CONTRACT MANAGEMENT AND SUSTAINABLE SUPPLY OF WORKS IN THE AVIATION INDUSTRY OF UGANDA: A CASE STUDY OF CIVIL AVIATION AUTHORITY (CAA).

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DECLARATION

I, **Mbuga Pauline**, do hereby declare that this dissertation is my original work and has to the best of my knowledge, not been published or submitted for any degree award to any other University before.

Signature: …….. Date: ……

APPROVAL

This is to certify that this dissertation has been supervised by me and submitted with my approval.

Signature: ……. Date: ……

MR. BUKENYA PETER

DEDICATION

I dedicate this work to the Almighty God Who has seen me through this course and life.

The bible says that children are an inheritance to their parents. To Mr. Mbuga Dickson Peter and Mrs. Nassuna Suzan Mbuga, you have added tremendous value, purpose and power to my life. I owe it to you.

To my siblings: Doreen Mbuga, Muyanja Michael, Diana, Claire Irene, Geofrey, Maria, Rebecca, Gloria, Faith, Solomon and Joshia.

I HAVE ALWAYS BELIEVED THAT SUCCESS FOR ANYONE IS ALL ABOUT DRIVE, DEDICATION AND DESIRE. BUT FOR ME, IT HAS ALSO BEEN ABOUT CONFIDENCE, FAITH AND ABOVE ALL, ***GOD****.*

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ACRONYMS

CAA	-	Civil Aviation Authority
CIPS	-	Chartered Institute of Procurement and Supply
CSR	-	Corporate Social Responsibility
EPP&S	-	Environmentally Preferable Procurement and Supply
ISM	-	Institute of Supply Management
NIGP	-	The National Institute of Governmental Purchasing
OECD	-	Organisation for Economic Cooperation and Development
OGC	-	Office of Government Commerce
PDE	-	Procuring and Disposing Entity
PDU	-	Procurement and Disposal Unit
PPDA	-	Public Procurement and Disposal of Public Assets
SPSS	-	Statistical Package for Social Scientists
SRP&S	-	Socially Responsible Procurement and Supply

DEFINITION OF KEY TERMS

Contract Management is the process of systematically and efficiently managing contract creation, execution and analysis for maximizing operational and financial performance and minimizing risk (The Chartered Institute of Procurement and Supply, UK, 2007).

Works: In the Public Procurement and Disposal of Public Assets Act, of 2003 as amended, works is defined as; 'any work associated with the construction, demolition, repair, or renovation of a building or structure, on the surface or underground, on and under water, and includes the preparation, excavation, erection, assembly, installation, testing and commissioning of any plant, equipment or materials, decoration and finishing, turnkey projects, build own and operate projects, build operate and transfer projects, or any arrangement of this nature, or any other form of private and public partnerships or joint development activities, all or any of which may include management, maintenance, testing, commissioning and training; as well as supplies or services incidental to those works where the value of such incidental supplies or services does not exceed the value of the works.'

Sustainable Supply is a process whereby organisations meet their needs for goods, services, works and utilities from suppliers in a way that achieves value for money on a whole life basis in terms of generating benefits to society and the economy, whilst minimizing damage to the environment (Chartered Institute of Procurement and Supply, 2013).

ABSTRACT

The study was about contract management and sustainable supply of works in the aviation industry with Civil Aviation Authority-Uganda as the case study. It was guided by the objectives of: examining the relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority; assessing the role of relationship management in achieving sustainable supply of works by Civil Aviation Authority; and examining the relationship between service delivery management and sustainable supply of works in Civil Aviation Authority. The relationship between the study variables was based on the agency, transaction cost and best value theories. The study adopted a phenomenological approach, a cross sectional and case study strategy integrating both qualitative and qualitative methods to investigate a sample of 80 out of the targeted population of 104 arrived at using Krejcie and Morgan's table of sample size determination. Sampling was both probabilistic and non probabilistic that involved simple random, census, and quota sampling techniques. Collecting both primary and secondary data involved the use of self administered questionnaires, interview guides, observation and documentary review checklists as instruments. Data obtained was analysed using SPSS to yield descriptive and inferential statistics that were the basis of interpretation and drawing conclusions. Findings revealed that there was a strong positive and significant relationship between contract management and sustainable supply of works in Civil Aviation Authority since correlations between predictors of contract management i.e. pre-contract award activities, relationship management, service delivery management, and the dependent variable sustainable supply of works were **r**= .711, **r** = .695, and **r** = .783 respectively. With the sig. value p = 0.000 across less than 0.05 the results led to the rejection of the null hypothesis H_0 and accepting the alternative H_1 that is, there is a positive significant relationship between contract management and sustainable supply of works. The study recommends improvements to be made in: communication, setting collaborative structures, benchmarking sustainable supply performance, incentivizing the commitment to sustainable supply practice, clear exit strategies, among others to realise a significant improvement in sustainable supply of works in Civil Aviation Authority and the aviation sector as whole.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The study sought to examine the relationship between contract management and sustainable supply of works in the aviation industry with Civil Aviation Authority-Uganda as the case study. In the world of business, it is common for organizations to engage contractors or suppliers in providing service or product to meet their intended requirements (Kumar and Markeset, 2007). It is the main duty for any procuring organisation to make sure contractors perform their duties safely and timely through appropriate contract management procedures and such supply should take into account the economic, social, and environmental of the entity's spending. Therefore, for organisations to achieve sustainable supply they need to evaluate their suppliers for sustainability and manage their supply programmes on three fronts, that is, the economic, social and environmental spheres (Chartered Institute of Procurement & Supply, 2012).

According to Taylor, (2009), an interesting starting point was offered in the history of contracts; that essentially they are some of the oldest written records in history and hence provide us with a prolific document set, e.g. The 10 Commandments, the Magna Carta, The Geneva Convention, and Marriage. By the turn of 19th century most European countries began and engaged in liberalized economies of production by engaging the private sector in the delivery of services through formal contract awarded and monitored by the government departments not only in central governments, but also in local governments service sectors (Darwin, Duberley and Johnson, 2000; OECD, 2008). Other developed economies such as USA, and monitoring of government services started as early as 1920 when contracting/outsourcing was perceived as the way to do business (Weele, 2002).

Effective contract management in all countries therefore became a focus because it was a means of ensuring and serving national interest and needs in form of service delivery. The 2016 evaluation of their achievement in sustainability as millennium development goal,

many countries especially in the developing world had unsatisfactory levels. Governments world over acknowledged and recognized the need to examine contract management processes to make it accountable to all stakeholders (Thai, 2003; Agaba and Shipman, 2007). Therefore, public sector organisations need to recognise that achieving sustainable supply requires commitment to it throughout the contract management process.

In Africa, colonial powers introduced similar service delivery through contractors from mainly the colonizing countries for civil works, supply of goods and services since the local capacity was not well developed in their decentralization policy of governance to prepare independence (Hunja, 2003; World Bank Report, 2005). In Uganda to date there exists the Public Procurement and Disposal of Public Assets (PPDA) Act, and attendant regulations, 2003; Local Government PPDA Regulations of 2006 and the amendments thereto of 2011 and 2014 that are legal instruments where there exists provisions on contract management which provide the framework for economic, social, and environmental deliverables from public supply contracts.

