefore suggested that future studies could consider incorporating moderating variables such as organisational culture, political climate, economic conditions and level of technological advancement. Future studies should also consider adopting various possible mediating variables like organisational support, staff training and development, supplier relationships and implementation strategy and the findings compared with those of the current study.

REFERENCES

Akhter, S. (2022). Key informants' interviews. In *Principles of Social Research Methodology* Singapore: Springer Nature Singapore. (pp. 389-403).

Akman, I., and Rehan, M. (2014). Online purchase behaviour among professionals: A socio-demographic perspective for Turkey. *Economic research-Ekonomska istraživanja*, *27*(1), 689-699.

Al Nuaimi, B.K., Khan, M. and Ajmal, M. (2020), "Implementing sustainable procurement in the United Arab Emirates public sector", *Journal of Public Procurement*, 20(2): 97-117. https://doi.org/10.1108/JOPP-07-2019-0044.

Ammari N. B. (2022). *Social customer relationship management (social-crm) in the era of web 4.0*. Tunisia: IGI Global Business Science Reference (an imprint of IGI Global).

Anin, E.K., Essuman, D., Baffour, F.A., M.D. and Asamany, P.A. (2022). Enhancing procurement quality performance in a developing country: The roles of procurement audit and top management commitment. *International Journal of Public Administration*,1-12. DOI: 10.1080/01900692.2022.2116046

Avotra, A. A. R. N., Chenyun, Y., Yongmin, W., Lijuan, Z., & Nawaz, A. (2021). Conceptualising the state of the art of corporate social responsibility (CSR) in green construction and its nexus to sustainable development. Frontiers in Environmental Science, 9, 541.

Bokombe, O. O. (2020). *An Assessment of the Implementation of Sustainable Development and Poverty Eradication in Kenya (2015-2020)* (Doctoral dissertation, University of Nairobi).

Carey J. C. Harris B. Lee S. M. and Aluede O. (2017). *International handbook for policy research on school-based counselling*. Cham: Springer. 535pp.

Carfora, V., Buscicchio, G., & Catellani, P. (2021). Integrating personal and pro-environmental motives to explain Italian women's purchase of sustainable clothing. *Sustainability*, *13*(19), 10841.

Connelly, L.M. (2008). Pilot Studies. *Medsurg Nursing*, 17(6):411-2. https://pubmed.ncbi.nlm.nih.gov/19248407/

Council of Governors [CoG] (2020). Localization of sustainable development goals by county governments in Kenya. [https://gold.uclg.org/sites/default/files/kenya_2020.pdf] accessed November 14, 2022.

Creswell, J. W., and Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Ćwiklicki, M., Pawełek, B., and Pilch, K. (2021). Organisational resource capacity and ISO 9001 QMS Implementation in the Local Government. Evidence from Poland. *Public Organization Review*, *21*(2), 205-219.

Environmental Performance Index (2022). 2022 EPI Results: Results Overview. [https://epi.yale.edu/epi-results/2022/component/epi]accessed November 13, 2022.

Ethics and Anti-Corruption Commission (2020). About us. https://eacc.go.ke/default/about-us/

Etse, D., McMurray, A., and Muenjohn, N. (2023). Sustainable Procurement Practice: The Effect of Procurement Officers' Perceptions. *Journal of Business Ethics*, *184*(2), 525-548.

Fernando, Y., Halili, M., Tseng, M. L., Tseng, J. W., and Lim, M. K. (2022). Sustainable social supply chain practises and firm social performance: Framework and empirical evidence. *Sustainable Production and Consumption*, *32*, 160-172.

Filho, W.L., Skouloudis, A. Brandli, L.L. *et al.* (2019). Sustainability and procurement practises in higher education institutions: Barriers and drivers. *Journal of Cleaner Production,* 231(10): 1269-1280. DOI: 10.1016/j.jclepro.2019.05.202

Galappaththi, M., Armitage, D., and Collins, A. M. (2022). Women's experiences in influencing and shaping small-scale fisheries governance. *Fish and Fisheries*, *23*(5), 1099-1120.

Ghazali, M.E., Nguyen, B., Mutuma, D.S., and Yap, S. (2019). Value-Belief-Norm theory: Assessing unobserved heterogeneity of two ethnic groups. *Sustainability*, 11:1-28. DOI: 10.3390/su11123237.

Government of Kenya (2015). Public Procurement and Disposal Act. Nairobi: Government Printer.

Government of Kenya [GoK]. Access to government procurement opportunities (AGPO). [https://www.treasury.go.ke/agpo/].

Htun, K. T. (2022). *Application to Principal Component Analysis To solve Multicollinearity in Sesame Production of Myanmar (1995-2020)* (Doctoral dissertation, MERAL Portal).

Ishola, A. A., Adeleye, S. T., and Tanimola, F. A. (2018). Impact of educational, professional qualification and years of experience on accountant job performance. *Journal of Accounting and Financial Management ISSN*, *4*(1), 2018.

Islam, M.M., Murad, M.W., McMurray, A.J. and Abalala, T.S. (2016). Aspects of sustainable procurement and private organisations in Saudi Arabia: an empirical study. *International Journal of Sustainable Development and World Ecology,* 24(4): 289-303. DOI:10.1080/13504509.2016.1209794

Kariuki, C.M. and Wabala, S. (2021). Influence of procurement planning on the procurement performance of selected county governments in Kenya. *International Journal of Business and Strategic Management,* 2(2):227-248.

Kenya National Bureau of Statistics (2019). Kenya Population and Housing Census: Volume I. Population by County and Sub-County.

Kim, S. H., and Seock, Y. K. (2019). The roles of values and social norms on personal norms and pro-environmentally friendly apparel product purchasing behaviour: The mediating role of personal norms. *Journal of Retailing and Consumer Services*, *51*, 83-90.

Kiswili, N.E. and Ismail, S.N. (2016). Role of sustainable procurement practises on supply chain performance of the manufacturing sector in Kenya: A case study of East African Portland Cement Company. *European Journal of Logistics, Purchasing and Supply Chain Management,* 4(3):1-31.

Laila, R. and Ermawati, M. (2021). Performance measurement in local government: Institutional factors. *Journal of Social and Development Sciences,* 12(2): 35-44. Site visited on December 14, 2022 https://www.researc hgate.net/ publication/355774063_Performance_Measurement_in_Local_Governm ent_Institutional_Factors/link/6381ac28c2cb154d292a055 a/ download

Mansi, M. and Pandey, R. (2016). Impact of demographic characteristics of procurement professionals on sustainable procurement practises: Evidence from Australia. *Journal of Purchasing and Supply Management,* 1-10. DOI:10.1016/j.pursup. 2015.06.001

Manta, O., Panait, M., Hysa, E., Rusu, E., and Cojocaru, M. (2022). Public procurement, a tool for achieving the goals of sustainable development. *Amfiteatru Economic, 24*(61), 861-876.

Martens, S.G. P. and Schwarz, G.M. (2022). Examining contemporary Australian local government sustainable procurement practises: A national study. *International Journal of Public Administration,*6(8): 78-95, DOI:10.10 80/01900692.2022.212 0002

Matsumoto, T. (2019). Devolution and Local Development in Emerging States: The case of Kenya. In: Takagi, Y., Kanchoochat, V., Sonobe, T. (eds). *Developmental State Building. Emerging -Economy State and International Policy Studies*. Springer: Singapore. pp 157-175.

Maulidharan, S. and Sheehan, K. (2018). The role of guilt in influencing sustainable pro-environmental behaviours among shoppers. Differences in response by gender to messaging about England's plastic-bag levy. *Journal of Advertising Research,* 58 (3):1-16. DOI: 10.2501/JAR-2017-029

Maxwell,M,J. (2021). Sustainable public procurement and the business environment. [https://www.marketlinks.org/blogs/sustainable-public-procurement-and-business-environment] accessed on November 12, 2022.

Mendonca, R.C.A., Pedrosa, I.V. and Camara, M.A.O.A (2021). Sustainable public procurement in a Brazilian higher education institution. *Environmental Developmental and Sustainability,* 23:17094-17125.

Mojumder, A., Singh, A., Kumar, A. and Liu, Y. (2022). Mitigating the barriers to green procurement adoption: An exploratory study of the Indian Construction Industry. *Journal of Cleaner Production,* 372:1-11. DOI: 10.1016/j.jclepro.2022.133505

Moon, M. D. (2019). Triangulation: A method to increase validity, reliability, and legitimation in clinical research. *Journal of emergency nursing*, *45*(1), 103-105.

Muema, D. (2021). Sustainable procurement practises and organisational performance of the county governments in Kenya. Master's Thesis. University of Nairobi, Kenya.

Mutangili, K.S. (2021). Public Procurement for sustainable development in East Africa. *Journal of Procurement and Supply Chain*, 5(1): 46-55.

Mutangili, S. K., Awuor, E., and Cheluget, J. (2020). Moderating Effect of Regulatory Framework in the Relationship between International Procurement Practises and Supply Chain Performance of Energy Development Agencies in Kenya. *African Journal of Emerging Issues*, *2*(3), 1-19.

Mutoro, W.J., Makokha, N.E., and Namusonge, G. (2018). Factors affecting procurement planning in Bungoma County Governments in Kenya. *European Journal of Business and Management,* 10(10):24-34

Mutua, J. (2021, April 30). Firms, PSs face Sh 1m fine for delayed suppliers pay. *Business Daily Newspaper.*

Ngunjiri, E.M. (2019). Evaluation of factors affecting implementation of Green Public Procurement Governments in Laikipia County Government, Kenya. *International Journal of Professional Business Review,* 4(1):91. DOI:10.26668/business review/2019.v4i1.91

Obunde, S. (2019). Effect of e-procurement on supply chain performance of county governments in Kenya: case study of Busia County government. Dissertation for award of Master's degree. Maseno University, Kenya. https://repository.maseno .ac.ke/handle/123456789/3594

Opondi, F.O. (2021). Sustainable procurement and supply chain agility of the county governments in Kenya. Dissertation for award of master's degree. University of Nairobi, Kenya.

