SUSTAINABILITY INTEGRATION AND PROCUREMENT PLANNING

A CASE OF KAMPALA CAPITAL CITY AUTHORITY (CITY HALL).

BY

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A RESEARCH DISSERTATION SUBMITTED TO KYAMBOGO UNIVERSITY GRADUATE SCHOOL IN PARTIAL FULFILMENT FOR THE AWARD OF A DEGREE OF MASTER OF SCIENCE IN PROCUREMENT AND SUPPLY CHAIN MANAGEMENT OF KYAMBOGO UNIVERSITY

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DECLARATION

I, **Mirembe Aisha Nante** hereby declare that this dissertation is my original work and that it does not incorporate without acknowledgement, any material previously submitted for award of a degree or any other academic award in any University and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text to that effect.

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APPROVAL

This is to certify that this research dissertation has been prepared and compiled by Mirembe Aisha Nante and that it is done under our supervision. It is now ready for submission to the Graduate School Kyambogo University in partial fulfillment for the requirements of the award of a Degree of Master of Science in Procurement and Supply Chain Management.

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SECOND SUPERVISOR

DEDICATION

This dissertation is dedicated to my beautiful grandmother Mrs. Namusoke Jane, my sisters Salimah, Shadia Sarah, Sumayya and my brother Suubi for they have been my motivation to always improve.

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In a special way I thank Dr. Charles Ndandiko, my mentor and Mr. Kintu Hussein who have worked so hard to see that I accomplish my research. May God bless you abundantly. With great respect, I would like to salute members of KCCA mainly the Procurement and Disposal Unit and User Departments who responded to questionnaires and interviews and made this study a success.

To my dear course mates specifically Mujasi Brian thank you very much for the interactive sessions we held and generally, for the cooperation. To my family who endured my long absence from home during the struggle to complete my studies, I say thank you and I will always treasure you.

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LIST OF ABBREVIATIONS

BUBU	:	Buy Uganda Build Uganda
CVI	:	Content Validity Index
EU	:	European Union
KCCA	:	Kampala Capital City Authority
NGOS	:	Non –Profit Organizations
NPSPP:		National Public Sector Procurement Policy
OGGO	:	Office of Greening Government Operations
OGPG	:	Queensland Government Procurement Guidelines .
PDE	:	Procurement and Disposing Entity
PDU	:	Procuring and Disposal Unit
PPDA	:	Public Procurement and Disposal of Public Assets Authority
SP	:	Sustainable Procurement
SPPA	:	Sustainable Public Procurement Agenda Report
SPSS	:	Statistical Package for Social Science

ABSTRACT

The general objective of the study was to evaluate how sustainability is integrated into procurement planning in KCCA. The study specifically evaluated how sustainability requirement analysis, sustainability market analysis and sustainability impact assessment are undertaken in KCCA. The study used a case study design adopting quantitative and qualitative approaches. The study population included 241 respondents consisting of heads and deputy heads of various directorate in KCCA, supervisors, staff officers and assistants and managers.

The study found a weak positive relationship between sustainability requirement analysis and sustainable costed procurement plan and was statistically significant in KCCA although it was the least significant predictor of the variance in sustainable costed procurement plan ($r = 0.315^{**}$, $\beta 1 = 0.315$, $t = 3.706$, Sig. = 0.000). There was a weak positive relationship between sustainability market analysis and sustainable costed procurement plan and was statistically significant being the second significant predictor of the variance in sustainable costed procurement plan ($r = 0.322^{**}$, $\beta 1 = 0.322$, $t = 3.802$, sig = 0.000). Sustainability impact assessment had a moderate positive relationship with sustainable costed procurement plan which was also statistically significant and it was the most significant predictor of the variance in sustainable costed procurement plan ($r = 0.501^{**}$, $\beta 1 = 0.501$, $t = 6.470$, Sig. = 0.000).

To ensure that sustainability is integrated into procurement planning, the study recommends training should be undertaken to provide knowledge about sustainable procurement among the staff of KCCA to enhance their understanding of the concept and top management setting aside a budget that can facilitate the undertaking of these activities of sustainability requirement analysis, sustainability market analysis and sustainability impact assessment.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

In today's globally competitive market, organizations should go beyond the profit maximizing goal as they are expected to include the social as well as environmental agenda in their practices (Chaudhary, 2015). Public procurement in Uganda represents an estimated value of 60% of government revenue which is spent on projects done through public procurement (Obanda, 2017). Integrating economic, environmental and social criteria when awarding public contracts drives sustainable production and consumption patterns (United Nations ,2008). Kampala Capital City Authority (KCCA) is one of the organizations in Uganda that has embraced sustainable considerations in their procurement process however, the level of implementation into the procurement process in Uganda is still at infancy of development with regards to sustainable procurement as entities still experience some challenges (Obicci,2017). This study sets out to evaluate how sustainability is integrated into procurement planning in KCCA. Chapter one presents the background to the study, problem statement, general objectives of the study, research questions, conceptual framework, study scope, significance and justification of the study and scope of the study.

1.2 Background to the study

1.2.1 Historical Background

The best approach to ensure sustainable procurement (SP) is to advance a structure that embeds sustainability issues in the procurement process. Over the years, a sustainable procurement policy framework has emerged in different countries and regions, especially in the developed world. In

the UK, policy context concerning public procurement is based on a set of guiding principles, including transparency, competitiveness, accountability, efficiency, legality, and integrity, that have the ultimate aim of supporting the delivery of 'best value for money' in public procurement (Majesty's Treasury, 2000). Best value for money gives focus to public entities to take into considerations social and environmental objectives in their procurement practices. This was recognized by the UK Government in its 2005 Sustainable Development Strategy, and an SP Task Force was established in 2005 to develop Sustainable Procurement guidance.

The UK Government stated its goal to be amongst the leaders in the EU on Sustainable procurement by 2009 (Department for Environment, Food & Rural Affairs, 2007). Public procurement in the EU is guided by national policy frameworks, coupled with an overarching EU policy framework that is designed to open up the EU's public procurement market to competition, outlawing "buy national" policies and promoting the free movement of goods and services. One study examined the state of development of national action plans regarding green or SP in the EU (Steurer et al., 2007). Of the 27 EU member states, their analysis showed that only a third of governments had adopted an action plan concerning SP as at April 2007, with a further five countries having a draft policy concerning SP that had not yet been adopted.

The emphasis of Sustainable Procurement policy in the European Union is environmental rather than social in character. For example, in Italy there is a mandate that 30 % of goods purchased by public administration comply with ecological criteria. The Canadian federal government founded the Office of Greening Government Operations (OGGO) in 2005, which developed its Policy on

Green Procurement in 2006. Through this policy, all government bodies are required to formulate green procurement targets and all personnel.

In East Africa, Kenya has also embraced sustainable public procurement according to the available literature however the Public Procurement Disposal Act (PPDA) of 2005 is however silent on green procurement. This means that there is no legislative mandate in Kenya for public or private entities to adopt green procurement measures. Any such adoptions are voluntary and driven by other factors other than legislation (Nsabiwa, 2011). Studies on green procurement have been carried out in Kenya for example according to Mwirigi (2007) on green supply chain management practices by manufacturing firms in Kenya.

Like its regional counterparts, the government of Uganda has put in place an elaborate system of institutions, laws, and regulations to ensure the prudent use of public resources. For example, the amendments in the PPDA Act of (2003) where we have section 59A and 59B on preference and reservation schemes, the PPDA Regulations of (2014), the guidelines on Reservation schemes of (2014) and also the BUBU policy that have been put in place to promote local consumption and SMEs participation. The Government of Uganda has been pursuing strategic reforms in public financial management aimed at supporting Government's goal of poverty eradication through the achievement of good governance, sustainable growth targets and a stable macro-economic environment. Efforts are on the way currently to review Draft National Public-Sector Procurement Policy and Public Procurement and Disposal Act and subsequent regulations. The aim of National Public Sector Procurement Policy (NPSPP) is to introduce a paradigm shift from the traditional approach of looking at public sector procurement as an administrative function to a strategic

function that facilitates socio-economic development and transformation and encourage the use of public sector procurement to promote the social, environmental and economic objectives (SPPA Report, 2018).

1.2.2 Theoretical background.

The theoretical framework of this study was presented drawing on the account of two perspectives that is stakeholder theory and institutional theory which relate to the integration of sustainability at procurement planning. The researcher opted for the two theories because the concept of sustainability is highly interdisciplinary in nature and therefore there is no single theory to explore it.

Stakeholder theory

Integrating sustainability is driven mainly by the increasing stakeholder expectations from the improved ethical, transparent, accountable and responsible roles of organizations and firms in society(Carter&Easton,2011). According to Freeman (1984), stakeholders are group or individuals who affect or are affected by the achievement of an organization's objectives and these may include suppliers, investors, customers, government media, NGOs and environmentalists. Traditionally, scholars have argued that corporations should have a limited role in the wellbeing of society. It was perceived that primary responsibility of a company is to safeguard the monetary interests of its shareholders by improving their stakeholder's wealth (Freidman,1970). Conversely, this theory holds a wide perspective with regard to the role of a company in society as it the organization is not only accountable to its shareholders but also other stakeholders like public or

society directly or indirectly influenced by the company's action (Freeman 1984; Frooman,1997; Mathur&Kenyon,1997).

Furthermore, an organization from a stakeholder theory is seen as a corporate citizen that has the duty to care and obligation towards a wide range of stakeholder groups within a society (Freeman,1984). The need for this extended responsibility arises from the fact that a business often produces externalities like negative social and environmental influences during its production operations that have an impact on internal and external stakeholder groups (Freeman,1984). For this reason, stakeholders put pressure on an organization to reduce the negative externalities and play a positive role that benefits the natural environment and can enhance society (Fiorino&Bhan,2014). This study made use of stakeholder theory given the relevance of stakeholders when integrating sustainability during procurement planning. In this case stakeholders in KCCA involved during planning include all the user departments that's to say physical planning, Internal Audit, Human Resource and administration, office of the executive director, Revenue collection, engineering and Technical, gender community services and production and education and social services as these are key when integrating sustainability into procurement planning and can put KCCA under pressure to take note of sustainability considerations in order to protect society , environment and the economy.

Institutional theory

This research was also guided by the Institutional theory that indicates that organizations become similar with regard to their organizational structures and process. This phenomenon is evoked by institutional pressure that is subdivided into coercive, mimetic and normative pressure. Coercive

pressure is pressure got from law, regulation and nonprofit organizations, Mimetic pressure is based on uncertainty inducing companies to copy their competitors and imitate activities of others in their sector to achieve legitimacy, Normative pressure is caused by professionalization through similar education background and professional networks and also through learning that take place in sustainable procurement training (DiMaggio& Powell,1983). This theory was relevant to this study as it mentions that one of the pressures is coercive whereby for organizations to implement sustainability into their procurement, they must follow the laws and regulations of that country, for the donor organization if money is got to run a project so application of such laws will enable implementation of sustainability considerations. More so implementation of sustainability may originate from the business environment like competitors particularly in Uganda whereby organizations that have embraced sustainability considerations have seen an increase in demand of their gods, works and services and this induces entities like KCCA to benchmark. Finally, normative pressure in this case is from the training about sustainability and increased sensitivity about environmental impact as what people and society purchase has an impact on sustainability implementation.

1.2.3 Conceptual Background

Sustainability Integration

There have been a lot of ongoing debates regarding the significance and integration of the sustainability in a business organization context (Chaudhary, 2016). Sustainability Integration has been defined in several ways, one being the creation of the strong organizations through unified economic, social and environmental systems (Bansal, 2003). Caldelli and Parmigiani, (2004) defined sustainability integration as an approach to corporate sustainability which implies

integration of criteria of economic, social and environmental performance in company's decision making processes.

Furthermore, sustainability integration involves purchasing decisions that ensure entity procures within economic, social and environmental dimensions (Koplin et al; 2007; European Commission, 2004). Sustainability Integration therefore involves integrating into public purchasing decisions; the principle of balancing the economic, social and environmental objectives of public deliverables. Borland (2009) also conceptualized sustainability to include environmental, social or cultural, planetary and financial considerations. Sustainable Procurement processes therefore should result in the balancing of economic development, social development and environmental protection against business needs. Unlike traditional procurement which focuses on value for money considerations only, sustainable procurement involves achieving value for money on a whole life basis with the goal of reducing possible adverse effects (Preuss, 2009; Walker & Brammer, 2009).

Sustainability Integration at procurement planning therefore involves undertaking requirement analysis, assessing the sustainability impacts and analyzing the supply market (Zeppel, 2014). An early consideration of sustainability in the early stages of the procurement process is important than to do so in other phases of the procurement process because there is a progressively less scope to add value through improved sustainability outcomes when considered in other stages (Larnyoh,2014). These three activities conducted during planning are explained below and they include;

Sustainability requirement analysis

Procurement starts with identification of the need (Kural & Alsac, 2006). Whenever planning to make a purchase, there are several sustainability issues that should be considered. These include; procurement needs being consistent with organizations objectives (Apiyo & Mburu, 2014), avoiding unnecessary purchasing by evaluating the need for the product or service, taking into the environmental considerations like pollution, emissions and water and energy consumption during the product's whole life cycle.

Sustainability Market analysis

After needs have been identified the next step is to conduct a market analysis on the needs to be procured (Sowah, 2015). The purpose of the market survey is to gain knowledge and information of what the market has to offer in terms of availability of products and potential suppliers (Dahl et al., 2007). QGPG (2014) describe supply market analysis as one that is conducted in order to develop an understanding of the current level of capability and performance in the market with regard to sustainability, and the capacity and potential of the supply base to move towards, and advance, best practice, determine the degree of influence the entity has within the supply market to drive sustainable procurement objectives.

Sustainability Impact Assessment

According to the European Union (2011) organizations should seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured. In the social procurement market, the purchaser wants delivery of a quality product at a competitive price plus

a social value. The supplier is responsible to provide both the business needs and the social value (Renukappa, et al., 2016).

Procurement Planning

Planning involves numerous stages that should be undertaken to ensure that procurements take place as planned, however, the underscoring reason is that planning is not just about making decisions that concern the future but impact of decisions made today that will affect the future (Basheka, 2009). Planning involves setting out goals and also includes an outline of the time and cost (Barasa, 2014). Planning necessitates describing the activities, scheduling and planning the essential workforce and staff required in sufficient quantities and quality, planning the money that should be spent in a specified timeframe and finally planning the information flow necessary for effective communication to enhance monitoring and control (Barasa, 2014). When planning is considered and implemented effectively, it can serve as an important instrument for extracting, distributing and allocating resources (James, 2004). Therefore, when sustainability is integrated into procurement planning, this results into development of a sustainable costed procurement plan that lays out strategies on how to source goods and services through applying appropriate procurement methods (Sowah,2015).