The inability to complete works projects on time and within the budget continues to be a chronic problem worldwide and is worsening (Monckza et al, 2002). Bautista and Ward (2009) observed that the trend of cost overruns is common worldwide and that it's more severe in developing countries. For instance most of the construction projects in Uganda have had problems with delays in completion and cost overruns and this has caused a lot of economic concern. In addition, the lack clear compliance with key practices and guidelines on responding to social and environmental concerns as well is a threat to sustainable supply schemes in public entities (Mbabazi, 2007).

Contract management is the process that enables both parties to a contract to meet their obligations in order to deliver the objectives required from the contract. It also involves building a good working relationship between customer and provider. It continues throughout the life of a contract and involves managing proactively to anticipate future needs as well as reacting to situations that arise (Office of Government Commerce, 2002). And The

Chartered Institute of Procurement and Supply, UK, (2007) defines contract life cycle management as the process of systematically and efficiently managing contract creation, execution and analysis for maximizing operational and financial performance and minimizing risk. Thus, basing on the latter view, minimizing the whole portfolio of risk in the economic, social, and environmental spheres should be at the focus throughout contract management activities.

Contract Management, according to the PPDA Act (2003) refers to the administrative activities associated with handling of contracts, such as appointment of the contract manager, contract implementation plan, quality assurance, contract administration, monitoring implementation, contract completion; final deliverables report, final acceptance or handover, defects liability or warranty periods, archiving records, payment, project commissioning and close out. Broadly as laid down the PPDA Chart 5 as revised by 2014, contract management entails three major phases: appointment of the contract management authority, monitoring contract implementation, and contract completion. And following the 2014 PPDA amendments on the Contract Management process, Regulations 47 and 48 provide for the release of guarantee and reconciliation of payments against deliverables.

Elsey in CIPS (2007) asserts that, there are a number of other definitions of contract management, the majority of which refer to post-award activities. Successful contract management, however, is most effective if upstream or pre-award activities are properly carried out. Such upstream or pre-award activities include: a) Preparing the business case and securing management approval; b) Assembling the project team; c) Developing contract strategy; d) Risk assessment; e) Developing contract exit strategy; f) Developing a contract management plan; g) Drafting specifications and requirements; h) Establishing the form of contract; i) Establishing the pre-qualification, qualification & tendering procedures; j) Appraising suppliers; k) Drafting ITT documents; l) Evaluating tenders; m) Negotiation; and n) Awarding the contract.

Having carried out the pre-award activities associated with contract formulation and award, the process now turns to post-award activities. These can be grouped into three general areas: the management of service delivery, the management of the relationship with the supplier and contract administration. Elsey in CIPS, (2007) specifically identifies post-award activities to include: o) Changes within the contract; p) Service delivery management; q) Relationship management; r) Contract administration; s) Assessment of risk; t) Purchasing organisation's performance and effectiveness review; and u) Contract closure.

The Institute of Supply Management (ISM) (2008) defines sustainability as "the ability to meet current needs without hindering the ability to meet the needs of future generations in terms of economic, environmental, and social challenges." Effective procurement and supply is sustainable procurement and supply that promotes positive outcomes for the economy, environment and society. The public sector should promote sustainable procurement throughout the acquisition and disposition process and sustainability should be embedded in all procurement and supply decision making.

According to Thales, UK (2015), Sustainable Supply is where measures are developed to identify suppliers' contribution to improve the sustainability of that specific supply chain, e.g. waste, water, emissions, materials, service and innovation etc. "Sustainable Procurement means Sustainable Supply." "Without sustainable supply sustainable procurement is in oblivion." And according to CIPS (2013) "Sustainable Supply is thus a process whereby organisations meet their needs for goods, services, works and utilities from suppliers in a way that achieves value for money on a whole life basis in terms of generating benefits to society and the economy, whilst minimizing damage to the environment". Following a sustainable process is best practice; it is more than being 'green'. Removing unnecessary wastes from the process of procuring what is needed. This is about risk management and reducing/mitigating that risk, considering whole life cost and taking account of the Company's reputation.

The Public Procurement and Disposal of Public Assets Act, of 2003 as amended, works is defined as; 'any work associated with the construction, demolition, repair, or renovation of a building or structure, on the surface or underground, on and under water, and includes the preparation, excavation, erection, assembly, installation, testing and commissioning of any plant, equipment or materials, decoration and finishing, turnkey projects, build own and operate projects, build operate and transfer projects, or any arrangement of this nature, or any other form of private and public partnerships or joint development activities, all or any of which may include management, maintenance, testing, commissioning and training; as well as supplies or services incidental to those works where the value of such incidental supplies or services does not exceed the value of the works.'

Confidence in government entities derives from demonstrated capability to deliver services in a way that meets national and public needs economically whilst demonstrating social and environmental responsibility. The ability of government entities like Civil Aviation Authority (CAA) to meet national service delivery needs is a source of credibility on their part. Conversely, government establishments face a critical test when they fail to meet peoples' expectations of economic use of public resources and safeguard of the environment. At the centre of sustainable supply is accountability to stakeholders, value for money, efficient and effective use of resources, improved communication and decision-making processes. If the accountability and supply innovation processes are weak, sustainable value for money will not be realized in the procurement and supply processes of public entities.

Several theories and models exist to explain, describe, understand and predict the relationship that exists amongst the study variables. However, in this study, three (3) theories i.e. contract compliance theory, agency theory, and transaction cost theory that directly relate to contract management and sustainable supply in the Public Sector are explained. These are supported by other theories and models of business management that are generalists but fundamental to grounding the link between contract management and sustainable supply in the public sector including; the Victorian Procurement Governance model, The PPDA

Contract Management Model, the CIPS Contract Management model, economic and management theories.

Contract Compliance Theory is centered on the act of conforming to contract agreements between buyers and suppliers. Generally, the procurement function is held responsible for all reasons of non-compliance in the supply of goods, services, works and utilities. According Aberdeen Group (2006) compliance may be internal or external. Internal compliance can be interpreted as either conforming to the rules in the agreement by purchasing organization such as payment terms and minimum order requirements or in purchasing from agreement only, that is, purchasing by using framework agreements for the entire company. As far as the projects as concerned, external contract compliance can take up several forms including unavailability of products services or qualified personnel, charging prices different from the contracted prices, or late delivery or delivering products that do not meet the contracted specifications. So, the achievement of sustainable supply can be determined embedding sustainability in contracts against which supply will be benchmarked.

The Agency Theory also provides theoretical basis for the performance outcomes of contract management. The theory adequately explains the relationship between the parties in contract management, their duties, and conflicts that arise amongst them, in this case Civil Aviation Authority (CAA) playing as the employer, which finally affects the sustainable supply of goods, services and works. On the other hand, the Best Value Theory by Baccarini and Collins (2003) emphasizes accounting for and pursuing the aspirations of local stakeholders by attempting to attain the highest quality and efficiency that are possible at a price people are willing to pay and other benefits expected to be delivered to society. The Transaction Cost Theory to contract management as proposed by Mclvor (2003) combines economic and management theories which determine the best type of relationship a firm should develop in the market place. This is essential to the integration and management of sustainable supply objectives of a public entity like Civil Aviation Authority.