Oyebanjo,O. and Tengeh, R. (2020). Public procurement and environmental sustainability in developing countries: A South African perspective. Proceedings of the 6th International Conference on Business and Management Dynamics. https://philarchive.org/archive/OYEPPA site visited on November 11, 2022.

Oyewobi, L. O., and Jimoh, R. A. (2022). Barriers to Adoption of Sustainable Procurement in the Nigerian Public Construction Sector. *Sustainability*, *14* (22), 14832.

Powell, Walter W., and Paul J. DiMaggio. "The iron cage revisited: institutional isomorphism and collective rationality in organisational fields." *American sociological review* 48.2 (1983): 147-160.

Procuring the Future (2006). Sustainable Procurement National Action Plan: Recommendations from the sustainable procurement task force. [https://assets .publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69417/pb11710-procuring-the-future-060607.pdf] site visited on December 12, 2022.BROO

Queirós, A., Faria, D., and Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European journal of education studies*.3(9) DOI: http://dx.doi.org/10.46827/ejes.v0i0.1017

Rasool, S. F., Samma, M., Wang, M., Zhao, Y., and Zhang, Y. (2019). How human resource management practises translate into sustainable organisational performance: the mediating role of product, process and knowledge innovation. *Psychology research and behaviour management*, 1009-1025.

Rosell, J. (2021). Getting the green light on green public procurement: Macro and meso determinants. *Journal of Cleaner Production*, *279*, 123710. https://doi.org/10 .1016/j.jclepro.2020.123710

Ross, A., Willson, V. L. (2018). *Basic and Advanced Statistical Tests: Writing Results Sections and Creating Tables and Figures.* Germany: Sense Publishers.

Salmerón, R., García, C., and García, J. (2020). Overcoming the inconsistencies of the variance inflation factor: A redefined VIF and a test to detect statistical troubling multicollinearity. *arXiv preprint arXiv:2005.02245*.

Seid, M. A., and Hussen, M. S. (2018). Knowledge and attitude towards antimicrobial resistance among final year undergraduate paramedical students at University of Gondar, Ethiopia. *BMC infectious diseases*, *18*, 1-8.

Shakya R. K. and IGI Global. (2019). *Green public procurement strategies for environmental sustainability*. IGI Global. pp228

Shakya, R. K. (2019). Green Public Procurement Initiatives in East African Community (EAC): The Way Forward. In R. Shakya (Eds.), *Green Public Procurement Strategies for Environmental Sustainability* (pp. 148-162). IGI Global. https://doi.org/10.4018/978-1-5225-7083-7.ch007

Shakya, R.K.(2019). Green Public Procurement in Bhutan: Success Story from Asia. In: R.Shakya (Eds). *Green Public Procurement Strategies for Environmental Sustainability*.pp16-25. IGI Global Publishers. DOI: 10.4018/978-1-5225-7083-7.ch008

Shilungu, M.M. and Miroga, J. (2019). Influence of green procurement practises on procurement performance in the county government of Vihiga, Kenya. *Strategic Journal of Business and Change Management,* 6(4):633-646.

Stedman, R. C., Connelly, N. A., Heberlein, T. A., Decker, D. J., and Allred, S. B. (2019). The end of the (research) world as we know it? Understanding and coping with declining response rates to mail surveys. *Society & Natural Resources, 32*(10), 1139-1154

Stern, P.C., Dietz, T., Abel, T., Guagnano, G.A., Kalof, L. A. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review,* 6:81-97.

Suarez-Perales, I., Valero-Gil, J., Hiz, D.L., Rivera-Torres, P. Garces-Ayerbe, C. (2021). Educating for the future: How higher education in environmental management affects pro-environmental behaviour. *Journal of Cleaner Production,* 321: 1-15 https://doi.org/10. 1016/j.jclepro.2021.128972

Sun, L., Yang, S., Li, S., and Zhang, Y. (2020). Does education level affect individuals' environmentally conscious behaviour? Evidence from Mainland China. *Social Behaviour and Personality: An international journal, 48*(9): 1-15. DOI: 10.2224/sbp.8488

Sustainable Development Report (2022). Sustainable Development Index. [https://www.sustainabledevelopmentindex.org/] site visited on October 3, 2022.

Tiwari, S., Wei, C.S., and Nor, M. N. (2019). Factors influencing sustainable procurement practises in the Malaysian manufacturing firm. 9th International Conference on operations and supply chain management, Vietnam, 2019.

UNDP (2017). Global review of sustainable public procurement 2017. [https://www.oneplanetnetwork.org/sites/default/files/globalreview_web_final.pdf]

UNEP (2017). World's most marginalised are still left behind by global development priorities: UNDP report. https://report.hdr.undp.org/intro

UNEP (2022). Sustainable public procurement. [https://www.unep.org/explore-topics/resource-efficiency/what-we-do/sustainable-public-procurement] site visited on October 3, 2022.

Viinikainen, T. and Bullón, C. (2019). Enabling Regulatory Frameworks for Contract Farming. Italy: Food and Agriculture Organization of the United Nations.

Vluggen, R., Gelderman, C. J., Semeijn, J., & Van Pelt, M. (2019). Sustainable public procurement—External forces and accountability. *Sustainability*, *11*(20), 5696.

Wang Q, Niu G, Gan X, Cai, Q. (2022). Green returns to education: Does education affect pro-environmental attitudes and behaviours in China? *PLoS ONE,* 17(2): e0263383. https://doi.org/10.1371/journal.pone.0263383

Western Cape Government (2019). Smart Procurement Sustainable procurement analysis. Final Report 2019. [https://africa.iclei.org/wp-content/uploads/2020/01/2019_Report_SmartProcurement_Sustainable-Procurement-Analysis.pdf]

Wilms, R., Mäthner, E., Winnen, L., and Lanwehr, R. (2021). Omitted variable bias: a threat to estimating causal relationships. *Methods in Psychology*, *5*, 100075.

Witek, L. and Ku ´zniar, W.(2021). Green Purchase Behaviour: The Effectiveness of Socio-demographic Variables for Explaining Green Purchases in Emerging Markets. *Sustainability* 13 (209):1-18. https://doi.org/10.3390/su13010209

World Meteorological Organisation (2021). Greenhouse gas bulletin: Another year, another record. [https://public.wmo.int/en/media/press-release/ green house-gas-bulletin-another-year-another-record] site visited on October 3, 2022.

Yu, J. (2018). Consumer responses toward green advertising: The effects of gender, advertising scepticism, and green motive attribution. *Journal of Marketing Communications,* 26(4): 414-433. DOI:10.1080/13527266.2 018.1514317.

APPENDICES

Appendix I: Questionnaire

Preliminary

Dear Respondent,

My name is Irene Ikanzu Salamba, a Master of Arts in Procurement and Supply Management student at Moshi Cooperative University, Tanzania. I am currently carrying out a study on **"Determinants for Sustainable Procurement Practises within County Governments in Kenya"** as a requirement for partial fulfilment of my master's degree Programme. I kindly request that you take a few minutes of your time to respond to the questions herein. All information collected will be used for academic purposes only and treated with utmost Confidentiality. Thank you for your cooperation.

Influence of socio-demographic characteristics of procurement professionals on the implementation of sustainable procurement practises ---------- Section A

Kindly tick the boxes as appropriate

1. Gender
   - Male [ ]
   - Female [ ]
2. Kindly indicate your age bracket
   - 18-35 years [ ]
   - 36-45 years [ ]
   - 46-55 years [ ]
   - Above 55 years [ ]
3. What is your highest level of education?
   - Certificate [ ]
   - Diploma [ ]
   - Postgraduate Diploma [ ]
   - Bachelor Degree [ ]
   - Masters [ ]
   - PhD [ ]
   - Others ……
4. How many years of work experience do you have?…….

5. Do you possess any professional qualifications?

   Yes [ ]

   No [ ]

Effect of the regulatory framework on the implementation of sustainable procurement practises ----------Section B

Kindly indicate your level of agreement with the following statements where 1=strongly disagree, 2= disagree, 3= not sure, 4=agree and 5=strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
Public procurement legal framework promotes on social sustainability					
Public procurement legal framework promotes environmental sustainability					
Public procurement legal framework emphasises economic sustainability					
There is legal requirement to include sustainability criteria in evaluation of contracts					
Regulatory framework could be improved to encourage more SPP					
Compliance with sustainable procurement regulations is a driver for SPP					
Regulatory framework could be modified to better align with SPP					

Effect of county government resource capacity on the implementation of sustainable procurement practises ----------Section C

Statements	**1**	**2**	**3**	**4**	**5**
Adequate financial resources are available for sustainable procurement					
County procurement process is fully automated and IT driven					
There is continuous staff training on sustainable procurement					
Resources have been committed to developing a sustainable supply base					
Resource capacity constraints impact county's ability to implement SPP					
Resource capacity influences level of engagement and commitment to SPP					
County can overcome resource constraints to effectively implement SPP					

Influence of procurement managers' commitment on the implementation of sustainable procurement practises ----------Section D

Statements	**1**	**2**	**3**	**4**	**5**
County procurement management allocates resources for SPP					
Top management conducts sustainable procurement audit					
The county has sustainable procurement policies					
Procurement staff is rewarded for implementing SP					
Management takes action to demonstrate commitment to SPP					
Management prioritises SPP relative to other organisational objectives					
Management builds and supports the culture of SPP within the county					

Sustainable procurement practises ----------Section E

Kindly indicate your extent of applying sustainable procurement practises where 1= never, 2=rarely, 3= sometimes, 4= very often, and 5=always.