1.2.4 Contextual Perspective

KCCA is a corporate body that was enacted in 2011 to be the governing body of the Capital City. KCCA is one of the organizations that have embraced sustainability considerations into the procurement process. KCCA being a government entity practices its procurement using the PPDA Act, World Bank Procurement Guidelines, African Development Bank Rules and Practices

(Akatuhwera, 2019). Through these, KCCA follows the sustainable procurement practices set there in but also, innovate a lot to ensure that aspects left out by the law are considered. This has enabled KCCA to contribute to the achievement of the social, economic and environmental objectives (Akatuhwera, 2019). Despite the current considerations of sustainable procurement in KCCA, the level of implementation is still very low due to limited knowledge and inadequate resources (Akatuhwera,2019). Therefore, this research sought to investigate how sustainability is integrated at procurement planning taking KCCA as a study area.

1.3 Problem statement

The government of Uganda has embraced sustainable procurement as it is seen as a lever to achieving social, environmental and economic policies. Integrating sustainability at each phase of procurement process is critical in achieving sustainability objectives (Arrow smith &Trbus,2008; Shaw,2008). However, Larnyoh (2014) emphasizes its consideration at the early stages of the procurement process. The argument is that, an early consideration of sustainability in the first stages of the procurement process is rather important than to do so later in other procurement stages because there is progressively less opportunity to add value through improved sustainability outcomes when considered in other stages. At planning stage this would involve conducting a critical needs analysis, supply market analysis and impact assessment (Bansal, 2003). This results into a sustainable costed procurement plan that clearly indicates the appropriate method of procurement to attain sustainability, aggregation of requirements and development product estimates (Oginda,2013).

According to Switch Africa Green and United Nations Report (2018), KCCA has adopted sustainable procurement as evidenced by promotion of SMEs, women and youth groups and application of total cost of ownership. However, these are still baby steps as the level of implementation is still low especially in the procurement process due to limited resources, knowledge and skills. This research made an attempt to evaluate KCCA's procurement sustainability activities at planning stage and how they can effectively be integrated at this stage of the procurement process.

1.4 General objective of the study

The general objective of the study was to evaluate how sustainability is integrated at Procurement Planning at KCCA.

1.5 Objectives of the study

1. To evaluate how Sustainability requirement analysis as a sustainability Integration mechanism at procurement planning is undertaken at KCCA.
2. To evaluate how Sustainability market analysis as a Sustainability Integration mechanism at procurement planning is undertaken at KCCA.
3. To evaluate how Sustainability Impact assessment as a Sustainability Integration mechanism at procurement planning is undertaken at KCCA.

1.6 Research questions

1. How is Sustainability requirement analysis as a Sustainability Integration mechanism at procurement planning undertaken at KCCA?

2. How is Sustainability market analysis as a Sustainability Integration mechanism at procurement planning undertaken at KCCA?
3. How is Sustainability Impact assessment as a Sustainability Integration mechanism at procurement planning undertaken at KCCA?

1.7 Scope of the study

1.7.1 Content scope

The study focused on integrating sustainability into procurement planning specifically evaluating how sustainability requirement analysis, sustainability market analysis and sustainability Impact assessment are conducted resulting into a sustainable costed procurement plan.

1.7.2 Geographical scope

The study was carried out at Kampala Capital City Authority (KCCA) City Hall located at plot 1-3 Apollo Kaggwa Road.

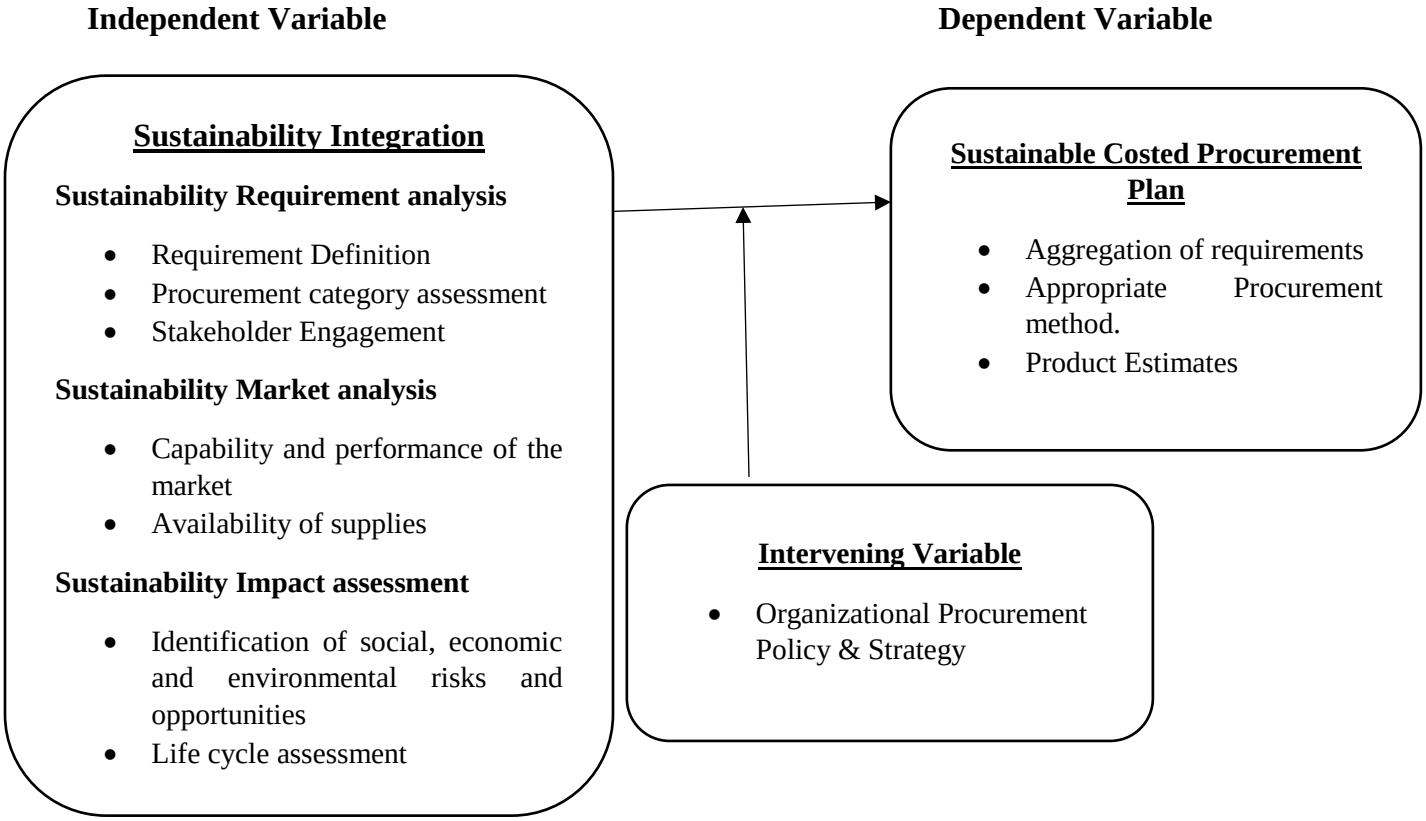
1.7.3 Time scope

The study gathered the relevant information within a period of six months. Additionally, the study used data ranging from 2000-2019 because the researcher thought data in that time frame was relevant information for the study and understanding the problem. This time was long enough for getting the required data for the study.

1.8 Conceptual Framework

Figure 1: Conceptual Framework

The model acted as the basis for the study objectives.



Source: *From United Nations Procurement Practitioner's Handbook (2006).*

The model above shows how sustainability maybe integrated into sustainable costed procurement planning Sustainability Integration includes dimensions of sustainability requirement analysis, sustainability market analysis and sustainability Impact assessment. Sustainable Costed Procurement Planning has indicators of aggregation of requirements, appropriate procurement method and product estimates and the intervening variable is organizational procurement policy and strategy which may have an influence on integrating sustainability in sustainable costed

procurement plan however for purposes of this research this factor was held constant. Each concept was explained below.

Sustainability Integration; in this study, Sustainability Integration was defined as embedding the threefold perspectives of social, economic and environment at each stage of the procurement process. This involves taking into consideration the analysis of the requirement to be purchased by critically assessing whether it's necessary to purchase that good or service and analyzing whether there are other alternatives of meeting the need at a much less economical means like reuse, rethinking conducting procurement category assessment and involving key stakeholders during planning. Furthermore, sustainability market analysis puts emphasis on whether there is availability of green goods and services or works in the market and the willingness of suppliers to adopt and supply green products and finally sustainability Impact assessment contend that before an organization procures goods, services and works , considerations should be made in line with the environment and social impact the product has from the time of purchase to the time of disposal through conducting a life cycle assessment.

Sustainable Costed procurement planning; in this study, this looked at the procedure on how the goods, services and works are to be procured in a manner that minimizes environmental and social adverse effects while gaining economically in terms of minimizing costs. Aggregation of requirements; this refers to the bundling of related items that an organization procures and appropriate procurement method refers to the different ways or techniques used during purchasing goods, services and works in an organization and product estimates look at establishing the prices for the green products that are available on the market.

1.9 Significance of the study

The study will provide policy makers and other stakeholders who are interested with the implementation of Public Procurement with adequate information on the effectiveness of how sustainability can be integrated at procurement planning.

Furthermore, it is anticipated that the result of this study will encourage professionals' procurement to deliver better value for money to meet their environmental Sustainable Procurement needs.

The study will also inform other PDEs in Uganda on how the aspects of requirement analysis, market analysis and sustainability impact assessment can be integrated into procurement planning and the social and environmental impacts that should be taken into consideration when planning for any procurement.

Uganda stands to benefit in the long term if sustainable procurement is fully implemented as the social economic goals will be achieved.

Sustainability is one of the major ways of seeking to achieve good governance goals of development that prioritize the poor, advances women, sustains the natural environment and create the needed opportunities for employment and wealth creation.

1.10 Justification of the study

Public procurement in Uganda represents an estimated value of 60% of government revenue which is spent on projects done through public procurement (Obanda, 2017). Because of that, procurement is increasingly seen as a powerful public policy tool to bring about major environmental and social benefits yet little or no research has been conducted on how both private and public organizations can integrate sustainability into their procurement process. Further, most of the studies in literature have investigated aspects of sustainable procurement in private sector organizations, typically with a focus on manufacturing industries and the environmental dimension of sustainability (Simpson, & Power,2005; Srivastava, 2007; Svensson,2007).

Walker & Brammer (2011) also indicate that in contrast to the literature on private sector organizations, comparatively little research has investigated sustainable procurement practices in the context of the public sector. Preuss (2009) contends that despite the importance of the public sector procurement, the number of studies that investigate the role of public authorities in sustainable supply is still small. Therefore, this research attempted to fill gaps found in the literature and to add a leaf on how sustainability can be integrated into the procurement process specifically at the procurement planning stage.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed the existing body of literature in sustainability Integration based on what other scholars had observed with a view of identifying literature gaps to be filled. The review covered theoretical review, conceptual review and the empirical review in relation to the study objectives.

2.2 Theoretical background.

The theoretical framework of this study was presented drawing on the account of two perspectives that is stakeholder theory and institutional theory which relate to the integration of sustainability at procurement planning. The researcher opted for the two theories because the concept of sustainability is highly interdisciplinary in nature and therefore there is no single theory to explore it.

2.2.1 Stakeholder theory

Integrating sustainability is driven mainly by the increasing stakeholder expectations from the improved ethical, transparent, accountable and responsible roles of organizations and firms in society(Carter&Saston,2011). According to Freeman (1984), stakeholders are group or individuals who affect or are affected by the achievement of an organization's objectives and these may include suppliers, investors, customers, government media, NGOs and environmentalists. Traditionally, scholars have argued that corporations should have a limited role in the wellbeing of society. It was perceived that primary responsibility of a company is to safeguard the monetary

interests of its shareholders by improving their stakeholder's wealth(Freidman,1970). Conversely, this theory holds a wide perspective with regard to the role of a company in society as it the organization is not only accountable to its shareholders but also other stakeholders like public or society directly or indirectly influenced by the company's action (Freeman 1984; Frooman,1997; Mathur&Kenyan,1997).

Furthermore, an organization from a stakeholder theory is seen as a corporate citizen that has the duty to care and obligation towards a wide range of stakeholder groups within a society (Freeman,1984). The need for this extended responsibility arises from the fact that a business often produces externalities like negative social and environmental influences during its production operations that have an impact on internal and external stakeholder groups (Freeman,1984). For this reason, stakeholders put pressure on an organization to reduce the negative externalities and play a positive role that benefits the natural environment and can enhance society (Fiorino&Bhan,2014). This study made use of stakeholder theory given the relevance of stakeholders when integrating sustainability during procurement planning. In this case stakeholders in KCCA involved during planning include all the user departments that's to say physical planning, Internal Audit, Human Resource and administration, office of the executive director, Revenue collection, engineering and Technical, gender community services and production and education and social services as these are key when integrating sustainability into procurement planning and can put KCCA under pressure to take note of sustainability considerations in order to protect society , environment and the economy.

2.2.2 Institutional theory

This research was also guided by the Institutional theory that indicates that organizations become similar with regard to their organizational structures and process. This phenomenon is evoked by institutional pressure that is subdivided into Coercive, Mimetic and Normative pressure. Coercive pressure is pressure got from law, regulation and nonprofit organizations, Mimetic pressure is based on uncertainty inducing companies to copy their competitors and imitate activities of others in their sector to achieve legitimacy, normative pressure is caused by professionalization through similar education background and professional networks and also through learning that take place in sustainable procurement training (DiMaggio& Powell,1983).

This theory was relevant to this study as it mentions that one of the pressures is coercive whereby for organizations to implement sustainability into their procurement, they must follow the laws and regulations of that country, for the donor organization if money is got to run a project so application of such laws will enable implementation of sustainability considerations. More so implementation of sustainability may originate from the business environment like competitors particularly in Uganda whereby organizations that have embraced sustainability considerations have seen an increase in demand of their gods, works and services and this induces entities like KCCA to benchmark. Finally, normative pressure in this case is from the training about sustainability and increased sensitivity about environmental impact as what people and society purchase has an impact on sustainability implementation.

2.3 Conceptual Background

2.3.1 Sustainability Integration

There have been a lot of ongoing debates regarding the significance and integration of sustainability in a business organization context (Chaudhary, 2016). Sustainability Integration has been defined in several ways, one being the creation of strong organizations through unified economic, social and environmental systems (Bansal, 2003). Caldelli and Parmigiani, (2004) defined sustainability integration as an approach to corporate sustainability which implies integration of criteria of economic, social and environmental performance in company's decision making processes.

Furthermore, sustainability Integration involves purchasing decisions that ensure an entity procures within economic, social and environmental dimensions (Koplin et al; 2007; European Commission, 2004).

Sustainability Integration therefore involves integrating into public purchasing decisions; the principle of balancing the economic, social and environmental objectives of public deliverables. Borland (2009) also conceptualized that sustainability to includes environmental, social or cultural, planetary and financial considerations. Sustainable Procurement processes therefore should result in the balancing of economic development, social development and environmental protection against business needs. Unlike traditional procurement which focuses on value for money considerations only, sustainable procurement involves achieving value for money on a whole life basis with the goal of reducing possible adverse effects (Preuss, 2009; Walker & Brammer, 2009).

Sustainability Integration at procurement planning therefore involves undertaking requirement analysis, assessing the sustainability impacts and analyzing the supply market (Zeppel, 2014). An

early consideration of sustainability in the early stages of the procurement process is important than to do so in other phases of the procurement process because there is a progressively less scope to add value through improved sustainability outcomes when considered in other stages (Larnyoh,2014). These three activities conducted during planning are explained below and they include.