Under pressure to do more with less, governments have moved from direct works provision to providing works by contract. Today citizens receive public works, supplies and services not only from their governments but also from a variety of suppliers working under contracts. Globally, public sector management is increasingly under pressure to go beyond the implementation of policies and procedures and to produce sustainable results. The public procurement sector has not been spared and in Uganda, there has been criticism that the public procurement legal framework is focused on compliance with little or no regard for sustainable supply of works through the process.

Of particular concern, has been the apparent financial loss and detrimental social and environmental liability costs to government when incompetent suppliers are awarded contracts while the competent are disqualified due to non-compliance with procedural requirements. Further, public officers are being held accountable not for results in service delivery but adherence to procedural requirements of the procurement and supply processes. In some Government departments, failure to absorb government funds and provision of the much needed social services has been blamed on the 'cumbersome' public procurement rules (Sabiiti & Muhumuza, 2012). In most public sectors, procurement is largely tactical in nature (Aberdeen Group, 206; Hunja, 2003) were the focus is normally on supplier selection and contract award (Office of Government Commerce, 2008).

Public Agencies like Civil Aviation Authority have also realized the importance of integrating sustainability in contracting. Civil Aviation Authority was created by Act of parliament and started operating officially in the year 1992. Despite CAA's mission, a lot of concerns had been raised about CAA's inadequacies in sustainable supply practice because of contract management gaps. It was revealed that 26% of the procurement records with the lowest level of compliance are related to poor contract management (PPDA Audit Report, 2013) raising significant threat to sustainable supply. The Civil Aviation Authority (CAA) was established in 1991 through CAA Ordinance number 2 of 1991, which was later replaced by CAA Statute Number 3 of 1994, Cap 354. The Act spells out the establishment,

objectives, functions and powers of the Authority and as of October 2016, it was under the Ministry of Works and Transport.

The mandate of the CAA is to coordinate and oversee Uganda's aviation industry, including licensing, regulation, air search and rescue, air traffic control, ownership of airports and aerodromes, and Ugandan and international aviation law. It also represents Uganda in an international capacity within the aviation community and in all other aviation matters. CAA's Vision is for "the Safest, Most efficient and Affordable Air Transport system in Africa and beyond." In order to keep focused on the cardinal purpose for its establishment and in line with the convention that guides the development and management of the international civil aviation system, the Authority set itself a mission that seeks *"to maintain the highest standards of safety, security and service in Civil Aviation."*

As a way of achieving its mission, the Authority is propelled by the cardinal objective of its establishment which is "*to promote the safe, secure, regular and efficient use and development of civil aviation inside and outside Uganda*." Secondary objectives include the following: i) Maximisation of revenue by providing facilities and services on cost recovery basis to the extent possible; ii) Maintenance of a high quality, cost sensitive and well motivated workforce; iii) Promotion and support of efforts for protection of the environment; and iv) Continued improvement of the quality of services to customers of airports managed by the Authority.

In addition to the mandate embedded in its vision, mission and objectives, the values of CAA give an objective assessment its commitment to sustainable supply of works. These values as mandated under 1994 Act of Parliament include; accountability, flexibility, passion for technology, transparency, quality, and people-centeredness. Accountable in that CAA takes responsibility for their actions and account for them at all levels. Value for money and good corporate governance are the foundations of the agency's decisions towards economic and socially responsible supply of works. The agency commits to taking the high road by practicing the highest ethical standards, and by honoring its commitments. In addition, in being flexible the agency focuses on understanding the dynamics of the aviation industry and

the needs of its clientele. And in order to endure; the agency observes a high level of flexibility without compromising the safety and security standards of its services.

In light of CAA's mandate, the works contract management practices compromised in all the above cases of CAA are a true reflection of inadequacies in contract management with specific regard to pre-contract award activities, relationship management and service delivery management. Such inadequacies have seen a translation into sustainable supply gaps in CAA and the public in particular whom CAA owes a duty of economic, social and environmental responsibility as a public entity. So, the need to streamline the contract management process in the procurement and supply of supplies, services and works within CAA, requires an investigation into such noted inadequacies which was the focus of this study so as to realize an improvement in sustainable supply output.

1.2 Statement of the problem

There is no much doubt that there has been growing interest in contract management in the developing world as this is fundamental to realization of sustainability targets prompting many studies on contract management (Karanu, 2014). Despite the emphasis and regulatory framework on contract management, Uganda Public Procurement Compliance Reports sanctioned by the Public Procurement and Disposal of Public Assets Authority have continuously shown contract management as one of the areas where performance of public entities is poor. According to the Baseline Survey Report on Public Procurement Systems in Uganda (PPDA, January 2014), there were significant variances between the actual and indicative timeframes, costs and management of disputes with affected communities in the management of contracts of works projects at Civil Aviation Authority attributed to inadequacies in pre-contract award and post-contract award stages.

While in some contracts, poor communications and low collaboration between the employer-CAA and some contractors evidently signaled relationship gaps that compromise the commitment of parties to sustainable supply practice in works procurement. The 2013 CAA Contract Management Reports indicated cost overruns, lack of clear terms and service level agreements on managing social and environmental interests in on-going expansion of

Entebbe International Airport and the upgrade of Mbarara Airfield. These pre-contract award activities, relationship management, service delivery management inadequacies that failed the optimization of sustainable supply outcomes from contracts of works in Civil Aviation Authority that prompted the investigation on the relationship between contract management and sustainable supply of works in the aviation industry.

1.3 Purpose of the study

The purpose of the study was to examine the relationship between contract management and sustainable supply of works in the aviation industry with focus on Civil Aviation Authority.

1.4 Research objectives

The study was guided by the following objectives;

a) To examine the relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority.
b) To assess the role of relationship management in achieving sustainable supply of works by Civil Aviation Authority.
c) To examine the relationship between service delivery management and sustainable supply of works in Civil Aviation Authority.

1.5 Research questions

The study was guided by the following research questions;

a) What is the relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority?
b) What is the role of relationship management in achieving sustainable supply of works by Civil Aviation Authority?
c) What is the relationship between service delivery management and sustainable supply of works in Civil Aviation Authority?

1.6 Research hypotheses

H_{o1}: There is no significant relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority.

H_{A1}: There is a significant relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority.

H_{o2}: There is no significant relationship between relationship management and sustainable supply of works in Civil Aviation Authority.

H_{A2}: There is a significant relationship between relationship management and sustainable supply of works in Civil Aviation Authority.

H_{o3}: There is no significant relationship between service delivery management and sustainable supply of works in Civil Aviation Authority.

H_{A3}: There is a significant relationship between service delivery management and sustainable supply of works in Civil Aviation Authority.

1.7 The scope of the study

The scope of the study includes time scope, geographical scope and content scope. These provide the limits within which the study operated.