Statement					
Environmental Sustainability	**1**	**2**	**3**	**4**	**5**
Asks suppliers to commit to greenhouse gas emission reduction					
Evaluates suppliers on waste reduction Programmes					
Evaluates suppliers on the use of renewable energy					
Uses life cycle costing in bid evaluation					
Purchases locally recycled products					
Social sustainability	**1**	**2**	**3**	**4**	**5**
Purchases from a diverse supply base including youth and women-owned business					
Promotes transparency and competitiveness in our sourcing process					
Evaluates supplier labour practises i.e. child labour					
Identifies and develops local suppliers					
Asks our suppliers to pay above minimum wage to their employees					
Recommends donation to charity organisations during disposal					
Economic Sustainability	**1**	**2**	**3**	**4**	**5**
I procure to achieve value for money					
I prefer competitive procurement methods					
Buys from local suppliers to create and sustain jobs					
I give preference to local products					
I follow up with finance to ensure timely payment of suppliers					

Appendix II: Key Informant Interview Guide

1. Regulatory Framework
    - How does the regulatory framework impact the county's sustainable procurement practises?
    - Are there any specific regulations or policies that influence how sustainable procurement is practised in this county?
    - How does the county ensure compliance with relevant regulations and policies related to sustainable procurement?
2. Resource Capacity
    - Can you describe the resources (e.g., staff, budget, technology) that your organisation has allocated to support SPP?
    - Are there any specific challenges or limitations in terms of resource capacity that impact the county's ability to implement sustainable procurement practises effectively?
    - How does the county prioritise and allocate resources to support sustainable procurement practises?
3. Management Commitment
    - How does management demonstrate its commitment to SPP?
    - How does management ensure that SPP are integrated into the overall strategy and operations of the county?
    - Are there any specific initiatives or programs that management has implemented to support SPP?
4. Sustainable Procurement Practises
    - Can you describe the sustainable procurement practises the county currently employs?
    - How does the county identify and prioritise sustainability considerations in procurement decisions?
    - Are there any specific strategies or mechanisms that the county uses to encourage suppliers to adopt sustainable practises?
    - How does the county monitor and evaluate the effectiveness of its sustainable procurement practises?

5. Collaboration and Engagement
    - How does the county collaborate with suppliers and other stakeholders to promote SPP?
    - Are there any specific mechanisms or forums in place for engaging with suppliers and other stakeholders on sustainability issues?
    - How does the county ensure that suppliers are aware of and committed to SPP?
6. Future Directions
    - What are the county's plans for advancing its SPP in the future?
    - Are there any emerging trends or technologies in sustainable procurement that the county is considering?
    - Are there any specific areas of sustainable procurement that the county would like to prioritise in the future?
7. Closing
    - Is there anything else you would like to add that has not been discussed?
    - Thank you for your time and participation.

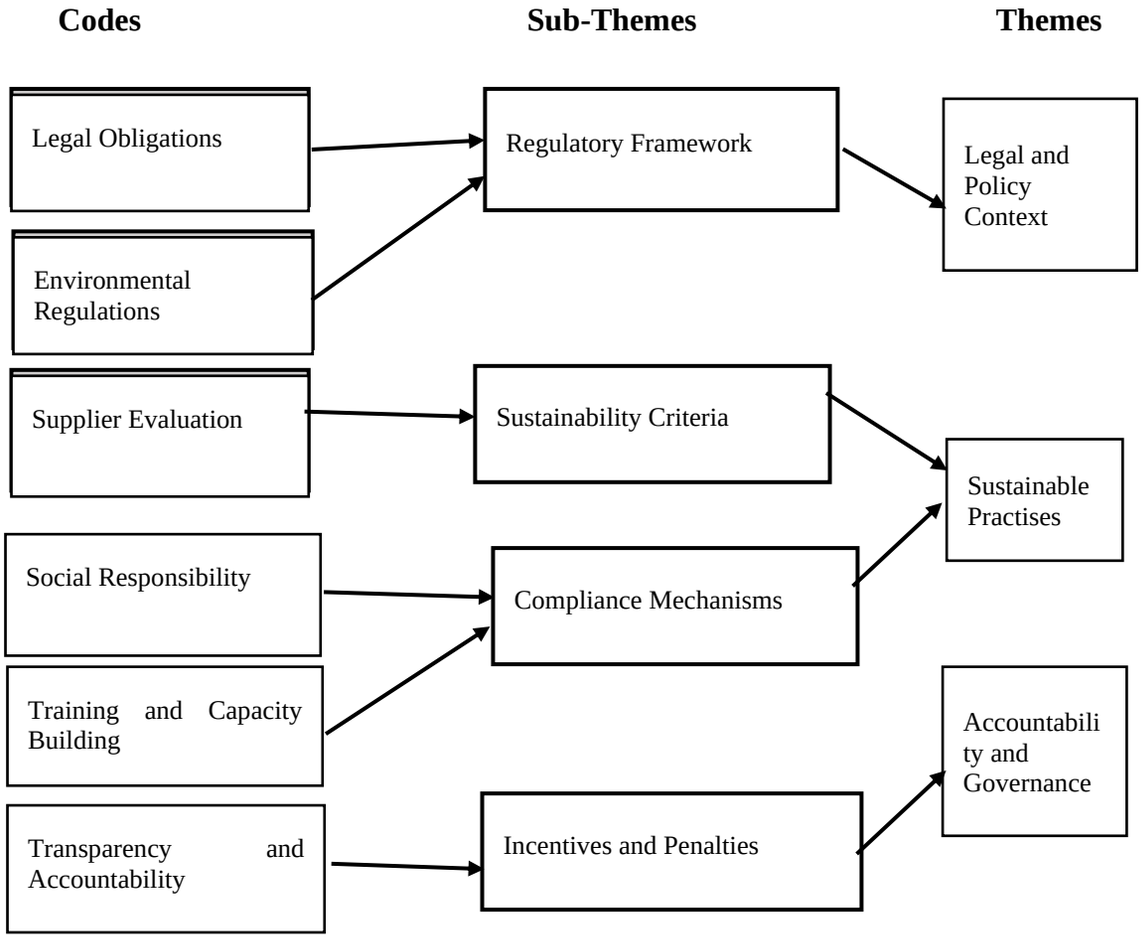
Appendix III: Distribution of Target Population

COUNTY GOVERNMENT	TARGET POPULATION	CENSUS SURVEY
Kakamega	46	46
Bungoma	36	36
Vihiga	40	40
Busia	56	56
Total	**178**	**178**

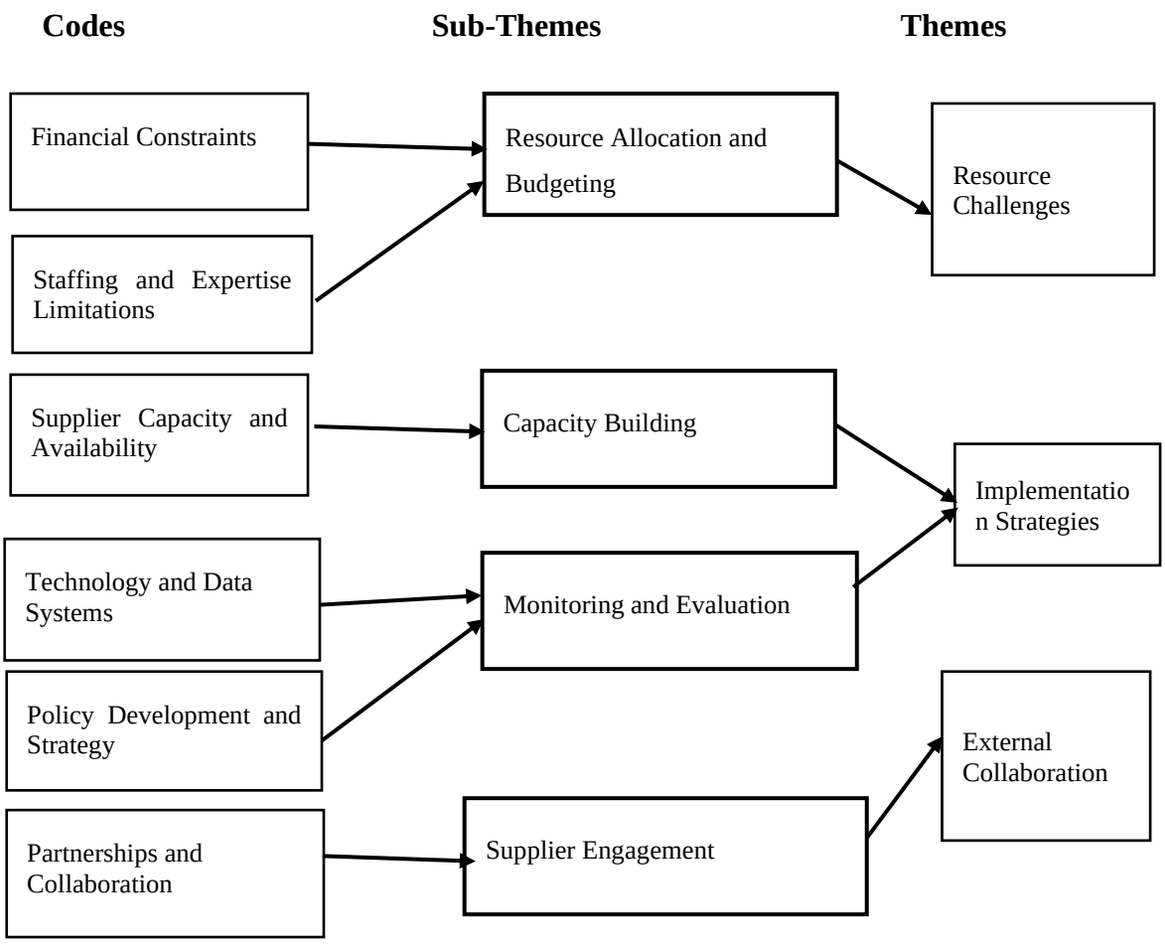
Appendix IV: Variable Matrix

Variables	Name	Definition of variables	Unit of measurement
Dependent variable			
Y	Implementation of sustainable procurement practises	Integration of economic, environmental & social considerations into purchasing decisions	Likert scale (1= never, 2=rarely, 3= sometimes, 4= very often, and 5=always)
Independent Variables			
X_1	Socio-demographic characteristics	Sex, Age, Educational level, work experience, professional qualification of the respondent.	Male = 1, Female = 2 1=18-35 years, 2=36-45 years, 3=46-55 years, 4= Above 55 years 1= No Education, 2= Primary 3= Secondary 4= Certificate, 5= Diploma, 6= Postgraduate Diploma, 7= Bachelor, 8= Masters, 9= PhD 0=No, 1=yes
X_2	Regulatory framework	Set of laws, regulations, guidelines, & policies that govern the purchasing & contracting processes.	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)
X_3	Resource capacity	Availability & adequacy of resources	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)
X_4	Managers' commitment	Dedication of procurement managers in integrating sustainability into the purchasing & supply chain processes.	Likert scale (1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