Sustainability requirement analysis

Procurement starts with identification of the need (Kural & Alsac, 2006). Whenever planning to make a purchase, there are several sustainability issues that should be considered. These include; procurement needs must be consistent with organizations objectives (Apiyo & Mburu, 2014), avoiding unnecessary purchasing by evaluating the need for the product or service, taking into the environmental considerations like pollution, emissions and water and energy consumption during the product's whole life cycle.

Sustainability Market analysis

After needs have been identified the next step is to conduct a market analysis on the needs to be procured (Sowah, 2015). The purpose of the market survey is to gain knowledge and information of what the market has to offer in terms of availability of products and potential suppliers (Dahl et al., 2007). QGPG (2014) describe supply market analysis as one that is conducted in order to develop an understanding of the current level of capability and performance in the market with regard to sustainability, and the capacity and potential of the supply base to move towards, and advance, best practice, determine the degree of influence the entity has within the supply market to drive sustainable procurement objectives.

Sustainability Impact Assessment

According to the European Union (2011), organizations should seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured. In the social procurement market, the purchaser wants delivery of a quality product at a competitive price plus a social value. The supplier is responsible to provide both the business needs and the social value (Renukappa, et al., 2016).

2.3.2 Procurement Planning

Planning involves numerous stages that should be undertaken to ensure that procurements take place as planned, however, the underscoring reason is that planning is not just about making decisions that concern the future but impact of decisions made today that will affect the future (Basheka, 2009). Planning involves setting out goals and also includes an outline of the time and cost (Barasa, 2014).

Planning necessitates describing the activities, scheduling and planning the essential workforce and staff required in sufficient quantities and quality, planning the money that should be spent in a specified timeframe and finally planning the information flow necessary for effective communication to enhance monitoring and control (Barasa, 2014). When planning is considered and implemented effectively, it can serve as an important instrument for extracting, distributing and allocating resources (James, 2004). Therefore, when sustainability is integrated into procurement planning this results into development of a sustainable costed procurement plan that

lays out strategies on how to source goods and services through applying appropriate procurement methods.

2.4 Empirical review

2.4.1 Sustainability requirement analysis as a sustainability Integration mechanism at procurement planning

Makkonen (2014) affirms that sustainability should be embedded in the initial phases of procurement as the process of identifying the need is the most significant idea in the procurement process for considering environmental and social issues. Tan (2013) asserts that identifying the need whether goods, services or works that are needed is done by user departments. Each purchase begins with coming up with the register of the needs of the internal or external user. At this stage questions likes whether the purchase is really essential, or could use be made of a current good, works or service, or a more environmentally friendly good, works or service should arise to help in decision making (Sawyer, 2018). Sowah (2015) and Apiyo and Mburu (2014) affirm that an early stage consideration of sustainable decision making helps to identify possibilities of opportunities to avoid or reduce consumption by the use of alternatives, identify more sustainable alternatives, rethink and revise provisions having in mind sustainability outcomes.

Schaltegger and Petersen (2008) points out clearly three key issues of what to buy, when to buy and how to buy as this helps to define the needs and avoid unnecessary purchase. More so Adjarko, Agyekum and Offei (2016) during the process of integrating sustainability into procurement planning, a needs assessment which involves identifying what and where the goods and services

will be procured is a key consideration. They further note that for needs assessment to be a success, it requires involving stakeholders.

Dolva (2007) emphasize that attention should be put on how to send an early and consistent indication to the market by including relevant wordings like sustainable or environmental in the subject matter as this informs suppliers that tenders will include specific sustainability requirements and the message that sustainability is an important aspect for the procuring.

However, Tregidga and Milne (2006) advances that during requirement appraisal, needs have to be certain in a functional way that ensures all the basic values that define sustainability in the markets are fully integrated and as such, solutions to problems are somehow rather than specific products or services, so as not to exclude all options available in the market. Users are the start and end points of the procurement process. In a well-managed procurement function, users are involved in strategic planning decisions of procurement activities, development of procurement strategy and execution of the proposed strategies throughout the life cycle of the procurement exercise backed with implementation, review and corrective actions. In order for the purchasing department to deliver products and services that meet the user needs, there is need to involve the users themselves when making decisions relating to purchasing (Perreau, 2015).

Tammer (2009) supported, the presence of key stakeholders during planning, as the problem-owner can make the procurement more tangible and accessible by illustrating problems and objectives, and answering questions from parties involved. Sharma (2008) added that engaging the stakeholder early on can help offset any potential misunderstanding.

Related literature points out sustainable portfolio analysis as an important activity during requirement analysis as cited by Mello et al. (2017) which was modified by Pagell et.al (2010) from the Kralijic model of 1983 to include sustainability. Organizations have to consider the segments of the different items being procured by including the aspect of sustainability whereby for strategic item the relative importance is not only focused on the economic aspects but also involves social and environmental aspects, bottleneck items have low impact on any of the three aspects of sustainability but high risk of supply, critical items focusing on the economic aspect and leverage items being divided into three to include true commodity which mainly looks at the economic aspect but with a less supply risk, transitional commodity that involves continuity practices of the supply base with the short term nature (training and developing suppliers in the area of sustainability to meet the buying organization's needs) and finally strategic commodity involving continuity practices on the supply base with long term investments are carried out due to social and environmental elements and this minimizes threats to the aspects of sustainability and creates new opportunities for a lasting relationship but increase the risk of investment loss if the supplier is replaced.

Krause et al. (2009) argue that when sustainability is one of the objectives of procurement in an organization, it must be included as a key performance measure for all four quadrants, considering the procurement of critical, leverage, bottleneck and routine products. The matrix enables the purchasers to think strategically about the impact their purchases have.

When aiming to integrate sustainability aspects to procurement practices, similar kind of thinking is necessary. Having sustainability as a performance measure in strategic products might require special emphasis on innovation especially when considering new product development. As both supply risk and the level of expenditure are high, emphasis should be put on the suppliers to be in fewer numbers to enable cooperation and developing them in the area of sustainability and how to deliver sustainable products.

For leverage in this case the sustainability aspect should be the guiding element when selecting the supplier since there are very many suppliers but the level of expenditure is relatively high therefore suppliers who embed sustainable aspects are given priority, leverage items attention should be put to concerns like reduction of material usage and utilization of recyclable as this promotes environmental and economic sustainability (Krause et al.,2009). The fact that bottleneck items have a high supply risk, buying organizations in the same industry could together try and develop standards and norms that promote sustainability for the whole industry and also collaboration with suppliers is key. Lastly purchasing routine items requires accreditation of suppliers' operations and practices to ensure sustainability.

2.4.2 Sustainability Market analysis as a sustainability integration mechanism at procurement planning

After needs have been known and identified, next is to undertake a market assessment on the needs to be procured (Sowah, 2015). Organizations are becoming more selective when determining

sources of supply where suppliers of more environmentally friendly products are given priority (Kalubanga,2012). The motive of the market examination is to gain knowledge and evidence of what the market has to offer in terms of availability of products and potential suppliers (Dahl et al., 2007).

Similarly, a supply market analysis is a method used in procurement to identify the market characteristics for certain products and services and such an analysis provides information and understanding on how a particular market works, the competitiveness, capability and capacity of a market, the key suppliers in a market (Mwacharo, 2015). It is important because it enables procurers to gain information that is significant in developing effective procurement strategies during procurement planning. According to QGPG (2014) supply market analysis is conducted in order to develop an understanding of the present level of competence and performance in the market with regard to sustainability, and the capacity and potential of the supply base to move towards, and advance, best practice, determine the degree of influence the organization has within the supply market to drive sustainable procurement objectives.

This is further elaborated by Gunther et al. (2003) where they insist that during market analysis, it is vital to pay courtesy to certain aspects such as, the market power of suppliers as this information is useful when bargaining with a supplier, the concentration of suppliers in the market for the selected procurements is key as it discloses or divulges the percent of market capacity or size characterized by a given number of companies and the impediments to environmental products entering the market are also important to consider as these barriers may inhibit companies from entering a market with a new good, service or works .

Discussions with key suppliers help build an understanding and enable purchasers to be aware of sustainable products and services that might be available but have not been brought forward by suppliers because a specific request did not previously exist. More so, Schiele (2007) proposes that supplier relationship management plays an important part in building supplier's potential to deliver sustainable goods, services and works.

It is worth noting however, that the depth of the market research work is directly connected to the level of anticipated risk for the requirement, the level of complexity and value of the item to be procured as small and simple procurements may involve just a simple check of past records of contracts whereas complex ones would require an extensive market survey (Lynch, 2014; Tan, 2013). The findings of a market analysis are used to inform an organization's planning activities. More so Roos (2012) upholds that conducting market research helps to identify new technologies, new products or innovative suppliers that can meet working needs.

A market study can be carried out by the use of the internet, where information on potential service providers can be sought but in other instances a professional and focused team can be hired to carry out the study and the minimum anticipated results from a market study include identification of alternate products, interest levels of suppliers, availability of services providers, technical and financial capacity of suppliers and price trends (Larnyoh, 2014).

2.4.3 Sustainability Impact Assessment as a sustainability integration mechanism at procurement planning

Businesses today need to fully integrate sustainability and risk management into their strategy not only to minimize potential losses but also to exploit new business opportunities arising from sustainability. These may include new products and services to meet developing sustainability needs, new technologies to improve sustainability or risk performance, or new business models to access and develop emerging markets and support the creation of sustainable communities (Yilmaz & Flouris, 2010) . Identifying areas where making sustainability improvements creates the most impact allows companies to restructure their process. However, Walker et al., (2002) asserts that prioritizing the needs and proper risk assessment in the procurement sustainability, there is no exact science to this even a lot of it may depend on available resources or political environment and or commitment and the agency that might apply (Koplin et al. 2007).

Supply could focus on one of, energy during use, power generation, distance travel goods, mode of freight transport and energy impacts of raw material. The risk assessment issues related to the reduction of carbon dioxide, protection of the public image and development, efficient use of natural resources, as does the purchase have potential for energy consumption high can also be applicable to all products (Lee et al., 2013).

Sustainability risk Management encompasses risks to the reputation deriving from social, environmental, and economic impacts (MacDonald, 2011). According to Anderson (2007) sustainability risk management deals with risks emanating from the environmental and corporate social responsibility areas. Public procurers are always aiming at ensuring value is created within their procurement activities and by so doing they endeavor to balance quest and objectives of the society and procure at economy whilst minimizing damage of the environmental (Linton

etal.,2007; Koplin et al;2007). Organizations should take note of every product or services they do buy as they have some impact on the environment, on the economy and people. The failure to incorporate the three components of sustainability which are economic, social, and environmental aspects leads to ineffective performance in the long run (Aziz, Manab, & Othman, 2016).

Buyers have a lot of control over what is manufactured, and how it is manufactured. Each time a product is purchased, the buyer is effectively electing for the company that has provided it. When products are purchased from companies that are ethically irresponsible, e.g. companies that exploit their workers, or companies that degrade the environment through their operations, then these companies engaged such un-sustainable practices are being encouraged to continue. The purchasing power should rather be used to support companies that produce sustainable products, for example recycled paper (Adjei, 2010).

Oferi (2000) suggested that products purchased must be environmentally friendly and disclose their environmental attributes. The purchasing of these environmentally friendly products could be guided by Eco-labelling products eco-labelling shows that a product has achieved the prescribed environmental standards and inform consumers that the product is environmentally sound (Li & Geiser,2005). Eco-labelling helps the purchaser to make decision by identifying the green impact of products(Bratt,2011).

According to Marron (2003) emphasis should be put on the products with most least environmental impacts and also find out the existing green equipment available in the market. While identifying environmental impacts, the life span of the product should be taken into consideration as life cycle

assessment approach consider the environmental impacts from raw materials to the disposal of the product (Nikbakhsh,2009).

Life cycle assessment is a process of ascertaining the potential environmental outcomes of products or services through their life cycle. After assessing the potential environmental impacts of the goods, services and works, the costs can be evaluated using lifecycle costing approach which refers to an accounting valuation performed to ascertain all the costs that will be incurred during the life span of the goods, services or works (Adell et al,2011). These costs may include investment, operation, maintenance and disposal costs. Environmental Life cycle costing takes into account also environmental costs (Suuronen,2016).

2.3.4 Sustainable costed Procurement Plan

Sustainable procurement plan under this study mainly focuses on a sustainable sourcing strategy. Oginda (2013) asserts that procurement strategy sets out to identify the effective means of procuring goods and services to achieve the required standards through developing a procurement plan, ensuring that procurement supports delivery of the organization's vision, enabling creative approaches to procurement by placing outcomes at the center. The objective is to ensure that quality and measurable outcomes can be achieved for goods and services procured for an organization. In implementing this procurement strategy, an organization is expected to realize various benefits like improved value for money, more efficient and effective procurement, effective partnership with suppliers, benefit and development of the local economy, better risk analysis and management, better planning and savings based on economy of scale and qualitative, consistent and a managed approach to procurement (Caldwell, Bakker & Read, 2007).

Alvier, Campos and Lesa (2010) argue that a successful procurement strategy is achieved by identifying key saving potential areas and driving innovative sourcing models which can enable operators to reinvent their cost structures. They further argue that robust sourcing model is essential for the overall success of strategic procurement since it is required at all levels in the organization. In order to procure different items under each category, the sourcing model needs to advance deeper into the aspects of spend analysis, supplier relationship management, and category plans. Sourcing options in the supplier market can either be from local or international vendors. A detailed assessment of the different supplier options should be undertaken, weighing various criteria, such as price, lead time, quality, on-site support and long term conditions, amongst others.

2.5 Summary of Literature Review

Despite the fact that literature is suggesting a positive impact of sustainability integration into all the phases of public procurement, few studies have been carried out on how sustainability can be integrated into procurement planning stage. Furthermore, studies focusing on sustainable procurement although numerous, few of them are specific on sustainability integration. To lessen the knowledge and practice gaps, this study investigated how sustainability is integrated into procurement planning at KCCA in Uganda.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction.

Methodology is the framework within which the study was conducted and the research was based (Brown, 2006). This chapter described how the research was conducted, how data was analyzed, the data collection methods, sampling methods, the data collection process, review of statistical tools and measurement of the variables.

3.2 Research Design

Creswell (2012) defines a research design as procedures for collecting, analyzing, interpreting and reporting data in research studies. This study used a case study research approach as a research design. (Yin, 2014) highlights the importance of context, adding that, within a case study, the boundaries between the phenomenon being studied and the context within which it is being studied are not clearly evident. The choice was premised on the fact that the study was to seek respondents' views and opinions on the objectives of the study. A mixed research method was adapted for this study in order to enable triangulation to take place to gain confidence in the data the researcher had collected and to make some aspects more clearly (Saunders, Lewis, & Thornhill, 2009).