1.7.1Content Scope

The study focused on contract management as the independent variable and sustainable supply of works as the dependent variable. The independent variable has three constructs considered by study including: pre-contract award activities, relationship management and service delivery management. The dependent variable is sustainable supply of works with focus on the economic, social, and environmental spheres. These constructs were considered because they are more strongly linked to the problem context within Civil Aviation Authority and therefore were adequate parameters to examine the relationship between contract management and sustainable supply of works.

1.7.2 Geographical scope

The study was conducted at Civil Aviation Authority-Entebbe, Katabi Sub County, Wakiso District. The authority's head offices are at Entebbe International Airport, approximately 40 kilometers (25 mi), by road, south of Kampala-the capital and largest city in Uganda. The coordinates of the Uganda CAA Headquarters are: 0°02'23.0"N, 32°26'53.0"E.

1.7.3 Time scope

The study considered an assessment of relationship between Contract management and sustainable supply of works in Civil Aviation Authority for the period 2013-2017. This period was considered appropriate because it is the period in which significant contract management inadequacies relating to sustainable supply of works were noted in CAA.

1.8 Significance of the study

To *Civil Aviation Authority:* The study provides analytical and statistical information that may serve as guidelines for developing a sustainable contract management strategy that can be used in order to have a systematic and effective approach to supply of works in Civil Aviation Authority.

To *procurement professionals and contract managers:* It is beneficial or of interest for procurement professionals and contract managers to aim at ensuring that sustainable supply of works is effectively and efficiently delivered through procurement processes of their organisations.

To *other stakeholders:* The study is of benefit to all stakeholders including government departments and ministries, local government and authorities. This is by providing them with insights into how effectively and efficiently to manage sustainable supply and administer contracts. The study fosters creation of new knowledge and awareness in the areas of contract management in the public sector.

To *knowledge:* Knowledge is cumulative. Important information can be acquired about a research topic from similar work done, on the same area of research by future researchers. Therefore, the study is of much significance to the research institutions, students and other researchers who may get the findings useful in their investigations in a similar area of study.

1.9 Structure of the dissertation

The dissertation is structured in nine chapters including:

Chapter One: The Introduction which gives the background to the study, the statement of the problem, purpose of the study, research objectives, research questions, research hypotheses, scope of the study, and significance of the study on contract management and sustainable supply of works in Civil Aviation Authority.

Chapter Two: The Study Literature presenting the different views, theories, models, and concepts on contract management and sustainable supply of works in the form of literature survey, literature review, theoretical review, and conceptual framework.

Chapter Three: The Methodology which highlights the research design, study population, sample size, sampling procedures, data collection methods, data collection instruments, approach to data processing, analysis, and presentation as well as ethical considerations and study limitations.

Chapter Four: This presents the data, analysis and interpretation of the findings on pre-contract award activities and how they have impacted on sustainable supply of works in Civil Aviation Authority.

Chapter Five: This presents the data, analysis and interpretation of the findings on relationship management and its role in achieving sustainable supply of works by Civil Aviation Authority.

Chapter Six: This presents the data, analysis and interpretation of the findings on service delivery management and how it has impacted on sustainable supply of works in Civil Aviation Authority.

Chapter Seven: This presents the harmonization of findings on contract management and sustainable supply of works in Civil Aviation Authority with the ideal practice set out in the literature.

Chapter Eight: This presents the Summary of findings, Conclusion and Recommendations of the study on contract management and sustainable supply of works in Civil Aviation Authority.

CHAPTER TWO

STUDY LITERATURE

2.1 Introduction

This chapter entails review of literature relating to concepts, theories, models and views of contract management and sustainable supply of works in the aviation perspective. It also establishes the gaps that this study intended to fill based on the review or survey of previous research work on the main variables of the study. These are advanced following a conceptual framework/model which is the basis of expanding the theory used in the research, the concepts given in the conceptual background and finally explains views of different researchers, which are related to the study. Basically this chapter is based on review of views of different researchers, scholars, and other authorities, which were conceptualized by the researcher to get a directed path for this study.

According to Patton, (2002), a good literature review needs to indicate the different views, agreements, disagreements, and trends of thought on the topic of research and be accurately portrayed and acknowledged in the text. She further states that: A literature review needs to produce a conceptual framework, including philosophical stances and theoretical assumptions, key assumptions and theoretical problems or contradictions. Amin, (2005) confirms that a literature review is a critical discussion of all significant, publicly available literature that contributes to the understanding of a subject. Bryman, (2001) concurs with Oliver, Blaxter, Hughes, Tight, Stilwell and Pickard, that a literature review involves the systematic identification, location and analysis of documents containing information related to the problem under investigation in this case, contract management and sustainable supply of works in Civil Aviation Authority.

2.2 Literature Survey

A literature survey is necessary to establishing research gaps to be filled by the current study (Sarantakos, 2005). Though a number of studies have been carried out, inadequate coverage

has been done to deal with contract management and sustainable supply. Studies that were conducted before did not address the gaps that the current study sought to fill as established in the works of Banyenzaki (2015), Muhwezi (2015), and Asiimwe (2017).

Banyenzaki (2015) carried out research on Contract Management Practices and Performance of the Road Construction Projects in Wakiso District–Uganda. The objectives of the study were: to examine the role of monitoring intensity in enhancing performance of the road construction projects in Wakiso district; to analyze the relationship between risk management and performance of the road construction projects in Wakiso district; and, to assess the role of evaluation in enhancing performance of the road construction projects in Wakiso district. A cross-sectional design was employed where both qualitative and quantitative methods were used in the study. The targeted sample size was 132 respondents out of a total population of 241 road construction stakeholders based on Krejcie and Morgan (1970) table for sample determination.

The findings indicated that there was a significant positive relationship between monitoring intensity, risk management, evaluation and performance of road construction projects in the study context. His study was limited to monitoring intensity, risk management and contract evaluation in enhancing performance of the road construction projects. It left gaps of considering pre-contract award processes that are essential to achieving sustainable supply of works and service delivery management as key elements of contract management that were considered in this study. Further in his study, performance was adapted as a dependent variable which left a gap in considering sustainable supply of works as a variable dependent on contract management processes.

Muhwezi (2015) conducted research on contract management, inter functional coordination, trust and contract performance of works contracts in Ugandan Public Procuring and Disposing Entities. This study was cross-sectional and correlational. It also took the descriptive and analytical design. Data was collected from a representative sample of 108 completed and fully documented works contracts in the central government procuring and disposing entities in Uganda. Out of these, responses from 64 were used for analysis, using

the Statistical Package for Social Scientists (SPSS).

Findings from the study revealed that delivery management was relatively more important than relationship management and contract administration and that in a rules based system, the importance of inter-functional coordination to contract performance is minimal, further expounding on the critical difference between private and public procurement systems. However, the study did not adequately reveal its adopted components of service delivery management and relationship management as predictors of sustainable supply of works. And the study also never considered pre-contract award activities and how they impacted on sustainable supply- which gaps the current study intended to fill.

Asiimwe (2017) carried out a study on contract management and service delivery in Civil Aviation Authority. The study used a descriptive, cross-sectional survey research design, with a target population of 153 in Civil Aviation Authority. It also employed a simple random sampling technique with a sample size of 70 respondents. Data was collected using questionnaires, analyzed using SPSS and presented using charts, tables, and graphs. The study findings indicated that state corporations practice effective contract management, which has a positive effect on service delivery. The study concluded that the common challenges involved in effective contract management in state corporations in Uganda include unclear project scope; unrealistic timeline and budgets; corruption; inflexibility; payment conflicts; and lack of cooperation.