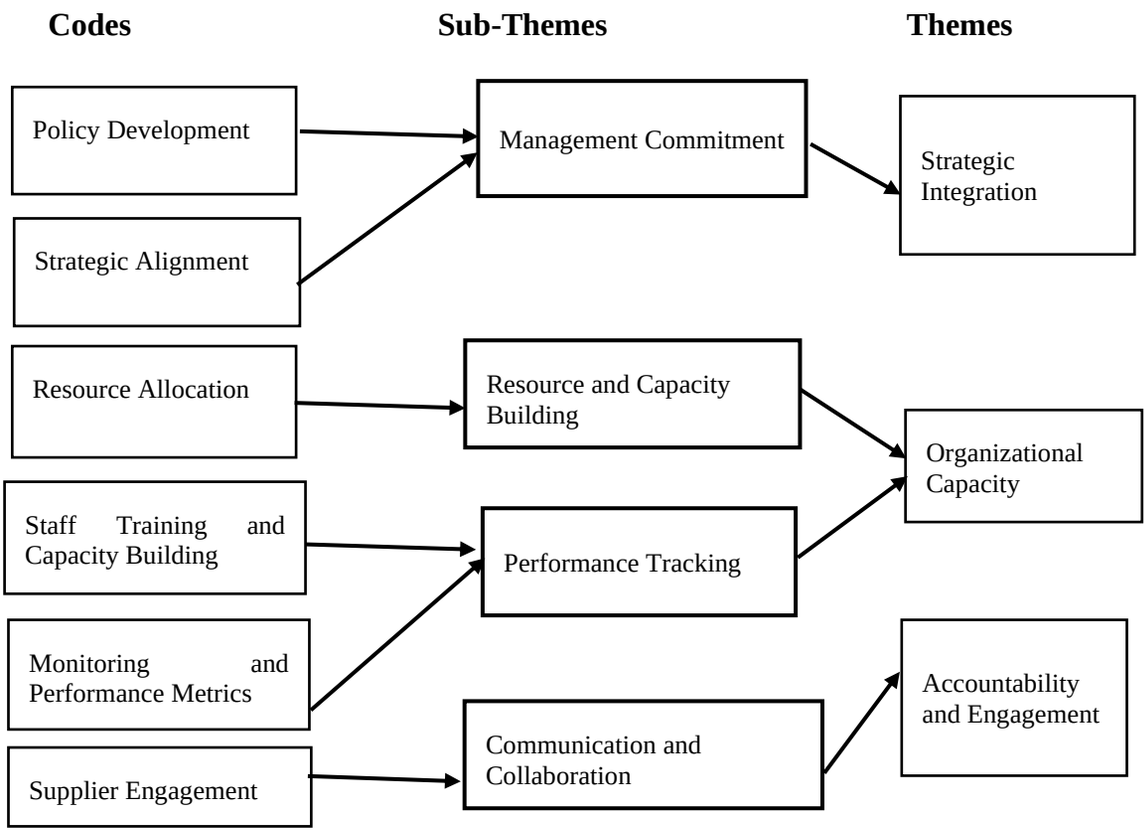
Appendix V: Thematic Analysis for effect of Regulatory framework on SPP



Appendix VI: Thematic Analysis for effect of Resource Capacity on SPP



Appendix VII: Thematic Analysis for influence of Management commitment on SPP



Appendix VIII: University approval letter

UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MOSHI CO-OPERATIVE UNIVERSITY (MoCU)
CHUO KIKUU CHA USHIRIKA MOSHI

OFFICE OF THE VICE CHANCELLOR

06 Sokoine Road, 25121 Mfumuni,
P. O. Box 474, Moshi, Tanzania, Tel: +255 272751833,
Email: vc@mocu.ac.tz, Website: www.mocu.ac.tz

In reply, indicate:
Ref. No.: MoCU/UGS/3/41 **Date:** 5th May, 2023

To Whom It May Concern

RE: IRENE IKANZU SALAMBA

Please refer to the above heading.

I am writing to introduce Ms Irene Ikanzu Salamba who is a bonafide student persuing Masters of arts in Procurement and Supply Management (MA-PSM) at Moshi Co-operative University in Tanzania

As part of the requirements for her studies, the named candidate is planning to undertake a research project titled "Determinants for Sustainable Procurement Practices Implementation Within County Governments in Kenya"

Any assistance accorded to her will be highly appreciated. Please do not hesitate to contact the undersigned for any information you may require.

Sincerely,

Prof. John Safari
FOR: VICE CHANCELLOR

Appendix IX: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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Date of Issue: 24/May/2023

RESEARCH LICENSE

This is to Certify that Miss.. IRENE IKANZU SALAMBA of Moshi Co-operative University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Bungoma, Busia, Kakamega, Uasin-Gishu, Vihiga on the topic: DETERMINANTS FOR SUSTAINABLE PROCUREMENT PRACTICES IMPLEMENTATION WITHIN THE COUNTY GOVERNMENTS IN WESTERN KENYA for the period ending : 24/May/2024.

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Appendix VII: Plagiarism Report

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DETERMINANTS FOR SUSTAINABLE PROCUREMENT PRACTICES IMPLEMENTATION WITHIN COUNTY GOVERNMENTS IN KENYA

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THE EFFECT OF COUNTY GOVERNMENT RESOURCE CAPACITY ON THE IMPLEMENTATION OF SUSTAINABLE PROCUREMENT PRACTISES

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Abstract

In developing and developed countries public procurement has enormous purchasing power which accounts for a third of the gross domestic product. Leveraging this purchasing power to promote sustainable procurement practises can spearhead the realisation of the Sustainable Development Goals. County governments in Kenya are allocated between a small fraction of the national budget, of which almost three quarters is spent on procurement. This puts the county government in a better position to drive sustainable development at the grass-root level through sustainable public procurement. On the contrary, a recent report by the Council of Governors showed that the localization of SDGs in county governments was still very low. This puts the county government in a better position to drive sustainable development at the grassroots level through sustainable public procurement. On the contrary, a recent report by the Council of Governors showed that the localization of SDGs in county governments was still very low. This study aimed to assess the effect of county government resource capacity on implementing sustainable procurement practises within County Governments in Western Kenya. The institutional theory guided the study and adopted a cross-sectional research design. It targeted all the one hundred and seventy-eight procurement professionals in Western Kenya counties who were studied using the census approach. The findings revealed that all the socio-demographic characteristics considered in the study significantly influenced the implementation of SPP. County Government resource capacity positively and significantly affected the implementation of SPP ($p<0.05$). Based on the findings, the study concludes that county government resource capacity significantly affects the implementation of SPP. The study thus recommends that the county governments should initiate comprehensive, departmental-wide training and development initiatives that encompass regulatory compliance, skill development in sustainable practises, and managerial involvement to ensure the effective implementation of Sustainable Procurement Practises within County Governments in Western Kenya.

Keywords: *MSMEs, Sustainable Procurement, SDGs, County governments, Resource capacity*

Introduction

Sustainable Public Procurement is among the key avenues for realising the three pillars of sustainable development globally. In developing and developed countries, public procurement has enormous purchasing power, accounting for 12% and 30% respectively of the gross domestic product (UNEP, 2022). Leveraging this purchasing power to promote sustainable procurement practises can spearhead the realisation of the Sustainable Development Goals (SDG) 12 which emphasises responsible consumption and production (UNEP, 2022). The SDG12 aims to achieve its goal by promoting 'public procurement practises that are sustainable, per national policies and priorities' (UNEP, 2022). Specifically, sustainable public procurement can contribute to sustainable development by reducing greenhouse gas emissions, reducing poverty, and promoting inclusive development (Manta *et al.*, 2022). Economically, Sustainable Procurement (SP) promotes greater value for money and spurs the governance sector (Kumar, 2022; Manta *et al.*, 2022). Besides, SP improves governance by encouraging public procurement professionals to be accountable and transparent (Shakya and IGI Global, 2019). This promotes public trust in government, resulting in the political stability of a nation. While the public sector is acutely aware of the importance of sustainable procurement practises (Oyebanjo and Tengeh, 2020), their implementation is very low, particularly in the county or subnational governments.

In Latin America, Argentina, the government uses e-procurement to create a catalogue system that provides a unique code for every good and service purchased by state agencies. Using the catalogue system, which is also linked to the supplier information system, enables the Argentinian government to monitor the volume of green products and services procured in the public sector. This encourages state agencies to adopt Sustainable Procurement Practises (SPP), with the UNDP (2017) report showing that 14% of Argentina's government procurement budget is spent on green procurement.

South Africa, is one of the sub-Saharan African countries that is using sustainable procurement practises as a tool to achieve sustainable development goals. To spearhead the implementation of SDG, the country clearly outlines the responsibility of each part of the government and private sector in achieving certain SDG targets, right from the national government, and provincial government to the local municipal

government. At the provincial level, the Western Cape government is leading in efforts to implement SP practises. Western Cape adopted a systematic and deliberate approach to implementing sustainable public procurement practises (Western Cape Government, 2019). Therefore, there is a very clear policy and regulation in South Africa guiding the adoption of SP practises. However, there is still a need to ensure that the policies are translated to action, for the gap between policy and action remains the main barrier to realising sustainability in procurement.

There are a lot of regulations and policies regarding sustainable procurement within the East African Region. Procurement Acts and Regulations in Tanzania, Uganda, and Rwanda provide for preference and reservation schemes, purchasing of local content, and ethical procurement conduct. Unlike South Africa where there is an emphasis on all three pillars of sustainable development in their public procurement (Oyebanjo and Tengeh, 2020), procurement legal framework and policy in East Africa are social and economically oriented. The green procurement element is not sufficiently covered. However, both Rwanda and Tanzania are currently working on a green public procurement framework with the intention of prioritising environmental sustainability (Global Green Growth Institute, 2021, Shakya, 2019). Even with limited regulation on economic and social aspects of sustainability, there is a policy-action gap, with implementation being done on an ad-hoc basis. According to Shakya (2019), the mismatch between policy and action observed in most African countries regarding the implementation of SP practises can be attributed to a lack of institutional capacity and political commitment.