3.3 Study Population

The population for this study comprised of 241 key stakeholders and this included all the 11 directorates of KCCA who are the user departments involved at procurement planning in different categories of heads of directorates, supervisors, staff officers and assistants, managers and deputy heads of directorates. The selection of the respondents for this background study was based on

their experience, influence during planning and the role they play at the planning stage and the rest of the stakeholders were chosen randomly because the researcher intended to reduce bias therefore provided reliable responses on the same (Nabiswa, 2011). The unit of analysis in this study was KCCA and unit of inquiry were the heads of directorates, supervisors, staff officers and assistants, managers and deputy heads of directorates.

3.4 Sample size determination

The study selected up to 148 respondents based on Krejcie and Morgan (1970) sampling guidelines (see appendix). The summary of the sample size selected from the study population is presented in table below.

Table 1: Population Category and Sample Size

Category	Population	Sample	Sampling technique
Heads of Directorates	11	11	Purposive sampling
Supervisors	60	40	Simple random sampling
Staff officers	80	50	Simple random sampling
Assistants	49	21	Simple random sampling
Managers	30	15	Simple random sampling
Deputy heads of Directorates	11	11	Purposive sampling
Total	**241**	**148**	

3.4.1 Sampling technique

In this study, random sampling was used to select members of the different directorates who are key during procurement planning. These possess abundant information on procurement planning

activities and this was done to minimize bias by giving all the subjects in the different categories equal opportunities to be considered in the study (Sekaran & Bougie, 2010). In using simple random sampling, the researcher used the lottery approach where each name is written on a tag and put in box and mixed thoroughly as suggested by Amin (2005). One name was picked without returning into the box until the required number in that specific category was obtained. Purposive sampling was used during interviews where top executives and heads of directorates were interviewed since it was assumed they were knowledgeable about the subject under study.

3.5 Data Collection Methods

The study used both quantitative and qualitative data which was collected using a questionnaire and an interview guide. Firstly, quantitative data was collected using questionnaires and then interviews were conducted to enrich the quantitative findings.

3.5.1 Questionnaire Survey Method

Questionnaires were used to collect quantifiable primary data from the selected respondents by personally delivering them to the respondents. The questionnaires were issued to all the respondents in their different categories from different user departments where the respondents recorded their answers within closely defined alternatives. The choice of the questionnaire was on the basis that it would collect vast amounts of data in short time with less resources (Sekeran, 2010).

3.5.2 Interview method

An interview guide was used to enable gaining of in-depth information from the targeted respondents mainly from heads and deputy heads of directorates through face to face conversations and probing of the respondent's responses to gain detailed explanations on the integration of sustainability into procurement planning as suggested by Sekeran (2010).

3.6 Data collection instruments.

3.6.1 Self-administered Questionnaire

Questionnaire refers to documents that include a series of open and closed questions, to which the respondent is invited to provide answers (Rowley, 2014). Questionnaires offer an objective means of collecting information about people's knowledge, beliefs, attitudes and behavior (Boynton & Greenhalgh, 2004).

In this research, a questionnaire was developed through three stages namely; drafting process, piloting stage and finalizing stage. Drafting stage was based on the literature. The data for the study was collected through the administration of questionnaire to respondents. All the sets of questionnaire contained closed-ended questions. The closed ended questions enabled the researcher to specifically direct the respondents towards the desired responses.

A pre-test was conducted on the staff of Procurement and Disposal Unit of Kyambogo University before the questionnaires were rolled out to the actual respondents to establish the validity, comprehensibility and consistency in their understanding which enabled amendments to take place including suggestions from the test group.

3.6.3 Interview Guide

The interview schedule used semi structured questions focusing on areas of sustainability integration at procurement planning. Interviews were necessary as they helped the researcher to confirm, refine and rephrase the research problem and the factors derived from the literature. To grasp a better understanding of integration of sustainability into procurement planning at KCCA, interviews were held with heads and deputy heads of directorates.

Data was collected using face-to-face semi-structured interviews at a place and time predetermined by the interviewees. Potential interviewees were contacted to seek their agreement, and the objectives of the interview was explained by the researcher. The questions were designed to allow interviewees to provide additional information and feedback. All the interviewees were assigned codes to protect their anonymity.

3.7 Validity and Reliability

3.7.1 Validity

Content validity is the technique used to ensure that the measures adequately quantify the concepts that they are supposed to be tested (Sekaran, 2010). The validity of the instruments was tested using the Content Validity Index. This involved judges scoring the relevance of the questions in the instruments in relation to the study variables and a consensus judgment given on each variable taking only variables scoring above 0.70. The Content Validity Index (CVI) was arrived at by using Nunnally and Bernstein (1994) formula:

$$CVI = \frac{\text{Total number of items declared valid}}{\text{Total number of item}}$$

Validity of the measures was pre-tested among the staff of the Procuring and Disposal Unit of Kyambogo University. Their responses on the quality of the questions as well as the comprehensibility of the same was taken into consideration and final amendments made before finally administering the questionnaires to the target respondents.

3.7.2 Reliability

Reliability evaluates accuracy of the measures through assessing the internal stability and consistency of items in each variable (Hair et al, 2005). The study questionnaire was pretested for its reliability on a sample of 10 colleagues to examine individual questions as well as the whole questionnaire very carefully (Nunnally & Bernstein, 1994). Reliability measures the consistence of the instrument in measuring what it is supposed to measure (Nunnally & Bernstein, 1994). The study used the Cronbach's alpha coefficient test to show how reliable the data was by using the Software Package for Social Sciences (SPSS) taking only variables scoring above 0.70 as suggested by Nunnally and Bernstein (1994). The reliability of measures was pre-tested by computing Cronbach's alpha coefficients. All the values of the coefficients were checked against the acceptable scale of 0.60-0.80 to ensure an acceptable level of reliability (Nunnally, 1994).

Table 2: Validity and Reliability Results

Variable	**CVI**	**Cronbach's Alpha**	**Items**
Sustainability Integration	.860	.970	30
Sustainable Costed Procurement Plan	.714	.826	05

Source: Primary data

Table above shows that all variables yielded CVI and Cronbach's Alpha which is greater than 0.70 suggesting the instrument was relevant and consistent in measuring sustainability integration and sustainable costed procurement plan.

3.8 Data Collection Procedure

After successful defense of the proposal, an introductory letter from the Graduate School-Kyambogo University was used to seek permission to conduct the study in KCCA. Anonymity and confidentiality of the respondents was observed by not asking the respondents to put their names on the questionnaires. Collected data was checked for its completeness and there after entered into SPSS in preparation for analysis.

The challenge that was faced was getting access to the respondents and securing their cooperation to participate in this survey. One of the ways that increased the response rate was to get support from the head of PDU KCCA, and approvals from the top management to convince the respondents. Although a high return rate was essential for this research, the researcher understood that the respondents had a right to decide not to participate at any point in time during the data collection.

3.9 Data Analysis and Presentation

Data preparation and cleaning was conducted to ensure data are reliable for the analysis. This consisted of screening questionnaires to identify illegible, incomplete, inconsistent and ambiguous responses (Bakir, 2014). The process included coding the data, screening the missing cases, outliers and checking on the normality distribution, validity and reliability. The completed

questionnaires were numbered to ensure easy detection for further reference and used for further analysis. The data was entered into SPSS. To ensure the accuracy and data entry error, the data entered in the SPSS was compared with the returned questionnaire.

3.9.1 Data Analysis

3.9.1.1 Quantitative Analysis

Quantitative data was analyzed using descriptive statistics of frequencies, percentages, mean and standard deviation for each of the variables used in the study to show the distribution responses on KCCA's sustainability Integration and costed procurement planning. A simple regression analysis using ANOVA was used to determine how sustainability requirement analysis, sustainability market analysis and sustainability impact assessment at procurement planning results into development of a sustainable costed procurement plan and finally a multiple regression was run combining the three predictors of Sustainable costed procurement plan.

3.9.1.2 Qualitative Analysis

The study used the content analysis technique to analyze qualitative data where themes identified in the respondent's narratives on integration of sustainability into procurement planning were analyzed for their implications, inferences and conclusions. Further qualitative analysis was involved comparing the qualitative data with the quantitative data findings.

3.10 Measurement of the variables

Since there is no known measurement scale for the study variables, the researcher operationalized the research variables in two ways. First, indicators or parameters of the variables were determined

through literature review. Sustainability Integration was measured based on the three activities that ought to be done to integrate sustainability at procurement planning and these include requirement analysis, market analysis and sustainability impact assessment. Sustainable costed procurement plan was measured by product estimates aggregation of requirements, and appropriate procurement method. Second, these were channeled into observable and measurable elements which enabled the development of an index of the concept. A five point Likert scale ranging from 5 for strongly agree, 4 for Agree, 3 for Not sure,2 for Disagree and 1 for Strongly Disagree.

3.11 Limitations of the Study

The study was constrained by some of the targeted respondents who were the user departments whereby they didn't want to participate in data collection because they claimed not being part of the planning process of KCCA. The study also relied on a sample selected from KCCA that has since its one of the organizations that have undertaken sustainable procurement as a best practice and this may have affected the generalization of the results to other public organizations in Uganda. The study also relied on primary data without use of secondary data which could have reinforced the quality of data collected and also some respondents were quiet careful on giving salient information regarding their sustainability practices.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

This chapter presents, analyses and interprets the study findings of sustainability integration and procurement planning in KCCA based on the information obtained from the study questionnaire and interviews. It presents the response rate, background information about the respondents and empirical findings on Sustainability Integration and Procurement Planning. Respondents were assigned weights on scale of 5 where Strongly Agree(SA) was 5, Agree(A) was 4, Not sure (NS) was 3, Disagree(D) was 2 and Strongly disagree(SD) was 1. This was done to make the process of responding easy because the respondents in KCCA are limited by time and tight schedules. A simple linear regression is also presented to guide making decisions on the study research questions.

4.2 Response Rate

A total of 148 questionnaires were issued however 127 questionnaires were returned in time for consideration in the study giving a response rate of 86 % which is high. Eleven interviews were targeted and five were successfully conducted. The results are therefore a good representation of the population from which the sample was selected.

4.3 Background Information about the Respondents

This sub section presents the characteristics of the respondents used in the study in relation to their gender, age bracket, highest level of education, department/Directorates in KCCA and time

worked in the position with KCCA as these are key determinants of perceptions of sustainability integration and procurement planning in KCCA.

Table 3: Demographic Characteristics of respondents

Demographic feature		
Gender	**Frequency**	**Percentage**
Male	83	65
Female	44	35
Total	**127**	**100**
Age bracket	**Frequency**	**Percentage**
Below 25 years	6	5
25-35 years	103	81
35 years and above	18	14
Total	**127**	**100**
Highest level of education	**Frequency**	**Percentage**
Postgraduate	42	33
Degree	54	43
Diploma	16	13
Certificate	15	12
Total	**127**	**100**
User departments of respondents	**Frequency**	**Percentage**
Physical planning	19	15
Internal audit	14	11
Engineering & Technical	28	22
Public Health &Environment	9	7.1
Revenue Collection	4	3.1
Gender community services and production	3	2.4
Education and social services	4	3.1
Administration and HR	4	3.1
Office of the executive director	42	33.1
Total	**127**	**100.0**
Time worked in the position	**Frequency**	**Percentage**
Below 1 year	9	7.1
1-5 years	86	67.7
5 years and above	32	25.2
Total	**127**	**100.0**

Source: Primary data (2019)

Table 3 shows that the majority of the respondents (65%) were male while the female constituted 35% of the total number of respondents. This implication shows that the type of work at KCCA requires a lot of involvement hence employing more of the male staff than female to deliver the organizational goals and objectives.

From the table 3 above, there is an indication that most of the staff of KCCA were still in their adult age of (25-35 years) with 81% which implies that such age bracket can easily be committed to delivering the set objectives since they are still energetic, can easily be trainable to influence them to integrate sustainability at procurement planning and open to new ideas like sustainability integration. However, there was a number of respondents of age bracket 35 years and above constituting 14% implying that their capacity to be trained and introduced to sustainability integration is minimal as such people are always resistant to changes as they want to confine themselves in what they already know and familiar with. While the 5% were below the age of 25 years indicating that commitment to work is still high since the level of responsibilities is still low.

Analyzing table 3 above, 33% of the respondents were postgraduate holders, 43% of the respondents were Bachelor's degree holders, 13% were diploma holders and 12% were certificate holders. The implications are that each of the respondents were having some level of qualification in understanding questionnaire items on Sustainability Integration and Procurement Planning.

Table 3 above shows that most respondents were from the office of the executive director with 33.1% followed by revenue collection with 22% while other directorates constituted 44.9%. Key procurement stakeholders included Physical planning, Internal Audit, Engineering and Technical,

Public Health and Environment, Revenue collection, Gender community services and production, Education and social services, Administration and HR, Legal affairs, Treasury services and finally Office of the executive director were examined in the study. The findings were therefore representative of the key stakeholders in the PDU within KCCA.

Table 3 above described how long the respondents have been working with KCCA. From the above ,67.7% of the respondents indicated they have been working with KCCA past one to five years. Also 25.2% of the respondent have indicated five years and above and 7.1% below one year. The implications are that all the respondents are familiar with the activities of KCCA and such relevant specific experiences of being involved in the procurement activities of KCCA.

4.4 Sustainability Requirement Analysis and procurement Planning in KCCA

The first objective of the study was to evaluate how Sustainability requirement analysis as a sustainability Integration mechanism at procurement planning is undertaken at KCCA.Two variables are identified in this object namely Sustainability Requirement Analysis (one of the dimensions of Sustainability Integration) and Procurement Planning (a dependent variable). Each of the variables was measured using weights scored on a five point Likert scale ranging from 5= Strongly Agree, 4= Agree, 3= Not Sure, 2= Disagree, and 1= Strongly Disagree. A mean result below 3 suggests low level Sustainability Integration while a mean result of $\geq$3 suggests a high level of sustainability Integration on a particular item of the variable.

Table 4: Descriptive results for Sustainability requirement analysis

Item	SD	D	NS	A	SA	Mean	Std. Deviation
	%	%	%	%	%		
Requirement definition is initiated by user departments at KCCA	22.8	57.5	12.6	4.7	2.4	2.06	.871
KCCA evaluates the necessity of a given purchase to reduce over consumption	19.7	47.2	16.5	14.2	2.4	2.32	1.02
KCCA considers alternative acquisition options before the procurement of goods e.g. reuse ,rethink, recycle	28.3	34.6	15.0	19.7	2.4	2.33	1.16
KCCA evaluates the state of the existing assets e.g. vehicles before a new procurement is approved to eliminate unnecessary purchase	29.9	30.7	17.3	17.3	4.7	2.36	1.21
KCCA includes wordings like green, sustainable or environmental in the subject of procurement to act as a signal to the market place that sustainability is an important aspect during the entire procurement process	18.1	25.2	22.8	14.2	19.7	2.92	1.38
KCCA ensures that the requirement definitions from users include sustainability requirements	21.3	31.5	20.5	14.2	12.6	2.65	1.31
KCCA conducts a thorough commodity categorization analysis of the different goods	27.6	22.8	21.3	11.8	16.5	2.67	1.42
Commodity categorization analysis enables KCCA to manage sustainability risks associated with securing goods	30.7	19.7	25.2	10.2	14.2	2.57	1.389
KCCA is able to develop appropriate procurement strategies for each of the commodity categories e.g. collaboration with suppliers	30.7	31.5	15.0	15.0	7.9	2.38	1.28
User departments actively participate in identifying needs to eliminate unnecessary purchases	31.5	28.3	20.5	9.4	10.2	2.39	1.29
Sustainability matters are introduced into discussions with stakeholders during planning	17.3	38.6	21.3	15.7	7.1	2.57	1.16

Source: Primary data

Table 4 above shows that 80.3 % of the respondents disagreed, 7.1 % agreed while 12.6% were not sure (mean =2.06) that requirement definition is initiated by user departments at KCCA while 66.9% of the respondents disagreed, 16.6 % agreed while 16.5% were not sure (mean = 2.33) that KCCA evaluates the necessity of a given purchase to reduce over consumption. Furthermore, 62.9% of the respondents disagreed, 22.1% agreed while 15% were not sure (mean = 2.33) that KCCA considers alternative acquisition options before the procurement of goods e.g. reuse, rethink, recycle.