However, her study centered on contract mobilization, service delivery management and contract monitoring and service delivery in Civil Aviation Authority. Her study left so many gaps on essential role of pre-contract award activities and relationship management in achieving sustainable supply. Therefore, while significant research work exists on the variables of this study, there are still gaps in regard to the study of the variables that this investigation about them at Civil Aviation Authority Uganda intended to fill.

2.2 Contract management and sustainable supply theories

Achieving sustainability is a key objective of public sector entities. Key functions like procurement of supplies, services and works are equally driven by this objective. How

procurement and supply of works contracts are managed greatly impacts on sustainability. Several theories explain the relationship between contract management and sustainable supply including the agency theory, the compliance theory, the transactional cost theory, inter alia. Hence, this study was based on these theories to establish the relationship between the variables in an entity like Civil Aviation Authority.

2.2.1 The Agency Theory

Academic research in contract management is founded on several economic and management theories, the most often referred to is the agency theory (Eisenhardt, 1989). A contract between a government entity like CAA and a contractor reflects a principal-agent relationship. The principal (government entity) contracts with the agent (contractor) to perform some level of effort, such as developing or manufacturing a product or providing a service. In this relationship, the government's objectives include obtaining the product or service at the right quality, right quantity, right source, right time, and at the right price (Monckza, 2004). However CIPS (2013) recognises that all these must be achieved while delivering social and environmental benefits as well.

The agent/principal theory also applied to this study. According to Khothari, (2004) the underlying principle of the contract theory is that there should be a clear understanding of the needs of the principal and ability of the agent to meet these needs competently. The theory becomes relevant to the study as it highlights the need for strategic management of procurement and supply contracts. When a contract is well defined and planned, the principal and agents find it easy to meet needs of each other in an efficient way resulting into timely execution of the contract. So, specification clarity of roles and commitment of parties acting agents in the pursuit of sustainable supply is incumbent upon any effective contract management process. Most important is commitment of parties to sustainable contract management and supply of works at the strategic level.

A government entity like CAA also has the additional objective of ensuring the supplies, services, and works procurement and contract management to that effect is in accordance

with public policy and statutory requirements (PPDA, 2003 and 2014 amendments). Contractors, on the other hand pursue the objectives of earning a profit, ensuring company growth, maintaining or increasing market share, and improving cash flow, just to name a few. Because of the different and conflicting objectives between the principal and agent, each party is motivated and incentivized to behave in a certain manner. This behavior includes either withholding or sharing information, or even compromise the commitment of parties to sustainable supply. In principal-agent relationships that involve higher levels of uncertainty, which result in higher risk, the information available to the government entity and contractor is typically asymmetrical. So, acting in public trust on policy and law, Civil Aviation Authority and its suppliers should nurture relationships that will lead to sustainable contract management and supply of works.

Agency theory is concerned with the conflicting goals between the principal and the agent in obtaining their respective objectives and is focused on mechanisms related to obtaining information, selecting the agent, and monitoring the agent's performance. Thus, how contracts are planned, structured, awarded, and administered to embrace concerns for sustainability, has its basis in agency theory and the principal-agent problem. Agency theory can also be applied to public procurement, specifically in the management of contracts in public entities (Gower, 2003). In government contracts, the same principal-agent model exists. The principal, in this case the public and procuring entity, is faced with the problem of ensuring the agents, in this context the members of the contract manager, contract team, the procurement function, and the supplier will choose to pursue the principal's best interests. Thus, the theory applies to this study in way that sustainable supply is a function of those in principal-agency duties' ability to commit to pre-contract award activities, relationship management, and service delivery management in optimizing sustainable supply of works in CAA.

2.2.2 The best value and transaction cost theories

On the other hand best value theory by Ellis and Garry (1990) in Anglin and Good (2009) emphasizes accounting for and pursuing the aspirations of local stakeholders by attempting

to attain the highest quality and efficiency that are possible at a price people are willing to pay. It requires officials to obtain economic, efficient and effective services so as to respond to local stakeholders. The theory is applicable since contract management and sustainable supply both have aspects of value for money and social satisfaction resulting from quality, efficiency, economy, effectiveness, diversity and inclusion. The process of awarding public supply contracts guarantees and safeguards the rights and interests of government, the public and the contractor as well. However, the application of these theories to explain effective contract management is limited. In this study, the theory explains the relationship between the PDE and the provider in delivering sustainable value for money from contracts of procurement and supply.

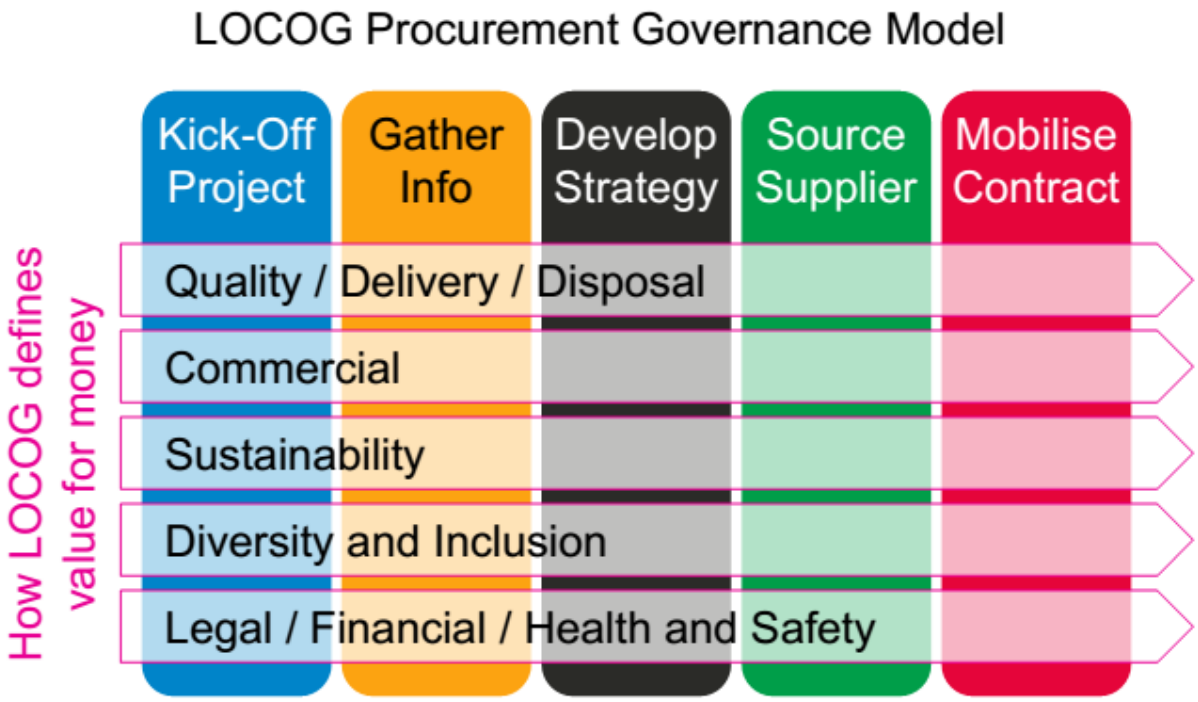
The transaction cost theory to contract management as proposed by Taylor (2009), combines economic and management theories which determine the best type of relationship a firm should develop in the market place. Waly and Gayle (2013) indicated that transaction cost economics provide a valuable theoretical approach for determining whether internal production is more efficient than outsourcing the market. Transaction costs in public organizations allows us to see the cost of information asymmetries, need for fail safe service delivery, and the benefit and cost of outsourcing or maintaining capacity in-house . Governments play important marketing management role when contracting (Davison and Wright (2009), but transaction costs can be reduced if there are established legal and management institutions to ensure success (Coronel and Kalaw, 2006). Hence, the need to evaluate the importance attached to relationship management in approaching the supply market to achieving sustainable supply was central to this study.