The Constitution of Kenya, 2010, article 227 and the Public Procurement and Asset Disposal Act PPADA (2015) recognize public procurement as a tool for promoting local and national development (GoK, 2021). Section 156 of PPADA (2015) requires that 30% of all government procurement opportunities be reserved for businesses owned by youth, women, and people living with disabilities. The government further created Access to Government Procurement Opportunities to fast-track the registration of micro, small, and medium-sized enterprises owned by women, youth, and people with disabilities. The Programme also links the registered business with available procurement opportunities. These regulations, nonetheless, are mostly biased toward

social and economic aspects of sustainable procurement. The legal framework does not provide equal directives for environmentally sustainable procurement practises. As of 2022, there is no green public procurement strategy at both national and county governments. As such, the inclusion of the environmental sustainability aspect in procurement tenders has been left to the discretion of accounting officers.

County governments also recognize their role in realising sustainable development at the local level. They have approached this by embedding sustainable development goals in their County Integrated Development Plans, Annual Development Plans, and Performance contracting. A Council of Governors (CoG) 2020 report identified that all 47 counties had mainstreamed SDGs in their development plans. However, the report acknowledged that implementation was lagging due to institutional and leadership shortcomings of most county governments.

The implementation of sustainable procurement practises in county governments is very low (Council of Governors, 2020; Muema 2021). Regarding social sustainability, many SMEs and businesses owned by vulnerable groups struggle to win county government procurement opportunities due to the high percentage of kickbacks required to win the contract (Ethics and Anticorruption Commission, 2018). In terms of economic sustainability, while both national and county governments procure from local suppliers, the processing of payment may be delayed for more than five years affecting the cash flow of most businesses, especially SMEs. As of 2021, national and county governments owed suppliers more than Ksh 435.35 billion according to the Office of Auditor General report (Mutua, 2021). The delay in payment of suppliers by the organs of government is affecting the development of local industry and the creation of sustainable jobs. Another report by the World Bank (Gill, 2022) revealed that the Kenyan government was losing 25% of its procurement budget through inefficient procurement practises. The lack of a green public procurement strategy has contributed to poor environment conservation efforts, with the country dropping from position 130 in 2018 to 148 in 2022 according to the Environmental Performance Index (2022). It is from this background that the study seeks to assess the effect of county government resource capacity on the implementation of sustainable procurement practises.

In Kenya, county governments are allocated between 15% and 45% of the national budget, with approximately 60% of their funds directed towards procurement activities. This substantial financial allocation places county governments in a prime position to drive sustainable development at the grassroots level through sustainable public procurement practises. However, a report by the Council of Governors highlights the challenge of localising Sustainable Development Goals (SDGs) within county governments, primarily due to institutional and leadership deficiencies, such as a lack of statistical capacity to develop SDG performance indicators and frequent changes in political leadership. The low rate of implementation of sustainable procurement practises is hindering the realisation of SDGs, as evidenced by Kenya's modest ranking in the 2022 Sustainable Development Index. The World Bank also emphasises the wastage of resources in inefficient procurement practises, which could otherwise be channelled towards sustainable and inclusive development.

Despite the government's efforts to promote sustainable public procurement, existing initiatives tend to focus on legal, regulatory, and policy frameworks. While these aspects are important, they may not fully address the institutional drivers that influence procurement practises, resulting in a policy-action gap. Previous studies have explored sustainable procurement in different sectors but often with limited scope and single-entity case study designs, limiting the generalizability of their findings. Additionally, there is a lack of comprehensive empirical evidence regarding the various forces that impact the implementation of sustainable procurement practises in county governments, which operate under the influence of multiple multidimensional factors. The current study aimed to bridge this gap by assessing the influence of county government resource capacity on the implementation of sustainable procurement practises. To address the identified gaps, this study sought to assess the effect of county government resource capacity on the implementation of sustainable procurement practises. Additionally, the study formulated a null hypothesis that County governments' resource capacity does not affect the implementation of sustainable procurement practises.

The study was anchored on the institutional theory which argues that an organisation's institutional environment strongly influences the adoption and development of formal structures in the organisation. The theory identifies three types of institutional environment forces namely normative, coercive, and, mimetic forces that can influence an organisation's practises. Normative force is the organisation's ability to implement certain practises that improve its performance. This ability includes internal financial resources to institute and operationalize structures that enable organisations to implement and adopt new innovative practises. Coercive forces stem from the external environment specifically from the regulatory authority and lobby groups by making it mandatory to implement certain practises or face sanctions for noncompliance.

VBN theory provides a theoretical framework for understanding how resource capacity in county governments can influence their values, beliefs, and norms, which in turn impact their implementation of sustainable procurement practises. Stern *et al*. (1999) relates values, beliefs, norms, and behaviour in a cause-effect relationship. According to Stern *et al.* (1999) individual values concerning other people and living things (altruistic values) can motivate them to live sustainably. Stern *et al*. (1999) also reiterate that individuals can possess biospheric values– biosphere and ecosystem values and egoistic values are self-interest values regarding wealth, power, and authority. Belief is the second element of VBN which is the individual knowledge about the environment and human behaviour and consists of two elements; awareness of the consequences of environmental degradation and an individual sense of responsibility to minimise adverse effects of climate change (Ghazali *et al.,* 2019). As such, when individuals hold values and beliefs that are environmentally friendly, it leads to the development of personal norms, which are feelings of moral duty to preserve the environment.

The application of institutional theory to study the effect of county government resource capacity on the implementation of sustainable procurement practises was significant since the theory provides a valuable analytical framework. Institutional theory helped the researcher to understand how external factors, such as regulatory environments and societal norms, influence the behaviour and practises of organisations, in this case, county governments. It allowed the study to examine how

institutional pressures, both coercive and normative, shape the adoption and implementation of sustainable procurement practises within these government entities. By considering the institutional context the study was able to uncover the underlying mechanisms that either facilitate or hinder the integration of sustainability principles into procurement processes.

While institutional theory provides important insights into the influence of external factors on organisational behaviour and practises, it does have certain weaknesses. One of its limitations is its potential oversimplification of organisational decision-making processes. The theory assumes that organisations passively conform to institutional pressures, neglecting the agency and strategic actions that organisations may employ in response to these pressures. Additionally, institutional theory tends to focus on the stability and inertia of institutions, which can lead to a somewhat deterministic view of organisational change. This may not fully account for the dynamic and heterogeneous nature of organisations, particularly in the context of county governments, where resource capacities and political dynamics vary widely. Moreover, the theory does not adequately address the role of individual actors and their agency in shaping institutional change. However the theory was still considered relevant to this study given its strengths which outweighs its weaknesses.

Research Methodology

The study employed a combination of methods and tools for data collection and analysis. For quantitative data collection, a closed-ended questionnaire was utilised to gather information from the 178 procurement professionals across the four county governments in Western Kenya. The survey method allowed for the efficient collection of large-scale data and was analysed using statistical software, specifically the Statistical Package for Social Sciences (SPSS). Quantitative analysis included inferential techniques such as ordinal regression to determine the impact of independent variables on the dependent variable.

Qualitative data was collected through Key Informant Interviews (KIIs) conducted with senior procurement managers and supply chain managers in each county. These interviews provided in-depth insights into institutional determinants of sustainable

procurement practises implementation. Qualitative data analysis involved a thematic approach, where emerging themes and patterns were identified and analysed to gain a deeper understanding of the research problem. Additionally, the study conducted a pilot test to assess the reliability of the questionnaire using Cronbach's Alpha coefficient, ensuring the instrument's internal consistency. Content validity of the questionnaire was also assessed through expert review, resulting in a Content Validity Index (CVI) above the threshold set by Ammari (2022), indicating the reliability of the instrument.

$$\text{CVI}= \frac{Number\ of\ Valid\ Questions}{Total\ Number\ of\ Questions} = \frac{33}{37} = 0.892$$

The study collected both quantitative and qualitative data, thus, both qualitative and qualitative analysis techniques were employed. Analysis of quantitative data was aided by Statistical Package for Social Sciences (SPSS) software. Quantitative data was analysed using both descriptive and inferential analysis techniques, while qualitative data was analysed manually using Content Analysis technique.

With regard to the objectives of this study, an ordered logit explanatory model was estimated based on the following specification (City.B, 2020). All the four study objectives were analysed using this model.

$$Z_i = \beta_{1X1i} + \beta_{2X2i} + \beta_{3X3}i + \beta_{4X4i} + \varepsilon_i$$

$$Y_i = \{ 1, if\ Zi < ai\ r, if\ ar - 1 \leq Zi < ar\ 5, if\ Zi > ar$$

Findings and Discussions

The study sought to evaluate the effect of county government resource capacity on the implementation of sustainable procurement practises. The results in Table 1 and 2 shows the ordinal regression results regarding the effect of county government resource capacity on social sustainability.

Table 1: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	271.119	149	0.201
Deviance	201.801	149	0.645

Link function: Logit.

The goodness-of-fit statistics in Table 1 demonstrate that the model has a highly significant fit, with a Pearson Chi-Square value of 271.119 and a p-value of 0.201. This implies that the model used in this study perfectly fits the data. Similarly, the

Deviance Chi-Square value of 201.801 with a p-value of 0.645 confirms the good fit of the data in explaining the variation in the data. Table 2 shows parameter estimates on the effect of county government resource capacity on social sustainability.