More so, a total of 60.6 % of the respondents disagreed, 22% agreed yet 17.3 % were not sure (mean = 2.36) that KCCA evaluates the state of the existing assets e.g. vehicles before a new procurement is approved to eliminate unnecessary purchase while another 43.3% disagreed, 33.9% agreed while 22.8% were not sure (mean = 2.92) that KCCA includes wordings like green, sustainable or environmental in the subject of procurement to act as a signal to the market place that sustainability is an important aspect during the entire procurement process and 52.8% of the respondents disagreed, 26.8% agreed however 20.5% were not sure (mean = 2.65) that KCCA ensures that the requirement definitions from users include sustainability requirements . The findings indicate that in KCCA, requirement definition is not adequately undertaken during procurement planning.

This is also supported by some of the interviews that were carried out. An interview was conducted where one was asked to comment on how requirement definition is conducted at KCCA, the interviewee noted:

"*We used to take off time to adequately understand the requirements at hand by establishing whether there are other better options of meeting the need however due to the many projects and the donor pressure to quicken the process we only carry out adequate requirement definition on big projects."*

In an interview when asked to comment on whether KCCA includes words like sustainability, green in the subject of procurement in the procurement plan, the interviewee I said:

"We don't because there is already a standardized format of a procurement plan in the PPDA Act that we have to follow as the Law doesn't provide for it"

Interviewee II asserted that:

"*Ministry of Finance has a way they categorize the different procurements from their chart of Accounts giving standardized names so we can't go out of that provision unless the Ministry makes changes."*

Table 4 further indicates 50.4% disagreed, 28.3% agreed however 21.3% were not sure that KCCA conducts a thorough procurement category assessment of the different goods (mean = 2.67), 50.4% disagreed, 24.4% agreed while 25.2% were not sure that Commodity categorization analysis enables KCCA to manage sustainability risks associated with securing goods (mean=2.57), 62.2% disagreed, 22.9% agreed while 15% were not sure that KCCA is able to develop appropriate procurement strategies for each of the commodity categories e.g. collaboration with suppliers (mean = 2.38).

Findings about procurement category assessment revealed that KCCA doesn't put into consideration this aspect during planning as the majority of the respondents disagreed. This is supported by an interview session where a respondent was asked to comment on how KCCA conducts procurement category assessment during planning, interviewee I said:

"We have not yet integrated sustainability at procurement planning so much as we do what we do as a best practice and the fact that it's not mandatory by PPDA Act to integrate sustainability into procurement."

Interviewee II noted that:

"We are not yet there at planning however for other stages of procurement the integration is evident like during specification, evaluation and bidding."

However, Interviewee III asserted that:

"During management meetings, the head PDU has got a chance to introduce the aspect of sustainability to top management and through that there has been positive response on sustainability in procurement."

Lastly 59.8% disagreed, 19.6 % agreed while 20.5 % were not sure that User departments actively participate in identifying needs to eliminate unnecessary purchases (mean = 2.39) while 55.9% disagreed, 22.8% agreed however 21.3% were not sure that Sustainability matters are introduced into discussions with stakeholders during planning (mean = 2.57). The implications are KCCA rarely engages user departments during procurement planning and this is supported by an interview

session where one of the respondents was asked whether user departments play a role during planning and responded by saying:

"User departments are no longer much involved because of time and sometimes to avoid disagreements since people have different opinions, however he continued to affirm that once in a while they send a requisition, we can have a brief meeting where we propose to the users' different ways of meeting a need."

4.4.1 Correlation analysis between sustainability requirement analysis and sustainable costed procurement plan.

To test if there was a significant relationship between sustainability requirement analysis and sustainable costed procurement plan, a correlation analysis was conducted using Pearson's correlation coefficient and significance statistics. The findings are presented in the table below.

Table 5: Correlation Matrix between sustainability requirement analysis and sustainable costed procurement plan

		Sustainability requirement analysis	Sustainable costed procurement plan
Sustainability requirement analysis	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	127	
Sustainable costed procurement plan	Pearson Correlation	.315**	1
	Sig. (2-tailed)	.000	
	N	127	127
**. Correlation is significant at the 0.01 level (2-tailed).			

Table above shows the Pearson's correlation coefficient r = 0.315** between sustainability requirement analysis and sustainable costed procurement plan suggesting that the two variables had a weak positive relationship and were statistically significant at 0.000.

The implication was that development of a sustainable costed procurement plan depends on how sustainability requirement analysis is undertaken by conducting thorough requirement definition, commodity categorization analysis and engaging stakeholders during planning. The findings also mean that the gaps in sustainability requirement analysis compel the development of a sustainable costed procurement plan. This also implied that there are other activities that are conducted in order to develop a sustainable costed procurement plan other than only sustainability requirement analysis.

4.4.2 Simple regression analysis

A simple regression analysis was conducted to establish the combined predictive of requirement definition, procurement category assessment and stakeholder engagement on a sustainable costed procurement plan in KCCA and also to establish if the relationship was causal and if so, which among the variables was the most significant predictor of the variance in Sustainability Integration.

Table 6: Summary of a simple regression results

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.315[a]	.099	.092	.66358		
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.044	.208		5.011	.000
	Sustainability requirement analysis	.346	.093	.315	3.706	.000
Dependent Variable: Sustainable costed procurement plan						

Source: primary data

Table above shows adjusted R^2 of 0.092 suggesting that dimensions of sustainability requirement analysis of requirement definition, procurement category assessment and stakeholder engagement all predict 9.2% of the variance in development of a sustainable costed procurement plan in KCCA and they were the most significant predictors. Other variables, other than sustainability requirement analysis predict the remaining variance of 90.8%.

The standardized coefficient results for sustainability Requirement Analysis Beta-β1= 0.315, t= 3.706, Sig. = 0.000 suggest that sustainability requirement analysis is a significant predictor of development of a sustainable costed procurement plan procurement in KCCA since a unit increase in sustainability requirement analysis results in 0.315 development of a sustainable costed procurement plan in KCCA which is significant (t= 3.706, sig = 0.000 which < 0.01).

To answer the first research question, *how is sustainability requirement analysis as a sustainability integration mechanism at procurement planning undertaken at KCCA?* This study affirms that sustainability requirement analysis positively and significantly results into a sustainable costed procurement plan in KCCA. Therefore, top management in KCCA needs to commit itself by encouraging different stakeholders involved to integrate sustainability at planning since its more important at this stage than the other stages of the process and this can be achieved through training users more on sustainable procurement and the associated benefits.

4.5 Sustainability market analysis and sustainable costed procurement plan

Table 7: Descriptive results for Sustainability market analysis

Item	SD	D	NS	A	SA	Mean	Std. Deviation
	%	%	%	%	%		
KCCA conducts market analysis to establish the different alternatives that exist in the market that can fulfill the need	14.2	45.7	25.2	12.6	2.4	2.43	.964
KCCA conducts market analysis to ascertain whether sustainability is incorporated into the products	26.0	32.3	24.4	15.0	2.4	2.35	1.09
KCCA is able to identify new sustainability responsive product during market analysis	16.5	47.2	11.8	17.3	7.1	2.51	1.17
KCCA conducts market analysis to gain a thorough understanding of the product estimates	19.7	39.4	18.9	17.3	4.7	2.48	1.13
Market analysis is carried out to ensure that draft specifications have accurately captured sustainability priorities ,risk and opportunities	19.7	39.4	24.4	11.8	4.7	2.42	1.08
KCCA conducts a supply base analysis which involves evaluating the capabilities of suppliers in terms of supply sustainable products	22.8	33.1	29.9	9.4	4.7	2.40	1.086
Market analysis enables KCCA to ascertain whether there is a sufficient number of potential suppliers able to meet the sustainability standards	26.0	29.9	27.6	16.5	0.0	2.35	1.04
KCCA sensitize suppliers on the benefits of sustainable procurement in order to reduce supplier resistance	23.6	32.3	24.4	15.0	4.7	2.45	1.15
KCCA engages the market early and informs suppliers about sustainability requirements hence giving them time to develop sustainable solutions	15.7	47.2	26.8	7.9	2.4	2.34	.919
) The information gained from market analysis assist KCCA in refining the requirement definition	26.8	45.7	7.9	10.2	9.4	2.29	1.24

Source: Primary data

Table 7 above indicated that 59.9% disagreed, 15% agreed while 25.2% were not sure that KCCA conducts market analysis to establish the different alternatives that exist in the market that can fulfill the need (mean =2.43). 58.3% disagreed,17.4% agreed while 24.4% were not sure(mean=2.35) whether KCCA conducts market analysis to ascertain whether sustainability is incorporated into the products. 63.7% disagreed,24.4% agreed while 11.8% were not sure (mean=2.51) that KCCA is able to identify new sustainability responsive product during market analysis. 59.1% disagreed, 22% agreed however 18.9% were not sure (mean=2.48) that KCCA conducts market analysis to gain a thorough understanding of the product estimates. 59.1% disagreed, 16.5% agreed while 24.4% were not sure (mean=2.42) that market analysis is carried out to ensure that draft specifications have accurately captured sustainability priorities, risk and opportunities.

The implications are KCCA doesn't engage much in market analysis during planning and this is also supported by some interviews that were conducted.

In an interview when asked whether KCCA conducts market analysis to establish the capabilities of the suppliers and the availability of green or sustainable products, interviewee noted:

"Market analysis is so important however KCCA is constrained by resources in terms of money, time and man power hence we end up going with what is available on the market.

"

Interviewee II responded:

"We also sometimes consider performance conformance of the products when we go to the market not necessarily the input as long as the products are fit for purpose."

Interviewee III pointed out that:

"For projects or procurements that are complex and new, KCCA applies two stage bidding where KCCA sends an expression of interest to the public requesting interested suppliers to document how they will deliver the contract and through that KCCA is able to pick ideas and knowledge on which kind of products are available and capability of suppliers.

The table above also indicated that 55.9% disagreed,14.1% agreed while 29.9% were not sure (mean=2.40) that KCCA conducts a supply base analysis which involves evaluating the capabilities of suppliers in terms of supplying sustainable products .55.9% disagreed ,16.5% agreed while 27.6% were not sure(mean=2.35) that market analysis enables KCCA to ascertain whether there is a sufficient number of potential suppliers able to meet the sustainability standards. 55.9% disagreed, 19.7% agreed while24.4% were not sure(mean=2.45) that KCCA sensitize suppliers on the benefits of sustainable procurement in order to reduce supplier resistance.

Furthermore, the table indicated that 62.9% disagreed, 10.3% agreed however 26.8% were not sure(mean=2.34) that KCCA engages the market early and informs suppliers about sustainability requirements hence giving them time to develop sustainable solutions. 72.5% disagreed, 19.6% agreed while 7.9% were not sure(mean=2.29) that the information gained from market analysis assist in refining the requirement definition. The implications are KCCA doesn't take into consideration the capabilities of suppliers to deliver green products during planning. This was supported by a response made by one of the interviewee who quoted and said:

"We go with what is available"

However, according to other interviews conducted, one of the interviewee said;

"KCCA engages suppliers during supplier development forums and during this time KCCA gets a chance of informing suppliers about supplying products that are economically, socially and environmentally friendly and it's the only way to win contracts. He continued to say that suppliers are advised to think of alternative ways of producing their products by learning new skills."

4.5.1 Correlation analysis between Sustainability Market analysis and Sustainable Costed Procurement plan

To test if there was a significant relationship between sustainability market analysis and sustainable costed procurement plan, a correlation analysis was conducted using Pearson's correlation coefficient and significance statistics. The findings are presented in the table below.

Table 8: Correlation Matrix between sustainability market analysis and sustainable costed procurement plan

		Sustainability market analysis	Sustainable costed procurement plan
Sustainability requirement analysis	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	127	
Sustainable costed procurement plan	Pearson Correlation	.322**	1
	Sig. (2-tailed)	.000	
	N	127	127
**. Correlation is significant at the 0.01 level (2-tailed).			

Table above shows the Pearson's correlation coefficient r = 0.322** between sustainability market analysis and sustainable costed procurement plan suggesting that the two variables had a positive weak relationship and were statistically significant at 0.000. The implication is that development of a sustainable costed procurement plan depends on how sustainability market analysis is

undertaken by conducting thorough analysis of availability of sustainable products in the market and capability and performance of the market during planning. The findings also mean that the gaps in sustainability market analysis compel the development of a sustainable costed procurement plan. This also implied that there are other activities that are conducted in order to develop a sustainable costed procurement plan other than only sustainability market analysis.

4.5.2 Simple Regression Model

A simple regression analysis was conducted to establish the combined predictive of availability of sustainable products and capability and performance of the market on a sustainable costed procurement plan in KCCA and also to establish if the relationship was causal and if so, which among the variables was the most significant predictor of the variance in Sustainability Integration.

Table 9: Summary of simple results

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate		
1		.322[a]	.104	.097	.66185		
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	1.130	.182		6.222	.000	
	Sustainability Market analysis	.272	.072	.322	3.802	.000	
a. Dependent Variable: Sustainable Costed procurement plan							

Source: primary data

Table above shows adjusted R^2 of 0.097 suggesting that dimensions of sustainability Market analysis of availability of sustainable products and capability and performance of the market all predict 9.7% of the variance in development of a sustainable costed procurement plan in KCCA

and they were second most significant predictors. Other variables, other than sustainability market analysis predict the remaining variance of 90. 3%.

The standardized coefficient results for sustainability market Analysis Beta-β1= 0.322, t= 3.802, Sig. = 0.000 suggest that sustainability market analysis is a significant predictor of development of a sustainable costed procurement plan procurement in KCCA since a unit increase in sustainability market analysis results in 0.332 development of a sustainable costed procurement plan in KCCA which is significant (t= 3.802, sig = 0.000 which < 0.01).

To answer the second research question, *how is sustainability market analysis as a sustainability integration mechanism at procurement planning undertaken at KCCA?* This study affirms that sustainability market analysis positively and significantly results into a sustainable costed procurement plan in KCCA. Therefore, top management in KCCA needs to commit itself through providing resources in terms of finances and man power to conduct market analysis to establish whether the market has the capability to deliver the sustainable products and the availability of these products on the market during planning to enable them make informed decisions.