2.2.3 The Victorian Procurement Governance Model

According to Victorian Procurement Audits (2011) Procurement Governance in public entities should focus on Value for money that integrates financial, delivery, disposal, commercial, financial, sustainability, legal, health and safety, as well as diversity and inclusion. This should be greatly visible throughout from project kick-off, gathering

information, strategy development, supplier sourcing, and contract mobilisation. This is equally by CIPS (2013) recognizing that sustainable supply requires more emphasis on pre-contract award activities than on post-contract award activities.

Figure 1: **Victorian Procurement Governance model**



Source: 2011, Victorian Procurement Audits

Whereas other value for money models in local government (LOCOG) focus on efficient, effective, and economic use of resources in procurement, The Victorian Procurement Governance Model draws wider concerns than these. It presupposes that focus on optimization of value and cost only would be a narrow perspective of value for money. It ignores the value interests beyond the procuring entity, and in fact it sub-optimizes the value position sought by the procuring entity. The best and wider value for money should embrace interests of society and environmental protection. Therefore, the model grounds benchmarks and the relevance of investigating whether sustainable supply of works is given attention in the contract management activities of Civil Aviation Authority.

2.2.4 The CIPS Contract Management Model

The Chartered Institute of Procurement and Supply (CIPS), UK, (2007) defines contract life cycle management as the process of systematically and efficiently managing contract creation, execution and analysis for maximizing operational and financial performance and minimizing risk. Thus, basing on the latter view, minimizing the whole portfolio of risk in the economic, social, and environmental spheres should be at the focus throughout contract management activities. CIPS asserts that there are a number of other definitions of contract management, the majority of which refer to post-award activities. Successful contract management, however, is most effective if upstream or pre-award activities are properly carried out.

The Upstream or pre-award activities advanced by the CIPS (2007) include: a) Preparing the business case and securing management approval; b) Assembling the project team; c) Developing contract strategy; d) Risk assessment; e) Developing contract exit strategy; f) Developing a contract management plan; g) Drafting specifications and requirements; h) Establishing the form of contract; i) Establishing the pre-qualification, qualification & tendering procedures; j) Appraising suppliers; k) Drafting ITT documents; l) Evaluating tenders; m) Negotiation; and n) Awarding the contract. Therefore, the attainment of sustainable supply through contract management in Civil Aviation Authority should be largely centered on pre-contract award activities than the post-award activities.

In addition, CIPS (2013) advances that, having carried out the pre-award activities associated with contract formulation and award, the process now turns to post-award activities. They have got an impact on the achievement sustainable supply in an on-going contract. These are grouped into three general areas: the management of service delivery, the management of the relationship with the supplier and contract administration. Specifically they include: o) Changes within the contract; p) Service delivery management; q) Relationship management; r) Contract administration; s) Assessment of risk; t) Purchasing organisation's performance and effectiveness review; and u) Contract closure. Out of these, the study is focused on the

role of relationship management and service delivery management in achieving sustainable supply in Civil Aviation Authority.

Further, the 2007 CIPS model adds that, the central aim of contract management is to obtain the services as agreed in the contract and achieve value for money. This means optimizing the efficiency, effectiveness and economy of the service or relationship described by the contract, balancing costs against risks and actively managing the customer–provider relationship. Contract management may also involve aiming for continuous improvement in performance over the life of the contract. This supported by the 2011 Victorian Procurement Governance model such terms agreed and value for money sought from contract management should embrace social and environmental concerns as well.

2.2.5 The PPDA Contract Management Model

Contract Management in CAA as guided by the PPDA Act (2003) should involve the administrative activities associated with handling of contracts, such as appointment of the contract manager, contract implementation plan, quality assurance, contract administration, monitoring implementation, contract completion; final deliverables report, final acceptance or handover, defects liability or warranty periods, archiving records, payment, project commissioning and close out. Broadly as laid down the PPDA Chart 5 as amended by 2014 under Regulations 49-52, contract management entails three major phases: appointment of the contract management authority, monitoring contract implementation, and contract completion. And following the 2014 PPDA amendments on the Contract Management process, Regulations 47 and 48 provide for the release of guarantee and reconciliation of payments against deliverables.

Section 50(2) of the PPDA Act, 2003, provides that once a contract has been placed, it must be managed to ensure that the provider performs in accordance with the terms and conditions of the contract and that the Procuring and Disposing Entity meets all its obligations under the contract. Contracts management is the responsibility of the User Department, but an external

contracts manager may be appointed where appropriate. Waly, et al. (2013) in caution to this proposition assert that, it is important that contracts are actively managed throughout their life to help ensure supplier performance is satisfactory, stakeholders are well informed and all contract requirements are met. So, the appoinntment of contarct managers and user department responsibility in ensuring that sustainable supply of works is derived from contract management activities in Civil Aviation Authority was the focus of the study.

2.3 The importance of Contract Management

Contract management is very vital in an entity like CAA because it is a legal requirement for all formal and open tendering process for all public sector contracts that exceeds certain thresholds (Office of Government Commerce, 2012). It is very important when a contracting authority has awarded a contract that such contracts are properly managed. The Aberdeen Group (2006) asserted that contract management has been placed at the centre of business strategy due to the pressure extracted from contracted relationships to avoid unnecessary costs and risks on the taxpayers. Entities seek to reduce costs in order to satisfy the public requirements quickly by having more standards and centralized contract processes to comply with laws and regulations and manage risk better. Hence, contract management is imminent in any efforts to achieve sustainable supply of works through regulatory compliance and mitigating social and environmental risk.

Like all public sectors elsewhere, sustainability is at the heart of a public sector like CAA. According to the report of National Treasury of the Republic of South Africa (2010), public sector entities are looking at maximum returns on investment in order to deliver more services of high level or value for money to the public. On the other hand Taylor (2009) defined contract management as a process that enables both parties to a contract to meet their obligations in order to deliver the objectives from the contract. Contract management service of Cambridge Shire County Council (2009) also defined contract management as a process of administering an agreement through established mutually beneficial relationship between all parties. These perspectives signal the importance of contract management in achieving

sustainability and particularly the role relationship management can play achieving sustainable supply solutions in works procurement.