Table 2: Regression results on the effect of county government resource capacity on social sustainability

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Social.S = 1.00]	2.213	0.798	7.678	1	0.006	0.648	3.778
	[Social.S = 2.00]	5.338	0.931	32.855	1	0.000	3.513	7.163
Location	Financial resources available for SP	0.134	0.165	0.657	1	0.418	-0.190	0.459
	Procurement process is automated	0.074	0.188	0.155	1	0.694	-0.294	0.442
	Continuous training on SP	0.409	0.194	4.469	1	0.035	0.030	0.788
	Resources committed to sustainable supply base	-0.072	0.214	0.114	1	0.736	-0.491	0.347
	RC constraints SPP	-0.569	0.167	11.561	1	0.001	-0.898	-0.241
	RC influence commitment to SPP	0.711	0.186	14.679	1	0.000	0.347	1.075
	County can overcome resource constraints	0.669	0.177	14.341	1	0.000	0.323	1.016

Link function: Logit.

Based on the results, the threshold [Social.S = 1.00] has an estimate of 2.213 with a standard error of 0.798. The Wald statistic is 7.678, and the p-value is 0.006. This indicates that the transition level is statistically significant. For [Social.S = 2.00], the estimate is 5.338, the Wald statistic is 32.855, and the p-value is less than 0.001. This also suggests a highly statistically significant transition level for social sustainability.

Regarding the predictor variables, the availability of adequate financial resources for sustainable procurement had a coefficient of 0.134, a Wald statistic of 0.657, and a p-value of 0.418. This variable was not statistically significant, indicating it might not be a strong predictor for social sustainability in this context. For the county's procurement process being fully automated and IT-driven, the coefficient was 0.074, the Wald statistic is 0.155, and the p-value is 0.694. This variable also was not statistically significant, suggesting that automation and IT do not necessarily impact social sustainability.

When it comes to continuous staff training on sustainable procurement, the coefficient was 0.409, the Wald statistic is 4.469, and the p-value is 0.035. This is statistically significant, implying that continuous staff training positively impacts the log-odds of higher social sustainability. The variable related to resources committed to developing a sustainable supply base showed a coefficient of -0.072, a Wald statistic of 0.114, and a p-value of 0.736. It was not statistically significant, meaning this factor doesn't significantly influence social sustainability. Resource capacity constraints impacting the county's ability to implement sustainable public procurement (SPP) had a coefficient of -0.569, a Wald statistic of 11.561, and a p-value of 0.001. This was statistically significant and suggests that increasing constraints actually reduces the likelihood of higher social sustainability. This suggests that counties that face resource constraints are less able to invest in programs and initiatives that promote social sustainability. However, the results also show that counties can overcome resource constraints and achieve high levels of social sustainability. This suggests that counties should focus on developing strategies to mitigate resource constraints, such as partnering with other organisations or seeking out grants and other forms of funding.

Resource capacity influencing the level of engagement and commitment to SPP shows a coefficient of 0.711, a Wald statistic of 14.679, and a p-value less than 0.001. This is highly significant, indicating that increased resource capacity positively influences social sustainability. Furthermore, the ability of the county to overcome resource constraints to effectively implement SPP had a coefficient of 0.669, a Wald statistic of 14.341, and a p-value less than 0.001. This was also highly significant, implying that overcoming constraints significantly boosts the log-odds of achieving higher levels of social sustainability.

The findings imply that continuous staff training, resource capacity influencing the level of engagement and commitment to SPP, resource constraints impacting the ability to implement SPP, and overcoming those constraints are statistically significant predictors of social sustainability. The availability of financial resources, automation of procurement, and resources committed to a sustainable supply base do not prove to be significant factors in this context. This led to the rejection of $\mathbf{H_0}$ that County governments' resource capacity does not affect the implementation of sustainable

procurement practises. The study thus concluded that County governments' resource capacity does affect the implementation of sustainable procurement practises within County Governments in Western Kenya. These findings agree with the findings by AI Nuamin *et al.* (2020) which found that the cost of implementing SPP was the highest-ranked factor, corroborating the findings by other studies (Martens and Schwarz, 2022; Rosell, 2021) on the role of financial resources.

Moreover, these findings are consistent with institutional theory by DiMaggio and Powell which suggests that organisations are influenced by their institutional environment in adopting certain practises. According to the theory, normative forces, such as continuous staff training, can help an organisation like a county government implement and adopt new practises like SPP effectively. The above results align with this theory, as counties with strong training programs and the ability to overcome constraints show higher levels of social sustainability. This supports the idea that an institutional environment, which includes training and resource allocation, plays a significant role in influencing the implementation of sustainable procurement practises in county governments.

During the interviews with senior supply chain managers at each county, the KIIs also responded to questions regarding resource capacity by stating that the allocation of resources for supporting sustainable procurement practises in their counties varies depending on the specific priorities, and available resources. Figure 4 shows codes, sub themes and themes.

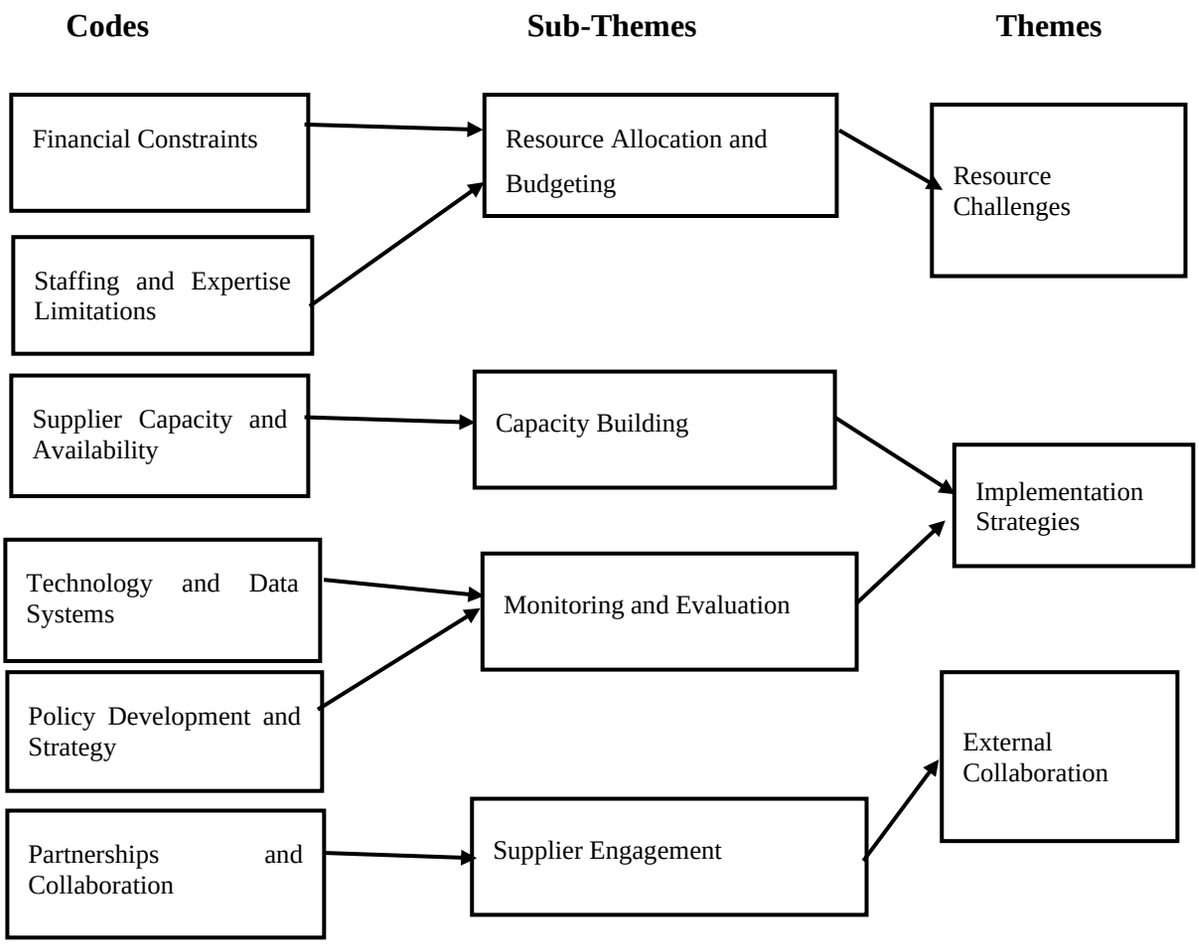

Figure 1: Codes, Sub-Themes, and Themes Used in Thematic Analysis

KIIs stated that;

> *Our county allocates personnel dedicated to procurement and sustainability-related roles, and these include procurement officers, sustainability officers, and specialists who are responsible for implementing and monitoring sustainable procurement practises. These staff members ensure compliance, conduct supplier evaluations, monitor sustainability criteria, and provide training and guidance to other staff involved in procurement. Our county allocates resources for training and capacity-building programs to enhance the knowledge and skills of procurement staff involved in sustainable procurement. This includes workshops, seminars, and certification programs focused on sustainable sourcing, environmental impact assessment, social responsibility, and compliance with relevant regulations and policies. Also, our county invests*

> *in technology and information systems to support sustainable procurement practises* (KIIs, 20 July, 2023).

The respondents also stated that;

> *Our county allocates resources for establishing monitoring and reporting systems to track and assess the implementation of sustainable procurement practises, which includes the development and maintenance of data collection mechanisms, reporting templates, and indicators to measure progress in meeting sustainability goals. Resources are also allocated to ensure compliance with reporting requirements stipulated by relevant regulatory bodies. Our county invests in technology and information systems to support sustainable procurement practises such as procurement management software, electronic procurement systems, and database systems that enable tracking and reporting of sustainability criteria. These systems help us streamline procurement processes, improve data management, and facilitate monitoring and evaluation of sustainable procurement practises* (KIIs, 27 July, 2023).

During the interviews with senior supply chain managers at each county, they were asked if there were any specific challenges or limitations in terms of resource capacity that impact their counties' ability to implement sustainable procurement practises effectively or not. In response, they stated that;

> *Yes, there are specific challenges and limitations in terms of resource capacity that can impact our ability as a county to implement sustainable procurement practises effectively. I would start with Financial Constraints. As a county we face limited financial resources, making it challenging for us to allocate adequate budgets for sustainable procurement initiatives. Insufficient funds hinder investment in training programs, technology infrastructure, data management systems, and the implementation of sustainable procurement strategies. We face the challenge of limited staffing and expertise. As a county, we have a limited number of staff members dedicated to procurement and sustainability-related roles. This leads to a lack of expertise and capacity in implementing sustainable procurement practises effectively. In addition, we face acute awareness and knowledge gaps* (KIIs, 27 July, 2023).