4.6. Sustainability impact assessment and sustainable costed procurement plan.

Table 10: Descriptive results for Sustainability impact assessment

Item	SD	D	NS	A	SA	Mean	Std. Deviation
	%	%	%	%	%		
Sustainability impact assessment involves identification of key sustainability impacts associated with the subject of procurement	20.5	69.3	7.9	0.0	2.4	1.94	.705
Products are selected based on the least sustainability impact	26.0	52.8	16.5	4.7	0.0	2.00	.787
KCCA gives preference to product that provide environmental benefits	28.3	55.1	9.4	7.1	0.0	1.95	.815
KCCA adopt a life cycle costing approach to establish product estimates	35.4	59.8	2.4	2.4	0.0	1.72	.629
KCCA takes into consideration a life cycle analysis when establishing the total cost for a particular procurement as opposed to initial cost assumptions	27.6	45.7	19.7	4.7	2.4	2.09	.935
KCCA develops a knowledge bank on sustainable alternatives like environmental or social labels and /or certification programs	22.8	33.9	24.4	14.2	4.7	2.44	1.13
KCCA conducts life cycle assessment to evaluate the environmental friendliness of goods	28.3	52.0	15.0	4.7	0.0	1.96	.791
Sustainability impact assessment enables KCCA to prioritise those procurements with high sustainability impacts so that they are addressed in the sustainable procurement strategy	29.1	29.9	19.7	4.7	16.5	2.49	1.39
KCCA visits suppliers' plants to ensure that they are not using child labour	16.5	51.2	25.2	4.7	2.4	2.25	.873

Source: Primary data

89.8% disagreed, 2.4% agreed while 7.9% were not sure (mean=1.94) that sustainability impact assessment involves identification of key sustainability impacts associated with the subject of procurement .78.8% disagreed, 4.7 % agreed while 16.5 % were not sure (mean=2.00) that products are selected based on the least sustainability impact. 83.4% disagreed, 7.1% agreed however 9.4 % were not sure (mean=1.95) whether KCCA is gives preference to products that provide environmental benefits. 95.2% disagreed, 2.4% agreed while 2.4% were not sure (1.72)

that KCCA adopts a life cycle costing approach to establish product estimates. 73.3% disagreed, 7.1% agreed while 19.7% were not sure (2.09) that KCCA takes into consideration a life cycle analysis when establishing the total cost for a particular procurement as opposed to initial cost assumptions.

Furthermore 56.7% disagreed, 18.9 % agreed while 24.4 % (mean=2.44) were not sure KCCA develops a knowledge bank on sustainable alternatives like environmental or social labels and /or certification programs. 80.3 % disagreed, 4.7 % agreed while 15% were not sure (mean = 1.94) that KCCA conducts life cycle assessment to evaluate the environmental friendliness of goods. 59 % disagreed, 21.2% agreed and 19.7% were not sure (mean= 2.49) that sustainability impact assessment enables KCCA to prioritize those procurements with high sustainability impacts so that they are addressed in the sustainable procurement strategy. 67.7% disagreed, 7.1% agreed however 25.2% were not sure (mean =2.25) that KCCA visits suppliers' plants to ensure that they are not using child labor. The implications are that KCCA inadequately conducts sustainability impact assessment during planning to establish the environmental and social impact before the procure the supplies.

However, according to an interview conducted on sustainability impact assessment, one of the respondent was asked to comment on whether KCCA undertakes impact assessment and the respondent said:

"We do conduct social and environmental assessment mainly for construction roads, and bridges during planning however for supplies we are not yet there."

Interviewee II noted:

"Due to the fact that we don't have experts, we hire specialized consultants to do the assessment before we make decisions during planning."

4.6.1 Correlation analysis between Sustainability Impact Assessment and Sustainable Costed Procurement plan

To test if there was a significant relationship between sustainability impact assessment and sustainable costed procurement plan, a correlation analysis was conducted using Pearson's correlation coefficient and significance statistics. The findings are presented in the table below.

Table 11: Correlation Matrix between sustainability impact assessment and sustainable costed procurement plan

		Sustainability Impact Assessment	Sustainable costed procurement plan
Sustainability Market analysis	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	127	
Sustainable costed procurement plan	Pearson Correlation	.501**	1
	Sig. (2-tailed)	.000	
	N	127	127
**. Correlation is significant at the 0.01 level (2-tailed).			

Table above shows the Pearson's correlation coefficient r = 0.501** between sustainability impact assessment and sustainable costed procurement plan suggesting that the two variables had a moderate positive relationship and were statistically significant at 0.000.

The implication was that development of a sustainable costed procurement plan depends on how sustainability impact assessments undertaken by conducting thorough life cycle assessment and positive sustainability impact during planning. The findings also mean that the gaps in

sustainability impact assessment compel the development of a sustainable costed procurement plan. This also implied that there are other activities that are conducted in order to develop a sustainable costed procurement plan other than only sustainability impact assessment.

4.6.2 Simple Regression Model

A simple regression analysis was conducted to establish the combined predictive of life cycle assessment and positive sustainability impact on a sustainable costed procurement plan in KCCA and also to establish if the relationship was causal and if so, which among the variables was the most significant predictor of the variance in Sustainability Integration.

Table 12: Summary of simple results

Model		R		R Square		Adjusted R Square		Std. Error of the Estimate	
1		.501[a]		.251		.245		.60507	
Model			Unstandardized Coefficients			Standardized Coefficients		t	Sig.
			B		Std. Error	Beta			
1	(Constant)		.619		.188			3.293	.001
	Sustainability impact assessment		.556		.086	.501		6.470	.000
a. Dependent Variable: Sustainable costed procurement plan									

Source: primary data

Table above shows adjusted R^2 of 0.245 suggesting that dimensions of sustainability Market analysis of availability of sustainable products and capability and performance of the market all predict 24.5% of the variance in development of a sustainable costed procurement plan in KCCA and they were least significant predictors. Other variables, other than sustainability impact assessment predict the remaining variance of 75.5%.

The standardized coefficient results for sustainability impact assessment Beta-β1= 0.510, t= 3.660, Sig. = 0.01 suggest that sustainability impact assessment is a significant predictor of development of a sustainable costed procurement plan procurement in KCCA since a unit increase in sustainability market analysis results in 0.241 development of a sustainable costed procurement plan in KCCA which is significant (t= 6.470, sig = 0.000which < 0.01).

To answer the third research question, *how is sustainability impact assessment as a sustainability integration mechanism at procurement planning undertaken at KCCA?* This study affirms that sustainability impact assessment positively and significantly results into a sustainable costed procurement plan in KCCA. Therefore, top management in KCCA needs to commit itself to conducting these impact assessments before any procurement is done to minimize on the social and environmental impact during planning.

4.7 Sustainable Costed Procurement Plan

Table 13: descriptive results for Sustainable Costed Procurement Plan

Item	**SD**	**D**	**NS**	**A**	**SA**	**Mean**	**Standard deviation**
Sustainable costed procurement plan	Percentages						
There is identification of the overall sustainability procurement approach for the commodities	48.0	37.0	12.6	0.0	2.4	1.72	.863
Aggregation of requirements allows the procurement function to focus its resources in order to maximize the cost effectiveness	53.5	26.8	17.3	2.4	0.0	1.69	.842
Procurement methods are selected for each commodity category	40.2	37.0	14.2	5.5	3.1	1.94	1.03
Appropriate procurement methods are taken to ensure there is cost reduction	40.2	35.4	19.7	2.4	2.4	1.91	.951
Product estimates are developed	52.8	33.1	9.4	4.7	0.0	1.66	.837

The table above indicated that 85% disagreed, 2.4% agreed while 12.6% were not sure (mean= 1.72) that there is identification of the overall sustainability procurement approach for the commodities. 80.3% disagreed, 2.4% agreed and 17.3% were not sure (mean= 1.69) that aggregation of requirements allows the procurement function to focus its resources in order to maximize the cost effectiveness. 77.2% disagreed, 8.6% agreed while 14.2% were not sure (mean= 1.94) that procurement methods are selected for each commodity category. More so 75.6% disagreed, 4.8% agreed while 19.7% were not sure (mean=1.91) that appropriate procurement methods are taken to ensure there is cost reduction. Finally, 85.9% disagreed ,4.7% agreed while 9.4% were not sure (mean=1.66) that product estimates are developed. The implication is that the majority of respondents under study are not aware of the outcome of integrating sustainability at the planning phase of the procurement process implying that KCCA should educate the staff about sustainability integration at planning phase and sensitize the staff about the benefits of sustainability at planning.

4.8 Multiple Regression

A multiple regression analysis was conducted to establish the combined predictive of sustainability requirement analysis, market analysis and impact assessment on a sustainable costed procurement plan in KCCA and also to establish if the relationship was causal and if so, which among the variables was the most significant predictor of the variance in development of a sustainable costed procurement plan. Table below shows a summary of multiple results.

Table 14: Summary of a multiple regression results

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		.506[a]	.256	.238	.60776	
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.696	.216		3.220	.002
	Sustainability requirement analysis	-.055	.117	-.050	-.466	.642
	Sustainability market analysis	-.091	.099	-.108	-.916	.361
	Sustainability impact assessment	.680	.162	.612	4.186	.000

a. Predictors: (Constant), sustainability requirement analysis, sustainability market analysis, sustainability impact assessment
b. Dependent Variable: sustainable costed procurement plan

$P \leq 0.05$

Source: Primary data

Table above shows adjusted R^2 of 0.238 suggesting that sustainability requirement analysis, sustainability market analysis and sustainability impact assessment, all predict 23.8% of the variance in sustainable costed procurement plan in KCCA and they were significant predictors. Other variables other than sustainability integration predict the remaining variance of 76.2%.

The unstandardized coefficient results for sustainability requirement analysis Beta-β1= -0.055, t= -0.466, Sig. = 0.642 implying that if efforts are reduced in enhancing activities of sustainability requirement analysis, a sustainable costed procurement plan will not be developed.

This is revealed by the unstandardized coefficient Beta of -0.055 and this is why it was statistically insignificant with a P-value of 0.642 at 95% confidence. Also if efforts are reduced in enhancing activities of sustainability market analysis, a sustainable costed procurement plan will not be developed. This is revealed by the unstandardized coefficient Beta of -0.091 and this is why it was

statistically insignificant with a P-value of 0.321 at 95% confidence. Results however reveal if efforts are made in enhancing activities of sustainability impact assessment, a sustainable costed procurement plan will be developed. This is revealed by the unstandardized coefficient Beta of 0.68 and this is why it was statistically significant with a P-value of 0.000 at 95% confidence

CHAPTER FIVE

SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, discussions, conclusions and recommendations of the study on sustainability integration and procurement planning in KCCA based on the study findings. The first section presents the summary based on the study findings. Discussions, conclusions, recommendations, limitations, contributions, and areas for further study are equally presented in this chapter.

5.2 Summary of the Study Findings

5.2.1 Sustainability requirement analysis and sustainable costed procurement plan in KCCA

The study found that the majority of the respondents at KCCA were not aware of sustainability as a concept and the outcomes of sustainability integration at procurement planning. However, a few of the respondents mainly from the PDU were informed about sustainability integration at planning though the applicability is still low at this stage.

For sustainability requirement analysis, the study found that a significant number of staff in KCCA were not knowledgeable about what sustainability requirement analysis as an activity undertaken at procurement planning. More so the majority of the staff never had knowledge about sustainability integration as they were ignorant about sustainable procurement. However, a few of the respondents commented and said that sustainability is practiced as a best practice since the law doesn't demand for it. There was low sensitization about sustainability among the staff in KCCA

The correlation results indicated that a weak positive relationship between sustainability requirement analysis and sustainable costed procurement plan which was also statistically significant in KCCA although it was the least significant predictor of the variance in sustainable costed procurement plan with ($r = 0.317^*$, $r2 = 0.77$, $\beta1 = 0.317$, $t = 2.061$, $sig = 0.046$)

5.2.2 Sustainability market analysis and sustainable costed procurement plan

The study found that KCCA rarely undertakes market analysis to establish whether the sustainable products do exist on the market and whether the suppliers are capable of supplying the sustainable products as the majority of the staff were not aware of the activity during planning and the few who responded positively pointed out that they usually go with what is on the market implying that market analysis in KCCA is not viewed as an important activity of sustainability during planning.

The correlation results indicated that a weak positive relationship between sustainability market analysis and sustainable costed procurement plan which was statistically significant in KCCA although it was the second significant predictor of the variance in sustainable costed procurement plan with ($r = 0.332^*$, $r2 = 0.87$, $\beta1 = 0.332$, $t = 2.167$, $sig = 0.037$)

5.2.3 Sustainability impact assessment and sustainable costed procurement plan in KCCA

The study found that KCCA undertakes sustainability impact assessment mainly for major projects like construction of roads and bridges however for small supplies or products KCCA rarely undertakes sustainability impact assessment to establish the social, environmental impact to both society and environment.

The correlation results indicated that a moderate positive relationship between sustainability impact assessment and sustainable costed procurement plan which was statistically significant in KCCA although it was the most significant predictor of the variance in a sustainable costed procurement plan with (r = 0.510**, r2 = 0.241 β1= 0.510, t = 3.661, sig = 0.001)

5.3 Discussion of the Study Findings

5.3.1 Sustainability requirement analysis and sustainable costed procurement plan

Sustainability requirement analysis results into sustainable costed procurement plan in KCCA although it was the second most significant predictor of the variance in sustainable costed procurement plan. The study therefore informed that sustainable costed procurement plan depends on how sustainability requirement analysis is undertaken through requirement definition, commodity categorization analysis and stakeholder engagement.

The study findings are supported by previous studies which attributed sustainable costed procurement plan to undertaking sustainability requirement analysis. Tan (2013) asserts that Identifying the need whether goods, services or works that are needed is done by user departments. Each purchase begins with coming up with the register of the needs of the internal or external user. At this stage questions likes whether the purchase is really essential, or could use be made of a current good, works or service, or a more environmentally friendly good, works or service should arise to help in decision making (Sawyer, 2018). More so Adjarko, Agyekum and Offei (2016) during the process of integrating sustainability into procurement planning, a needs assessment which involves identifying what and where the goods and services will be procured is key consideration.

They further note that for needs assessment to be a success , it requires involving stakeholders. Attschud and Lepicki (2010) came up with some pointers to the importance of needs assessment in procurement planning. He stated that needs assessment is instrumental in directing action and funding.

Tammer (2009) supported, the presence of key stakeholders during planning, as the problem-owner can make the procurement more tangible and accessible by illustrating problems and objectives, and answering questions from parties involved. Sharma (2008) added that engaging the stakeholder early on can help offset any potential misunderstanding. Krause et al. (2009) argue that when sustainability is one of the objectives of procurement in an organization, it must be included as a key performance measure for all four quadrants, considering the procurement of critical, leverage, bottleneck and routine products. The matrix enables the purchasers to think strategically about the impact their purchases have. When aiming to integrate sustainability aspects to procurement practices, similar kind of thinking is necessary.