In the CIPS Guide (2007) it is noted that successful contract management is most effective if upstream or pre-award activities are properly carried out. The Office of Government Commerce (2002) also recognizes that good contract management practice is essential to realization of expected service to the public. But such service should be sustainable. At center of such practice should embrace service delivery management, relationship management, and contract administration. So, how the former two elements are integrated into contract management within CAA to achieve sustainable supply of works was sought to be established by the study.

Cost effective service delivery should a focal item of contract management activities in CAA. Elsey (2007) further recognizes that organizations in both the public and private sectors are facing increasing pressure to reduce costs and improve financial and operational performance. New regulatory requirements, globalization, increases in contract volumes and complexity have resulted in an increasing recognition of the importance and benefits of sustainable contract management. Conceptually, contract management has become a megatrend in many public entities especially as result of social accountability and increased demand of service delivery by citizens whilst delivering social and environmental benefits (Baccarini and Collins, 2003).

2.4 Sustainable Supply of works

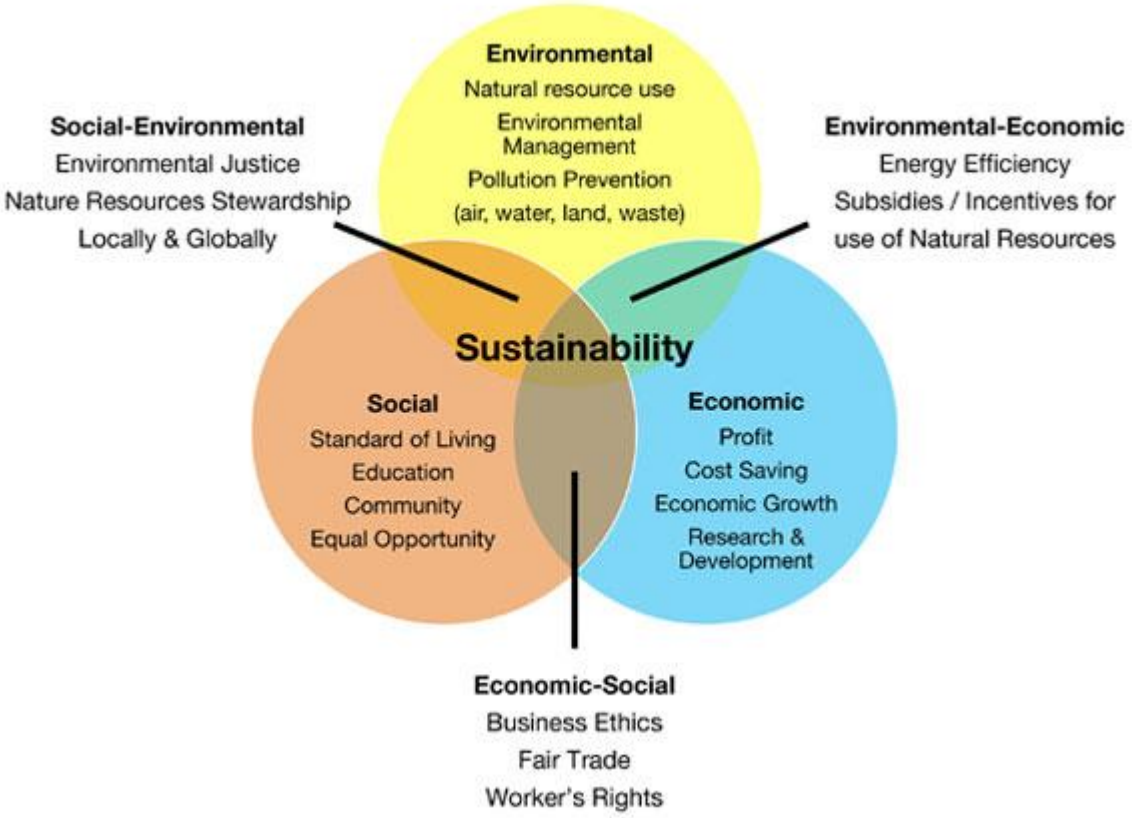
The Institute of Supply Management (ISM)-(2008) defines sustainability as "the ability to meet current needs without hindering the ability to meet the needs of future generations in terms of economic, environmental, and social challenges." Effective procurement is sustainable procurement that promotes positive outcomes for the economy, environment and society. The public sector should promote sustainable procurement throughout the acquisition and disposition process and sustainability should be embedded in all procurement decision making. An organization practicing sustainable procurement should consider the

three aspects of sustainability (economic, social and environmental) to create a more enduring approach to procuring goods and services that will contribute positively to the community and beyond.

Sustainable Supply is thus a process whereby organisations meet their needs for goods, services, works and utilities from suppliers in a way that achieves value for money on a whole life basis in terms of generating benefits to society and the economy, whilst minimizing damage to the environment (Chartered Institute of Procurement and Supply, 2013). ISM (2008) and CIPS (2013) both recognise that sustainable supply equals to a proactive approach to sustainable procurement which is' a purchasing and investment process that takes into account the economic, environmental and social impacts of the entity's spending. Sustainable procurement allows organizations to meet their needs for goods, services, construction works and utilities in a way that achieves value for money on a whole-life basis in terms of generating benefits not only to the organization, but also to society and the economy, while remaining within the carrying capacity of the environment". The proactive approach by government entities like Civil Aviation Authority to sustainable procurement of works in particular was at the heart of this study.

ISM (2008) further notes that, public sector agencies and private entities enormously spend on procuring goods, services and works. There is an expectation that they use the power afforded by such huge spend to realise wider community benefits when undertaking procurement exercises and awarding contracts. These 'wider community benefits (or 'social value), can be broken down into social, economic and environmental benefits, as shown in Fig 2. Where wider community benefits have been identified as being relevant and linked to the subject matter of the contract, and therefore to be included in the specification, it may be that pre-qualification questions are asked as to applicants' experience in delivering such benefits. The derivation of these benefits by Civil Aviation Authority from its contractors was investigated by this study.

Fig 2: The Three Spheres of Sustainability



Source: BITC (2009) 'How to Manage Your Supply Chains Responsibly'

2.4.1 Environmentally preferable supply

According to ISM (2008), environmentally preferable, or "green", procurement and supply covers products in all aspects of government purchasing, including office supplies, paper products, computer equipment, vehicle parts, cleaning products, landscaping, bathroom fixtures, packing materials, food preparation, construction, and lighting. The various directives issued by governments cover energy conservation, solid waste reduction and recycling, pollution prevention, water contamination, etc. Pollution prevention has become a central focus for environmental efforts in many states and local communities.

ISM (2008) further adds that, one area where Government plays a primary role in pollution prevention is as the nation's single largest consumer of goods and services. In the practice of

sustainable procurement, there is to incorporate a focus on how the governments, through their purchasing agents, seek to implement environmental preference through acquisition and supply processes which recognize and affirm pollution prevention and resource conservation (affirmative procurement and supply), alternative fuels, ozone depletion, and elimination of hazardous. How this is integrated CAA's contract and supply management processes, was sought to be investigated in this study.