Senior supply chain managers were further asked to give their opinions regarding how their respective counties were prioritising and allocating resources to support sustainable procurement practises. KIIs stated that;

> *Our county develops policies and strategic plans that explicitly prioritises sustainable procurement practises. These documents outline our county's commitment to sustainability, define goals and targets, and allocate resources accordingly. By including sustainable procurement as a strategic priority, we signal the importance of allocating resources to support its implementation. Our county allocates a portion of their annual budget to sustainable procurement practises including allocating funds for training and capacity building programs, technology infrastructure, data management systems, supplier evaluation processes, and other activities related to sustainable procurement. Our county also monitors and evaluates the performance of sustainable procurement practises to assess their effectiveness. By analysing the outcomes and impacts of sustainable procurement initiatives, our county is able to identify areas that require additional resources and make adjustments to resource allocation accordingly. Resource allocation for sustainable procurement practises depends on factors such as available budget, county size, and development priorities. Our county determines resource allocation based on our unique circumstances and the desired outcomes of sustainable procurement initiatives* (KIIs, 27 July 2023).

The KII response above depicts that financial constraints pose a significant hurdle to counties in Western Kenya. Limited budgets prevent the allocation of sufficient resources towards initiatives promoting sustainable procurement. A lack of financial resources can thereby slow the progress towards a more sustainable procurement approach, despite the existing understanding and willingness to move in that direction. In addition, the findings suggest a supply-side issue in terms of the availability of qualified suppliers that adhere to sustainability standards. To successfully implement sustainable procurement practises, it is crucial to have a pool of suppliers that are both capable of meeting the demands of the county and compliant with sustainability

standards. If such suppliers are limited or non-existent, it poses a significant barrier to the adoption of sustainable procurement, despite the best intentions or policies. This suggests that there might be a need to work with suppliers to help them understand and meet these sustainability criteria, which could involve additional investment and time.

In conclusion, the findings from the key informants (KIIs) highlight a concerted effort by the county to integrate sustainable procurement practises (SPP) into its operations, showing a clear prioritisation of SPP in both policy and resource allocation. The county has dedicated personnel like procurement and sustainability officers to ensure compliance, conduct evaluations, and provide training, which underscores the strategic importance placed on SPP. Investments in technology and systems for monitoring and reporting are also indicative of a commitment to operationalizing and enhancing SPP. However, the KIIs acknowledge significant challenges, notably financial constraints and limited staffing, which impede the effective implementation of SPP. Despite these challenges, the county continues to prioritise SPP in its strategic plans, allocating a portion of the budget towards SPP-related activities and continuously evaluating the effectiveness of these practises to adjust resource allocation as necessary. This approach is adapted to each county's specific circumstances and strategic goals, aiming to overcome the identified limitations and support the successful implementation of SPP.

Innovativeness of the Study

This study has demonstrated innovativeness in several aspects. Firstly, the study addresses the relatively unexplored area of sustainable procurement practises within county governments in Western Kenya, shedding light on the factors influencing the implementation of such practises in this specific context. Secondly, the study utilises a combination of quantitative and qualitative data collection methods, including Key Informant Interviews (KIIs), to provide a comprehensive understanding of the research problem. The use of ordered logit regression analysis allows for the statistical examination of the impact of county government resource capacity on social sustainability, which is a novel approach in the context of sustainable procurement research. Additionally, the study's focus on the role of resource capacity, continuous staff training, and the ability to overcome constraints in shaping social sustainability

aligns with institutional theory, offering a theoretical framework for understanding the dynamics at play in county governments' adoption of sustainable procurement practises. Overall, the study's unique blend of empirical research, statistical analysis, and theoretical underpinning contributes to its innovativeness in exploring and explaining the factors influencing sustainable procurement implementation at the county government level in Kenya.

Practical Applications of the Study

The findings of this study hold significant practical implications for county governments in Western Kenya and potentially for similar contexts globally. The identification of key factors that impact the implementation of sustainable procurement practises, such as the role of resource capacity, continuous staff training, and the ability to overcome constraints, provides actionable information for policymakers and county officials. County governments will be able to use this knowledge to strategically allocate resources, prioritise staff training programs, and develop strategies for mitigating resource constraints to enhance their capacity for implementing sustainable procurement practises effectively. Secondly, the study's emphasis on the significance of continuous staff training as a predictor of social sustainability underscores the importance of investing in human capital development within procurement departments. This suggests that county governments should prioritise training and capacity-building initiatives for procurement professionals to promote sustainable practises. Moreover, the study alignment with institutional theory highlights the role of normative forces in shaping organisational behaviour, suggesting that counties can leverage institutional pressures to drive the adoption of sustainable procurement practises.

Limitations and Suggestions for Future Research

This study focused solely on county governments in Western Kenya, which limits the generalizability of its findings to other regions or countries with different institutional contexts and resource capacities. Future research should therefore extend the scope to include a broader range of county governments to capture variations in sustainable procurement practises. Additionally, the study relied on self-reported data from procurement professionals, which may introduce response bias or social desirability

bias. Utilising multiple data sources, such as interviews with various stakeholders or external audits, should be considered by future researchers to enhance data reliability. Moreover, future research should consider exploring the relationship between political leadership and sustainable procurement implementation, providing a more comprehensive understanding of the dynamics involved.

Conclusion

- The goodness-of-fit statistics indicated that the model used in the study had a highly significant fit, implying that it effectively explained the variation in social sustainability data.
- There exists statistically significant transition levels for social sustainability, indicating significant changes in social sustainability at those points. These transition levels highlight key points where county governments can make a meaningful impact on social sustainability through resource capacity enhancement.
- The availability of financial resources for sustainable procurement was not found to be a statistically significant predictor of social sustainability.
- The automation of procurement processes and IT-driven approaches did not prove to be statistically significant predictors of social sustainability.
- Continuous staff training on sustainable procurement was found to have a significant positive impact on social sustainability.
- Resources committed to developing a sustainable supply base were not found to significantly influence social sustainability.
- Resource capacity constraints that impact the ability to implement sustainable public procurement (SPP) were found to reduce the likelihood of higher social sustainability.
- County governments' ability to overcome resource constraints and effectively implement SPP was found to significantly enhance social sustainability.

Based on the above findings, this study concludes that the model used effectively explains the relationship between county government resource capacity and social sustainability, providing valuable insights into the factors that influence sustainability practises. Additionally, financial resources and automation may not be the primary

drivers of social sustainability in county governments, highlighting the multifaceted nature of resource capacity.

Continuous staff training emerges as a significant factor positively impacting social sustainability, suggesting the importance of investing in workforce development. Resource constraints can hinder the implementation of sustainable procurement practises, underscoring the need for strategies to mitigate these challenges. The ability to overcome resource constraints is crucial for achieving higher social sustainability, emphasising the importance of resilience and effective resource management in county governments.

Furthermore, the study concludes that most of the procurement professionals in the Western Kenya counties are optimistic about the county government's resource capacity and its effect on implementing SPP. This implies that policymakers and professionals must prioritise strengthening the resource capacity of county governments. The study also concludes that there is a strong positive and significant association between county government resource capacity and the implementation of sustainable procurement practises. Moreover, County Government resource capacity has a positive and significant effect on the implementation of SPP within County Governments in Western Kenya.

6.0 Recommendations

- County Governments in Western Kenya should strategically allocate budgets to support the implementation of sustainable procurement practises, emphasising the importance of financial resources in driving sustainability initiatives.
- Optimization of manpower within county governments is essential, with a focus on training and capacity building programs for procurement staff to enhance their knowledge and skills in sustainable procurement.
- County governments should consider investments in technology infrastructure and information systems that support sustainable procurement practises, facilitating data management, tracking, and reporting of sustainability criteria.

REFERENCES

Akhter, S. (2022). Key informants' interviews. In *Principles of Social Research Methodology* Singapore: Springer Nature Singapore. (pp. 389-403).

Ammari N. B. (2022). *Social customer relationship management (social-crm) in the era of web 4.0*. Tunisia: IGI Global Business Science Reference (an imprint of IGI Global).

Avotra, A. A. R. N., Chenyun, Y., Yongmin, W., Lijuan, Z., & Nawaz, A. (2021). Conceptualising the state of the art of corporate social responsibility (CSR) in green construction and its nexus to sustainable development. Frontiers in Environmental Science, 9, 541.

Carey J. C. Harris B. Lee S. M. and Aluede O. (2017). *International handbook for policy research on school-based counselling*. Cham: Springer. 535pp.

Carfora, V., Buscicchio, G., & Catellani, P. (2021). Integrating personal and pro-environmental motives to explain Italian women's purchase of sustainable clothing. *Sustainability*, *13*(19), 10841.

Connelly, L.M. (2008). Pilot Studies. *Medsurg Nursing,* 17(6):411-2. https://pubmed.ncbi.nlm.nih.gov/19248407/

Council of Governors [CoG] (2020). Localization of sustainable development goals by county governments in Kenya. [https://gold.uclg.org/sites/default/files/kenya_2020.pdf] accessed November 14, 2022.

Ćwiklicki, M., Pawełek, B., and Pilch, K. (2021). Organisational resource capacity and ISO 9001 QMS Implementation in the Local Government. Evidence from Poland. *Public Organization Review*, *21*(2), 205-219.

Environmental Performance Index (2022). 2022 EPI Results: Results Overview. [https://epi.yale.edu/epi-results/2022/component/epi]accessed

Ethics and Anti-Corruption Commission (2020). About us. https: //eacc.go.ke/default/about-us/

Etse, D., McMurray, A., and Muenjohn, N. (2023). Sustainable Procurement Practice: The Effect of Procurement Officers' Perceptions. *Journal of Business Ethics*, *184*(2), 525-548.