5.3.2 Sustainability market analysis and sustainable costed procurement plan

Sustainability market analysis results into sustainable costed procurement plan in KCCA. The study therefore informed that sustainable costed procurement plan depends on how sustainability market analysis is undertaken through availability of sustainable products and capability and performance of the market. The study findings are supported by previous studies which attributed sustainable costed procurement plan to undertaking sustainability market analysis. Organizations are becoming more selective when determining sources of supply where suppliers of more environmentally friendly products are given priority (Kalubanga,2012). The motive of the market

examination is to gain knowledge and evidence of what the market has to offer in terms of availability of products and potential suppliers (Dahl et al., 2007).

Furthermore, according to QGPG (2014) supply market analysis is conducted in order to develop an understanding of the present level of competence and performance in the market with regard to sustainability, and the capacity and potential of the supply base to move towards, and advance, best practice, determine the degree of influence the organization has within the supply market to drive sustainable procurement objectives.

5.3.3 Sustainability impact assessment and sustainable costed procurement plan

Sustainability impact assessment results into sustainable costed procurement plan in KCCA. The study therefore informed that sustainable costed procurement plan depends on how sustainability impact assessment is undertaken through identification of social, economic and environmental impacts and conducting a life cycle assessment. The study findings agree with previous studies which attributed sustainable costed procurement plan to undertaking sustainability market assessment.

According to Yilmaz and Flouris (2010) businesses today need to fully integrate sustainability and risk management into their strategy not only to minimize potential losses but also to exploit new business opportunities arising from sustainability. These may include new products and services to meet developing sustainability needs, new technologies to improve sustainability or risk performance, or new business models to access and develop emerging markets and support the creation of sustainable communities. Public procurers are always aiming at ensuring value is

created within their procurement activities and by so doing they endeavor to balance quest and objectives of the society and procure at economy whilst minimizing damage of the environmental (Linton etal.,2007; Koplin et al;2007). According to Marron (2003) emphasis should be put on the products with most least environmental impacts and also find out the existing green equipment available in the market. While identifying environmental impacts, the life span of the product should be taken into consideration as a life cycle assessment approach considers the environmental impacts from raw materials to the disposal of the product (Nikbakhsh,2009).

5.4 Conclusion of the Study

5.4.1 Sustainability requirement analysis and sustainable costed procurement plan in KCCA

The study concludes that development of a sustainable costed procurement plan depends on how KCCA integrates requirement definition, commodity categorization analysis and involve stakeholders in this case the user departments during requirement analysis. Such sustainability requirement analysis gaps need to be addressed so as to ensure that a sustainable costed procurement plan is developed during planning in KCCA.

5.4.2 Sustainability market analysis and sustainable costed procurement plan in KCCA

The study concludes that development of a sustainable costed procurement plan depends on how KCCA integrates assessing the availability of sustainable products and establishing whether the market has the capability of supplying sustainable products during market analysis. There was significant lack of knowledge about what the market can offer in terms of the sustainable products and establishing the performance and capability of the market during planning in KCCA. Such

sustainability market analysis gaps need to be addressed so as to ensure that a sustainable costed procurement plan is developed during planning in KCCA.

5.4.3 Sustainability impact assessment and sustainable costed procurement plan in KCCA

The study concludes that development of a sustainable costed procurement plan depends on how KCCA integrates assessing the lifecycle assessment and identifies social, environment and economic impacts during sustainability impact assessment. There was significant lack of knowledge about establishing the social, economic and environmental impacts associated with the different products purchased by KCCA as mostly environmental and social impact assessment are mainly carried out on works and less on suppliers or products during planning in KCCA. Such sustainability impact assessment gaps need to be addressed so as to ensure that a sustainable costed procurement plan is developed during in KCCA.

5.5 Recommendations of the study

5.5.1 Sustainability requirement analysis and sustainable costed procurement plan in KCCA

The PDDA Act (2003) and Regulations (2014) should be amended to include sections that make sustainability integration at each phase of procurement process a must clearly stating what should be done at planning and other stages if organizations are to integrate sustainability at this stage. Also KCCA should ensure that user departments are involved at planning to enable proper understanding of the concept of sustainability and the benefits as this would help staff to gain

knowledge about sustainability. Training and seminars should be constantly provided to improve the personnel skills and knowledge about sustainable procurement in the PDUs of different public organizations.

5.5.2 Sustainability market analysis and sustainable costed procurement plan in KCCA

KCCA should also undertake a thorough market analysis to establish the available sustainable products on the market as well as assessing the performance and capability of the market to deliver the desired products and that way the organization will be able to devise means of ensuring that suppliers get on board through vigorous training and sensitization

5.5.3 Sustainability impact assessment and costed procurement plan in KCCA

KCCA should be consistent when conducting impact assessment to ensure that they are not carried out on for works and major projects but for every single procurement to include suppliers in order to protect the environment and society at large. A government policy on sustainable procurement to guide procurement professionals should be passed and implemented.

5.6 Contributions of the Study

The study is arguably the first of its kind exploring sustainability Integration and procurement planning at KCCA. Consequently, it has helped to provide managerial interventions necessary for strengthening sustainability integration in KCCA and other public organizations. This study further helps to fill literature gaps on sustainability integration at the planning stage in the public sector of a developing Country-Uganda which is still at its infancy when it comes to sustainability as a concept in procurement

5.7 Areas for Further Research

The study found that sustainability integration at planning phase of the procurement process is still at its infancy as it is not conducted the way it ought to be therefore other studies need to examine sustainability Integration at procurement planning comparing more than one organization. More so other studies pertaining sustainability integration at the different stages of procurement in other public organizations could be undertaken to help other organizations understand how to incorporate sustainability in into their own procurement processes. Lastly, research issues on exploring the legal framework on sustainability integration in the public procurement process is worthy of examination.

REFERENCES

Adjarko, H., Agyekum, K., & Offei, I. (2016). Incorporating Environmental Sustainability into Construction Procurement at the District Assembly Level in Ghana. *International Journal of Construction Engineering and Management*, 6 , 585-593.

Adjei, A. B. (2010). Sustainable Public Procurement: A New Approach to Good Governance. International Public Procurement Conference. Available http://www.ippa.org/IPPC4/Proceedings/07GreenProcurement/paper7-10.pdf.

Akatuhwera, D. T. (2019, March 8). How KCCA is Implementing Sustainable Procurement Practices. Guest speaker (Msc), Kyambogo University, Uganda. (Unpublished).

Amin, M. E. (2005). Social Science Research: Conception, Methodology and Analysis;Kampala: Makerere University Printery. ISBN: 9970-05-019-2.

Anderson, D. (2007). Sustainability Risk management as a Critical Component of enterprise risk Management: Global warming - Climate Change risks. In International Insurance Society Seminar, Berlin, July, 2007.

Apiyo, R. O. & Mburu, D. K. (2014). Factors Affecting Procurement Planning in County Governments in Kenya: A case study of Nairobi City County. *International Journal of Economics, Commerce and Management*, 11(11), 1-34.

Arrowsmith, S., & Trybus, M. (Eds.). (2008). Public Procurement Regulation: An Introduction. Kluwer Law International.The Hague.Cambridge Univerity Press. ISBN No. 1107028329.

Aziz, N. A. Manab, N. A. & Othman, S. N. (2016). Sustainability Risk Management : An Extention of Enterprise Risk Management Concept, *International Journal of Management and Sustainability*, 5(1), 1-10.

Bakir, S. (2013). Environmental Orientation of Government Procurement in Singapore, Doctor of Philosophy. RMIT University, Melbourne, Australia.

Bansal, P. (2003). From issues to actions: The Importance of Individual Concerns and Organizational Values in Responding to Natural Environmental Issues. *Organization Science*,14 (5), 510-527.

Barasa, H. W. (2014). Procurement Practices Affecting Effective Public Projects Implementation in Kenya: A Case Study of Kenya Civil Aviation Authority. *European Journal of Business and Management*, 6 (6), 49-67 .

Basheka, B. C. (2009). Procurement Planning and Local Governance in Uganda: A factor analysis. *International Journal of Procurement Management*, 2 (2), 191-209.

Borland, H. (2009). Conceptualizing Global Strategic Sustainability and Corporate Transformational Change. *International Marketing Review*,26 (4/5), 554-572.

Boynton, P. M. & Greenhalgh, T. (2004). Selecting, Designing, and Developing your Questionnaire.*British Medical Journal*, 328 (7451), 1312-1315.

Bratt, C. (2011). Assessment of Eco-labelling and Green Procurement from a Strategic Sustainability Perspective. Doctoral thesis, Blekinge Insitute of Technology, Sweden. ISBN :978-91-7295-212-6.

Brammer, S., Walker, H. (2011). Sustainable Procurement in the Public Sector: An International Comparative Study. *International Journal of Operations and Production Management*, 31(4), 452-476.

Brown, R. B. (2006). Doing your Dissertation in Business and Management. ISBN:9781412903516. London, Sage Publications Ltd.

Caldelli, A., Parmigiani, M.L. (2004). Management information system tool for corporate sustainability. *Journal of Business Ethics* 55 (2), 159-171.

Caldwell, N., Bakker, E., & Read, J. J. (2008). The purchasing process in public procurement in the Public Sector: An International Perspective.In K.V.Thai(Ed.), International Handbook of Public Procurement (427-441). Boca Raton, Florida:Auerbanch Publications.

Chaudhary, B. (2016). Sustainability Supply Chain Management & Its Integration Among the Norwegian Industries, Master's Thesis, Norwegian University of Science and Technology.

Carter, C. R. & Easton, P. L. (2011). Sustainable supply chain management: Evolution and future directions. *International Journal of Physical Distribution & Logistics Management*, 41 (1), 46-62.

Creswell, J. W. (2012). Qualitative Inquiry and Research Design: Choosing Among Five Approaches (3rd ed.). London, UK: Sage.ISBN:978141299506.

Dahl, C., Jansson, C. & Karlsson, C. (2007). Green public procurement - A Case Study. Sveriges Landtbruksuniversitet: Uppsala.

Department for Environment Food & Rural Affairs. (2007). Securing the Future: UK Government Sustainable Procurement Action Plan Incorporating the Government Response to the Report of the Sustainable Procurement Task Force. DEFRA, London.

DiMaggio, P. J. Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, *American Sociological Review*, 48 (2), 147-160.

Dolva, L. C. (2007). Green Public Procurement: How widespread is Green Public Procurement in Norway and What Factors are seen as Drivers and Barriers to a Greener Procurement Practices?, Master's Thesis, Stockholms University.

European Commission. (2004). Buying Green! A Handbook on Environmental Public Procurement. Luxembourg: Office for the Official Publications of the European Communities Public Policy and Administration.

European Union (2011). Buying Green! A Handbook on Green Public Procurement: Publications Office of the European Union, Luxembourg.

Fiorino, D., J., & Bhan, M. (2014). Supply Chain Management as private sector regulation: What does it mean for Business Strategy and Public Policy? *Business Strategy and the Environment*, 25, 310-322.

Freeman, R. E. (1984). Strategic management: A stakeholder Approach, Boston :Pitman. ISBN: 0-273-01913-9.

Friedman, M. (September,1970). The social Responsibility of Business is to Increase its Profits. 32–33, The New York Times Magazine.

Frooman, J. (1997). Socially Irresponsible and Illegal Behavior and shareholder Wealth:A meta-Analysis of event studies. *Business & Society,* 36(3),221-249.

Günther, E., Klauke, I., Scheibe, L., & Erdmenger (Eds.). (2003). Researching the Market Condition for Green Purchasing: Buying into the Environment: Experiences, opportunities.

Hair, J. F., Black, W. C., Babin, B. J. Anderson, R. E.& Tatham, R. L. (2006). Multivariate data analysis. 6th Edition. Pearson Prentice Hall, New Jersey.

HM Treasury. (2000). Spending Review : Public Service Agreements: Government Accounting . England. Available at: www.Governmentaccounting.

IAPWG. (2006). Interagency Procurement Working Group.UN Procurement Practitioner's Handbook. Institute for Supply Management, United States.

James, U. V. (2004). Public Policy and the African Environment: An Examination of the Theory and Practice of the Planning Process of the Continent. In Kalu,A.K.(Ed.): Agenda Setting and Public Setting in Africa; Ashagte. England.

Kalubanga, M. (2012). Sustainable Procurement: Concept, and Practical Implications for the Procurement Process. *International Journal of Economics and Management Sciences*,1(7),1-7.

Krejicie, R. V. & Morgan, D. W. (1970). Determining Sample Size of Research Activities. *Journal of Educational and Psychological Measurement*, 30, 607-610.

Koplin, J., Seuring, S., & Mesterharm, M. (2007). Incorporating sustainability into supply management in the automotive industry: The case of the Volkswagen AG. *Journal of Cleaner Production,*15(11/12), 1053-1062.

Krause, D. R. Vachon, S.& Klassen, R. D. (2009). Special Topic Forum on Sustainable Supply Chain Management: Introduction and Reflections on the Role of Purchasing Management. *Journal of Supply Chain Management*,45 (4), 18-25.

Kural, S. & Alsac, U. (2006). Public procurement procedures in Turkey. *Journal of Public Procurement*, 6 (1/2), 100-129.

Larnyoh, A. (2014). Enhancing Environmental Sustainability within the Construction Procurement Process in Ghana,Master's Thesis, University of Kwame Nkrumah.

Lee, K. H. Barker, M. & Mouasher, A. (2013), Is it even espoused? An exploratory study of Commitment to Sustainability as Evidenced in Vision, Mission, and Graduate Attribute Statements in Australian universities. *Journal of Cleaner Production*, 48, 20-28.

Li, L. & Geiser, K. (2005). Environmentally responsible public procurement (ERPP) and its Implications for Integrated Product Policy (IPP). *Journal of Cleaner Production* 13 (7), 705–715.

Linton, J. D. Klassen, R.& Jayaraman, V. (2007). Sustainability supply chains: An introduction. Journal of Operations Management, 25, (6), 1075-1082.

Lynch, J. (2014). Market Study in Public Procurement.Available https://www.procurement.classroom.com/Market-study.in-public procurement/

MacDonald, D. B. (2011). When risk management collides with enterprise sustainability. *Journal of Leadership, Accountability, and Ethics*, 8 (3),56-66.

Makkonen, A. (2014). The role of company's sustainable procurement practices in conscious consumer buying behaviourCase: Ekotin Oy , Bachelor's Thesis, Haaga-Helia University of Applied Sciences.

Mathur, S. S. & Kenyon, A. (1997). Creating value: Shaping tomorrow's business: Oxford, UK: Butterworth-Heinemann.ISBN: 13-978-0750639545.

Marron, D., Johnstone, N.(Eds). (2003). Greener Public Purchasing as an Environmental Policy Instrument. In: The Environmental Performance of Public Procurement: Issues of Policy Coherence. OCED *Journal on Budgeting*,3 (4),71-102.

McCue, C. & Gianakis, G. (2001). Public purchasing: Who's minding the store', *Journal of Public Procurement*,1(1),71-95.

Meehan, J., & Bryde D. J. (2011). Sustainable procurement practice. *Business Strategy and the Environment*,20 (2), 94-106.

Mello, M. T. Eckhardt, D.&Leiras, A. (2017). Sustainable Procurement Portfolio Management: A case Study in a Mining Company.Production, 27, 2016-2136.

Mwirigi, P. M. (2007). Green supply chain management practices by manufacturing firms in Kenya. Unpublished MBA Thesis, University of Nairobi.

More, R.S. & Joshi, P. (2011). Procurement Process Parameters optimised For Construction Material By Using Taguchi Method. *International Journal of Advanced Engineering Technology*,1, 7-10.

Mwacharo, F. K. (2015). Exploring the awareness and opportunities for Kenyan hospitals to implement green procurement, Master's Thesis,University of Jyvaskyla School of Business and Economics.

Niesten, E., & Lozano, R. (2015). Making, buying and collaborating for more sustainable production and consumption. *Journal of Cleaner Production*,100,1-3

Nsabiswa, K., J. (2011). Green Procurement in the Public Sector: The case of Parastatals in Kenya. Master's thesis, University of Nairobi.

Nunnally, J., C., & Bernstein, I. H. (1994). The assessment of reliability. Psychometric theory (3rd Ed.). 3 (1),248-292. New York, NY: McGraw-Hill, Inc.

Obanda, W., P. (2017). Public Procurement Process Design and Small and Medium Enterprises Access to Contracts in Uganda. *International Journal of Supply and Operations Management*, 4, 274-278.

Obicci, A. P. (2017). Trouncing Barriers to Sustainable Procurement Practices in Public Sector Organizations in Uganda. *International Journal of Research in Management, Science &Technology*,5 (1), 64-74.

Ofori, G. (2000). Greening the construction supply chain in Singapore. *European Journal of Purchasing and Supply Management*. Proceedings of the Second International Conference of the CIB TG 29, Gaborone, Botswana, Nov, 1–11.

Oginda, E. (2013). Challenges of Implementing Procurement Strategy at Kenya Power and Lighting Company Limited, Master's Thesis, University of Nairobi Research Archive.

Pagell, M., Wu, Z., & Wasserman, M. E. (2010). Thinking differently about purchasing portfolios: An Assessment of Sustainable Sourcing. *The Journal of Supply Chain Management*, 46, (1), 57-73.

Perreau, F. (2015). The 3 decision making process guiding consumers' purchasing behavior. Available at: http://theconsumerfactor.com/en/5-stages-consumer-buying-decisionprocess/.

Preuss, L. (2009). Addressing sustainable development through public procurement: The case of local government. Supply Chain Management. *An International Journal*, 14 (3), 213-223.

QGPG. (2014). Procurement guidance: Integrating sustainability into the procurement process. Queensland Government Procurement Guideline.

Rea, L. M. & Parker, R. A. (2012). Designing and Conducting Survey Research: A Comprehensive Guide, 4th Edition.ISBN: 9781118767023.

Renukappa, Hennagara, S., Akintoye, Akintola, Egbu, Charles, Sures & Subashini (2016). Sustainable procurement strategies for competitive advantage: An empirical study.Proceedings of Institution of Civil Engineers: Management, Procurement and Law, 169 (1), 17-25.

Roos, R. (2012). Sustainable Public Procurement Mainstreaming sustainability criteria in public procurement in developingcountries. Centre of Sustainability Management (CSM), Leuphana University of Leuneburg, Leunburg.

Rowley, J. (2014). Designing and using research questionnaires. *Management Research Review*,37(3), 308-330.

Saunders, M., Lewis, P. & Thornhill, A. (2009). Research Methods for Business Students. London: Financial Times. 5th ed.). New York: Prentice Hall.

Sakyi, K. (2016). Exploring Sustainable Procurement Practices in Public Procurement. A Case Study of University of Health and Allied Sciences. Master's Thesis, Kwame Nkrumah, Ghana.

Sawyer, L. (2018). Sustainable Procurement Procedure. Southern Health. NHS Foundation Trust. Available at : shsc.nhs.uk › Sustainable-Procurement-Policy-FIN-009-v2.

Sekaran, U., & Bougie, R. (2010). Research Methods for Business: A Skill Building Approach (5th ed.). New Jersy: John Wiley and Sons, Hoboken.

Seitz, M. A & Wells, P. E. (2006): Challenging the Implementation of Corporate Sustainability: The case of automotive engine remanufacturing. *Business Process Management Journal,* 12(6), 822-836.

Schaltegger, S & Petersen, H. (2008): Einführung in das Nachhaltigke its management: Studien brief des MBA-Studiengangs Sustainability Management. Leuphana Universität, Luneburg.

Sharma, R., (2008). The 6 principles of stakeholder engagement. Supply Chain Management Review. Available at: www.censeoconsulting.com/media/pnc/2/media.12.pdf

Simpson, D. F. & Power, D. J. (2005). Use the supply relationship to develop lean and green suppliers", *Supply Chain Management*. *An International Journal*, 10(1),60-68.

Sowah, E. A. (2015). A Framework For Procurement Planning In Public Procurement Entities In Ghana, Master's Thesis,University of Kwame Nkrumah.

Srivastava, S.K. (2007). Green Supply Chain Management: A State-of-the-Art Literature Review. *International Journal of Management Reviews*, 9 (1), 53-80 .

Steurer, R., Berger, G., Konrad, A., & Martinuzzi, A. (2007). Sustainable public procurement in EU member states: Overview of government initiatives and selected cases. Final Report to the EU High-Level Group on CSR, European Commission, Brussels.

Svensson, G. (2007). Aspects of sustainable supply chain management (SSCM): Conceptual Framework and Empirical example. *Supply Chain Management: An International Journal*, 12(.4), 262-266.

Switch Africa Green and United Nations. (2018) . Sustainable Public Procurement Agenda Report: Greening Uganda's Public Sector Procurement Policy.

Tammer, M. D. (2009). Early Stakeholder Involvement in Projects: PM World Today, 11(4). Available at: http:www.pmworldtoday.net

Tan, L. H. J. (2013). An Analysis of Internal Controls and Procurement Fraud Deterrence. Master's Thesis, Monterey, California:Naval Postgraduate School. Available at: http://hdl.handle.net/10945/39022

Tregidga, H., & Milne, M., J. (2006). From sustainable management to Sustainable Development: a longitudinal analysis of a leading New Zealand environmental reporter. *Business Strategy and the Environment*,15 (4), 219-241.

United Nations. (2008). Public Procurement as a Tool for Promoting More Sustainable Consumption and Production patters. Sustainable Development Innovation Brief.

Weele, W., A. (2010). Purchasing and Supply Chain Management, 5th ed., Cengage Learning, London.ISBN: 9781408018965.

Walker, P. L. Shenkir, W, G., & Barton, T. L. (2002). Enterprise risk management: Pulling it all together. Institute of Internal Auditors Research Foundation, Lake Mary Florida, United states.ISBN -13:978-0894134906.

Yilmaz, A. K. & Flouris, T. (2010). Managing Corporate Sustainability: Risk management Process Based Perspective. *African Journal of Business Management*,4 (2), 162-171.

Yin, R. K. (2014). Case Study Research: Design and Methods, Applied Social Research Methods Series 3rd Edition. Sage Publication London. ISBN : 978-1-4522-4256-9.

Zeppel, H. (2014). Green procurement by Local Government: A Review of Sustainability Criteria: A report for Local Government Association of South Australia. University of Southern Queensland. South Australia.

APPENDICES

APPENDIX 1: QUESTIONNAIRE TO EMPLOYEES OF KCCA IN DIFFERENT USER DEPARTMENTS

Dear Sir /Madam

Introduction.

Thank you for agreeing to participate in this study. I am a Postgraduate student at Kyambogo University Pursing a program leading to the award of MSc. in Procurement and Supply Chain Management. I am carrying out research on the topic: "SUSTAINABILITY INTEGRATION AND PROCUREMENT PLANNING TAKING KCCA AS A STUDY AREA." Please be assured that all the information collected will be kept confidential and that your identifiable indicators will never be shown to any other party or for any other purpose other than for its academic purpose. This survey is aimed at seeking how sustainability can be integrated at procurement planning stage at KCCA.

Section I: Background Information (Tick as appropriate)

No.	Bio-data	Options	Please Tick
1.	Gender	Male	
		Female	
2.	Age bracket	Below 25 years	
		25-35 years	
		35 years and above	
3.	Highest level of education	Postgraduate	
		Degree	
		Diploma	
		Certificate	
		Others (Specify)	
4. Directorates		Legal Affairs	
		Education and social services	
		Physical planning	
		Internal audit	
		Engineering& Technical	
		Public Health& Environment	

		Gender Community services and Production	
		Administration and HR	
		Revenue Collection	
		Treasury Services	
		Office of the Executive director	
5.	Time worked in the position	Below 1 year	
		1-5 years	
		5 years and above	

SECTION II: Sustainability Integration

Instructions

Indicate the extent to which you agree with the following statements on Sustainability Integration by ticking (SA) if strongly agree (A) if agree, (NS) if not sure (D) if disagree (SD) if strongly disagree.

Sustainability requirement analysis as a sustainability integration mechanism	**SD**	**D**	**NS**	**A**	**SA**
1. Requirement definition is initiated by user departments at KCCA					
2. KCCA evaluates the necessity of a given purchase to reduce over consumption					
3. KCCA considers alternative acquisition options before the procurement of goods e.g. reuse ,rethink, recycle					
4. KCCA evaluates the state of the existing assets e.g. vehicles before a new procurement is approved to eliminate unnecessary purchase					
5. KCCA includes wordings like green, sustainable or environmental in the subject of procurement to act as a signal to the market place that sustainability is an important aspect during the entire procurement process					
6. KCCA ensures that the requirement definitions from users include sustainability requirements					
7. KCCA conducts a thorough commodity categorization analysis of the different goods					
8. Commodity categorization analysis enables KCCA to manage sustainability risks associated with securing goods					
9. KCCA is able to develop appropriate procurement strategies for each of the commodity categories e.g. collaboration with suppliers					
10. User departments actively participate in identifying needs to eliminate unnecessary purchases					
11. Sustainability matters are introduced into discussions with stakeholders during planning					

Sustainability Market analysis as Sustainability integration mechanism at procurement planning					
1. KCCA conducts market analysis to establish the different alternatives that exist in the market that can fulfill the need	**SD**	**D**	**NS**	**A**	**SA**
2. KCCA conducts market analysis to ascertain whether sustainability is incorporated into the products					
3. KCCA is able to identify new sustainability responsive product during market analysis					
4. KCCA conducts market analysis to gain a thorough understanding of the product estimates					
5. Market analysis is carried out to ensure that draft specifications have accurately captured sustainability priorities ,risk and opportunities					
6. KCCA conducts a supply base analysis which involves evaluating the capabilities of suppliers in terms of supply sustainable products					
7. Market analysis enables KCCA to ascertain whether there is a sufficient number of potential suppliers able to meet the sustainability standards					
8. KCCA sensitize suppliers on the benefits of sustainable procurement in order to reduce supplier resistance					
9. KCCA engages the market early and informs suppliers about sustainability requirements hence giving them time to develop sustainable solutions					
10. The information gained from market analysis assist KCCA in refining the requirement definition					
Sustainability Impact assessment as a sustainability integration mechanism at procurement planning					
1 Sustainability impact assessment involves identification of key sustainability impacts associated with the subject of procurement	**SD**	**D**	**NS**	**A**	**SA**
2 Products are selected based on the least sustainability impact					
3 4 KCCA gives preference to product that provide environmental benefits					
5 KCCA adopt a life cycle costing approach to establish product estimates					
6 KCCA takes into consideration a life cycle analysis when establishing the total cost for a particular procurement as opposed to initial cost assumptions					
7 KCCA develops a knowledge bank on sustainable alternatives like environmental or social labels and /or certification programs					
8 KCCA conducts life cycle assessment to evaluate the environmental friendliness of goods					
9 Sustainability impact assessment enables KCCA to prioritise those					

	procurements with high sustainability impacts so that they are addressed in the sustainable procurement strategy					
10	KCCA visits suppliers' plants to ensure that they are not using child labour					

SECTION III: Sustainable Costed Procurement Plan

Instructions

Indicate the extent to which you agree with the following statements on sustainable procurement plan by ticking (SA) for strongly agree (A) for agree, (NS) for not sure (D) for disagree (SD) for strongly disagree.

Scale	**SD**	**D**	**NS**	**A**	**SA**
Sustainable costed procurement plan					
1. There is identification of the overall sustainability procurement approach for the commodities					
1. Aggregation of requirements allows the procurement function to focus its resources in order to maximise the cost effectiveness					
2. Procurement methods are selected for each commodity category					
3. Appropriate procurement methods are taken to ensure there is cost reduction					
4. Product estimates are developed					

THANKS FOR YOUR TIME

APPENDIX II: INTERVIEW GUIDE OF TOP EMPLOYEES OF KCCA

Self-introduction

My name is **Mirembe Aisha Nante** and I am a student of Master's degree of Science in Supply Chain Management at Kyambogo University. I am conducting a study on Sustainability Integration and Procurement Planning in KCCA as the partial requirement for the Master's degree award. You have been selected as a respondent to provide me with your views on this study based on your experience on the subject matter. Your views will be kept and treated confidentially and at no moment will it be used against you.

1. Comment on how KCCA has integrated sustainability during procurement planning
2. Does KCCA conduct sustainability requirement analysis during procurement planning?
3. With your experience, what is the procedure of requirement definition at KCCA?
4. What is your view on procurement category assessment during procurement planning at KCCA?
5. What is your opinion on stakeholder engagement during procurement planning?
6. How adequate is sustainability market analysis conducted in KCCA?
7. Comment on the availability of green products in the market.
8. In your own view, does KCCA conduct sustainability impact assessment during planning?
9. Of what importance is a sustainable costed procurement plan to KCCA?

THANK YOU FOR YOUR TIME AND PARTICPATION.

APPENDIX III: INTRODUCTORY LETTER

KYAMBOGO UNIVERSITY
P. O. BOX 1 KYAMBOGO
Tel: 041 - 4286792 Fax: 256-41-220464
Website: www.kyu.ac.ug
Office of the Dean, Graduate School

9th July 2019

To Whom It May Concern

Dear Sir/Madam,

This is to introduce **Ms Mirembe Aisha Nante** Registration Number **17/U/14779/GMSC/PE** who is a student of Kyambogo University pursuing a Masters Degree.

She intends to carry out research on **"Sustainability Integration and Procurement Planning: A Case of Kampala City Council Authority "** as partial fulfillment of the requirements for the award of the Masters of Science in Procurement and Supply Chain Management.

.

We therefore kindly request you to grant her permission to carry out this study in your institution.

Any assistance accorded to her will be highly appreciated.

Yours sincerely,

KYAMBOGO UNIVERSITY
★ 09 JUL 2019 ★
OFFICE OF THE
DEAN, GRADUATE SCHOOL

Assoc. Prof. Bosco Bua
FOR DEAN, GRADUATE SCHOOL

APPENDIX IV: DETERMINING SAMPLE SIZE FOR RESEARCH ACTIVITIES",

EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT

Table for Determining Sample Size from a given Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: "N" is population size

"S" is sample size

Krejcie, Robert V., Morgan, Daryle W. (1970). "Determining Sample Size for Research Activities", Educational and Psychological Measurement.