Fernando, Y., Halili, M., Tseng, M. L., Tseng, J. W., and Lim, M. K. (2022). Sustainable social supply chain practises and firm social performance:

Framework and empirical evidence. *Sustainable Production and Consumption, 32*, 160-172.

Ghazali, M.E., Nguyen, B., Mutuma, D.S., and Yap, S. (2019). Value-Belief-Norm theory: Assessing unobserved heterogeneity of two ethnic groups. *Sustainability*, 11:1-28. DOI: 10.3390/su11123237.

Government of Kenya [GoK]. Access to government procurement opportunities (AGPO). [https://www.treasury.go.ke/agpo/].

Htun, K. T. (2022). *Application to Principal Component Analysis To solve Multicollinearity in Sesame Production of Myanmar (1995-2020)* (Doctoral dissertation, MERAL Portal).

Kariuki, C.M. and Wabala, S. (2021). Influence of procurement planning on the procurement performance of selected county governments in Kenya. *International Journal of Business and Strategic Management*, 2(2):227-248.

Kenya National Bureau of Statistics (2019). Kenya Population and Housing Census: Volume I. Population by County and Sub-County.

Kenya, L. O. (2013). *The constitution of Kenya: 2010*. Chief Registrar of the Judiciary.

Kiswili, N.E. and Ismail, S.N. (2016). Role of sustainable procurement practises on supply chain performance of the manufacturing sector in Kenya: A case study of East African Portland Cement Company. *European Journal of Logistics, Purchasing and Supply Chain Management*, 4(3):1-31.

Kumar S. (2022). *Understanding sustainable public procurement: reflections from India and the world*. Springer.pp 383

Manta, O., Panait, M., Hysa, E., Rusu, E., and Cojocaru, M. (2022). Public procurement, a tool for achieving the goals of sustainable development. *Amfiteatru Economic*, *24*(61), 861-876.

Martens, S.G. P. and Schwarz, G.M. (2022). Examining contemporary Australian local government sustainable procurement practises: A national study. *International Journal of Public Administration*,6(8): 78-95, DOI:10.10 80/01900692.2022.212 0002

Matsumoto, T. (2019). Devolution and Local Development in Emerging States: The case of Kenya. In: Takagi, Y., Kanchoochat, V., Sonobe, T. (eds).

Developmental State Building. Emerging -Economy State and International Policy Studies. Springer: Singapore. pp 157-175.

Moon, M. D. (2019). Triangulation: A method to increase validity, reliability, and legitimation in clinical research. *Journal of emergency nursing*, *45*(1), 103-105.

Muema, D. (2021). Sustainable procurement practises and organisational performance of the county governments in Kenya. Master's Thesis. University of Nairobi, Kenya.

Mutangili, K.S. (2021). Public Procurement for sustainable development in East Africa. *Journal of Procurement and Supply Chain*, 5(1): 46-55.

Mutoro, W.J., Makokha, N.E., and Namusonge, G. (2018). Factors affecting procurement planning in Bungoma County Governments in Kenya. *European Journal of Business and Management*, 10(10):24-34

Mutua, J. (2021, April 30). Firms, PSs face Sh 1m fine for delayed suppliers pay. *Business Daily Newspaper*.

Nsiah-Sarfo, D. J., Ofori, D., and Agyapong, D. (2023). Sustainable Procurement Implementation among Public Sector Organisations in Ghana: The Role of Institutional Isomorphism and Sustainable Leadership. *Cleaner Logistics and Supply Chain*, 100118.

Obunde, S. (2019). Effect of e-procurement on supply chain performance of county governments in Kenya: case study of Busia county government. Dissertation for award of Master's degree. Maseno University, Kenya. https://repository.maseno .ac.ke/handle/123456789/3594

Opondi, F.O. (2021). Sustainable procurement and supply chain agility of the county governments in Kenya. Dissertation for award of master's degree. University of Nairobi, Kenya.

Oyebanjo,O. and Tengeh, R. (2020). Public procurement and environmental sustainability in developing countries: A South African perspective. Proceedings of the 6th International Conference on Business and Management Dynamics. https://philarchive.org/archive/OYEPPA site visited on November 11, 2022.

Oyewobi, L.O.; Jimoh, R.A. Barriers to Adoption of Sustainable Procurement in the Nigerian Public Construction Sector. *Sustainability*, 14(14832):1-14. Doi:10.3390/su142214832

Powell, Walter W., and Paul J. DiMaggio. "The iron cage revisited: institutional isomorphism and collective rationality in organisational fields." *American sociological review* 48.2 (1983): 147-160.

Procuring the Future (2006). Sustainable Procurement National Action Plan: Recommendations from the sustainable procurement task force. [https://assets .publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69417/pb11710-procuring-the-future-060607.pdf] site visited on December 12, 2022.BROO

Queirós, A., Faria, D., and Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European journal of education studies*.3(9) DOI: http://dx.doi.org/10.46827/ejes.v0i0.1017

Rasool, S. F., Samma, M., Wang, M., Zhao, Y., and Zhang, Y. (2019). How human resource management practises translate into sustainable organisational performance: the mediating role of product, process and knowledge innovation. *Psychology research and behaviour management*, 1009-1025.

Rosell, J. (2021). Getting the green light on green public procurement: Macro and meso determinants. *Journal of Cleaner Production, 279*, 123710. https://doi.org/10 .1016/j.jclepro.2020.123710

Ross, A., Willson, V. L. (2018). *Basic and Advanced Statistical Tests: Writing Results Sections and Creating Tables and Figures.* Germany: Sense Publishers.

Salmerón, R., García, C., and García, J. (2020). Overcoming the inconsistencies of the variance inflation factor: A redefined VIF and a test to detect statistical troubling multicollinearity. *arXiv preprint arXiv:2005.02245*.

Seid, M. A., and Hussen, M. S. (2018). Knowledge and attitude towards antimicrobial resistance among final year undergraduate paramedical students at University of Gondar, Ethiopia. *BMC infectious diseases*, *18*, 1-8.

Shakya R. K. and IGI Global. (2019). *Green public procurement strategies for environmental sustainability*. IGI Global. pp228

Shakya, R. K. (2019). Green Public Procurement Initiatives in East African Community (EAC): The Way Forward. In R. Shakya (Eds.), *Green Public Procurement Strategies for Environmental Sustainability* (pp. 148-162). IGI Global. https://doi.org/10.4018/978-1-5225-7083-7.ch007

Shakya, R.K.(2019). Green Public Procurement in Bhutan: Success Story from Asia. In: R.Shakya (Eds). *Green Public Procurement Strategies for Environmental Sustainability.*pp16-25. IGI Global Publishers. DOI: 10.4018/978-1-5225-7083-7.ch008

Shilungu, M.M. and Miroga, J. (2019). Influence of green procurement practises on procurement performance in the county government of Vihiga, Kenya. *Strategic Journal of Business and Change Management,* 6(4):633-646.

Stern, P.C., Dietz, T., Abel, T., Guagnano, G.A., Kalof, L. A. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review,* 6:81-97.

Suarez-Perales, I., Valero-Gil, J., Hiz, D.L., Rivera-Torres, P. Garces-Ayerbe, C. (2021). Educating for the future: How higher education in environmental management affects pro-environmental behaviour. *Journal of Cleaner Production,* 321: 1-15 https://doi.org/10.1016/ j.jclepro.2021.128972

Sun, L., Yang, S., Li, S., and Zhang, Y. (2020). Does education level affect individuals' environmentally conscious behaviour? Evidence from Mainland China. *Social Behaviour and Personality: An international journal*, *48*(9): 1-15. DOI: 10.2224/sbp.8488

Sustainable Development Report (2022). Sustainable Development Index. [https://www.sustainabledevelopmentindex.org/] site visited on October 3, 2022.

UNDP (2017). Global review of sustainable public procurement 2017. [https://www.oneplanetnetwork.org/sites/default/files/globalreview_web_final.pdf]

UNEP (2017). World's most marginalised are still left behind by global development priorities: UNDP report. https://report.hdr.undp.org/intro

UNEP (2022). Sustainable public procurement. [https://www.unep.org/explore-topics/resource-efficiency/what-we-do/sustainable-public-procurement] site visited on October 3, 2022.

Viinikainen, T. and Bullón, C. (2019). Enabling Regulatory Frameworks for Contract Farming. Italy: Food and Agriculture Organization of the United Nations.

Wang Q, Niu G, Gan X, Cai, Q. (2022). Green returns to education: Does education affect pro-environmental attitudes and behaviours in China? *PLoS ONE*, 17(2): e0263383. https://doi.org/10.1371/journal.pone.0263383

Wang Q, Niu G, Gan X, Cai, Q. (2022). Green returns to education: Does education affect pro-environmental attitudes and behaviours in China? *PLoS ONE*, 17(2): e0263383. https://doi.org/10.1371/journal.pone.0263383

Western Cape Government (2019). Smart Procurement Sustainable procurement analysis. Final Report 2019. [https://africa.iclei.org/wp-content/uploads/2020/01/2019_Report_SmartProcurement_Sustainable-Procurement-Analysis.pdf]

Western Cape Government (2019). Smart Procurement Sustainable procurement analysis. Final Report 2019. [https://africa.iclei.org/wp-content/uploads/2020/01/2019_Report_SmartProcurement_Sustainable-Procurement-Analysis.pdf]

World Meteorological Organisation (2021). Greenhouse gas bulletin: Another year, another record. [https://public.wmo.int/en/media/press-release/greenhouse-gas-bulletin-another-year-another-record] site visited on October 3, 2022.

World Meteorological Organisation (2021). Greenhouse gas bulletin: Another year, another record. [https://public.wmo.int/en/media/press-release/greenhouse-gas-bulletin-another-year-another-record] site visited on October 3, 2022.

Yu, J. (2018). Consumer responses toward green advertising: The effects of gender, advertising scepticism, and green motive attribution. *Journal of*

Marketing Communications, 26(4): 414-433. DOI:10.1080/13527266.2018.1514317.

Yu, J. (2018). Consumer responses toward green advertising: The effects of gender, advertising scepticism, and green motive attribution. *Journal of Marketing Communications*, 26(4): 414-433. DOI:10.1080/13527266.2018.1514317.