The National Institute of Governmental Purchasing, Inc. (2012) recognises that, in most cases, the environmentally preferable choice should be made where it is cost effective, uses life-cycle costing, and will not interfere with the agency's mission. There are often direct financial gains to be achieved by procuring agencies from the procurement of products containing environmentally preferable materials. For example, the cost of a retread tire is usually 30-50% less than the cost of a new tyre. The life-cycle cost for many energy-efficient appliances is much lower in certain areas of the country than equipment that costs less initially. Government agencies like CAA need pursue a cost effective environmental management policy in its procurement and supply arrangements.

The National Institute of Governmental Purchasing, Inc. (2012) further recognises that, Environmental issues to be considered when drafting specifications, method statement questions and tender evaluation criteria, include: i) when waste is created, it gives priority to preparing it for re-use, then recycling, recovery and last of all disposal (e.g. landfill). The durability, reparability, reusability, recyclability and upgradability of products; ii) What are the supplier`s responsibilities, for example, in relation to end of life disposal?; iii) Recycled goods/content; iv) Packaging, e.g. 'Take back' arrangements for reuse, recycling; v) Efficiency of products, including eco-settings; vi) Avoidance of hazardous chemicals, wherever possible; vii) Ensuring that timber is from legal and sustainable sources; viii) standards for design of new buildings, refits and extensions; ix) Minimising carbon emissions, e.g. through the use of low emission/low carbon vehicles and logistics planning; and Use of renewable energy/alternative fuels. The commitment of CAA to such criteria in its specifications to suppliers was to be established by the study.

2.4.2 Socially Responsible Supply

According to Levin (2014), in the supply chain context, procurement professionals must take Socially Responsible Procurement and Supply into account, along with other corporate considerations, such as 'value for money' and low cost sourcing, as well as consumer expectations of low prices. In broad terms, Corporate Social Responsibility is about corporate behaviour, governance and transparency in key social, environmental and business areas. It's about considering the broader impact of company actions on all stakeholders. It's about ensuring that companies do business responsibly, take a leadership position in community and social issues relevant to its own business operations (including those of its supply network), and are transparent about their actions in these areas. Hence, CAA needs to evaluate its suppliers for commitment to Corporate Social Responsibility for sustainable supply of works.

Levin (2014) further asserts that, 'Triple bottom line reporting' or 'the triple bottom line' says that a company needs to be responsible for not only its financial performance, but also its social and environmental performance. The ISM (2008) adds to it that, where CSR practices relate to procurement and supply, this is what known as "*Socially Responsible Procurement and Supply"* (SRP&S) - how best to achieve good social and environmental performance in the supply chain. Many of organisations (of various sizes) are beginning to realise the importance of addressing key SRP&S issues.

In addition Levin (2014) adds that, the plethora of issues that have arisen from the effects of globalisation are receiving increased social, media, and therefore political, attention. The CSR credentials of companies are being assessed by the media, regulators, the community, customers and shareholders, as well as by socially responsible investors considering their options. Business leaders are increasingly being expected to ensure that their companies behave as 'good corporate citizens', not only at home, but in their dealings internationally. However, this means that business leaders face tough decisions, including how to balance the interests of shareholders, and their expectations of high returns, with CSR practices (and their focus on the broader good of the community). Striking this balance in its procurement

and supply operations, CAA's image will be boosted hence the investigation on its contract management and sustainable supply practices in works procurement.

The Institute for Supply Management (2008) defines Socially Responsible Procurement as *a framework of measurable corporate policies and procedures and resulting behavior designed to benefit the workplace and, by extension, the individual, the organization, and the community.* Pursuing this objective requires focused efforts along the six dimensions of socially responsible procurement: community involvement; diversity and inclusion; environmental protection; ethics and financial stewardship; human rights respect ; and health and safety. With Levin (2014) in common consent, ISM (2008) recommends that procurement and supply professionals must set priorities and make tradeoffs between these dimensions in order to properly allocate what are typically limited resources. The procurement workgroup must consider the relevance of that dimension to overall company strategy, and whether actions taken by the company can truly make a difference in the marketplace. How these dimensions have been integrated into the procurement and supply strategy of CAA was the focus of this study.

2.4.3 Economic Supply

CIPS (2013) recognises the need to deliver economic benefits to the organisation's procurement and supply operations. Adams (2016) notes this means delivering value for money. According to the OECD, (2008), public entities should commit to delivery of value for money from procurement and supply. Value for money comes from the effective, efficient and economic use of resources. It is the objective of all procurement professionals to ensure value for money is achieved in all procurement and supply. Value for Money is about obtaining the maximum benefit over time with the resources available. It is about achieving the right local balance between economy, efficiency and effectiveness or, spending less, spending well and spending wisely to achieve local priorities...Value for money is high when there is an optimum balance between all three elements, when costs are relatively low, productivity is high and successful outcomes have been achieved.

However, Adams (2016) advances the "*Good value for money* is the optimal use of resources to achieve the intended outcome. And such outcome should be sustainable". He adds that, it is important to consider *life-cycle costing* when considering energy-efficient products. Where utility costs are low, the lifetime cost of operating a less expensive appliance that uses greater amounts of electricity may be less than purchasing a more expensive energy-efficient model. *Life-cycle analysis* is the comprehensive examination of a product's environmental and economic effects throughout its lifetime including new material extraction, transportation, manufacturing, use, and disposal. Additionally, efficient use of resources may reduce operating costs. Therefore, the consideration of value for money that is sustainable and considerations for eco-efficiency in CAA's procurement and supply was critical to this study.

Economic factors include the costs of products and services over their entire life cycle, such as: acquisition, maintenance, operations and end-of-life management costs (including waste disposal) in line with good financial management. It is important to consider whole life costs when undertaking procurement and supply exercise, including: Acquisition costs; Ownership costs; Disposal costs; and Sustainability assessments. This requires whole life costing. Whole Life Costing is *a process of assessing all costs associated with procuring supplies, services or works. It takes account not only of the initial purchase price, but the on-going cost of ownership, disposal costs and life expectancy*. Where relevant, it should also take account of the social, economic and environmental impact or costs of a product or service. Whole Life Costing is sometimes also known as "*Total Cost of Ownership".* Having such an integrated and inclusive evaluation of costs was critical to CAA's pursuit of economic supply.

According to the OGC, (2002) quality measures and metrics provide information about how well a service is performing. But of course it is no good providing a perfect service if the costs are prohibitive. Ensuring value for money is about the trade-off between service quality and cost. A key objective for the management of any contract is to ensure that it continues to achieve value for money over time. This is of essential application to the current study in determining how service delivery management as a key component of contract management

is aiding the attainment of value for money whilst delivering social and environmental benefits. The Victorian Value for Money model sets out that attaining VFM requires that all activities should address quality, delivery, disposal, commercial, sustainability, diversity and inclusion, legal, financial, health and safety. Hence, this investigation sought to harmonize these measures with service delivery as consequences of contract management activities of CAA.

2.5 Pre-contract award activities and sustainable supply

Elsey in CIPS (2007) asserts that, there are a number of other definitions of contract management, the majority of which refer to post-award activities. Successful contract management, however, is most effective if upstream or pre-award activities are properly carried out. Such upstream or pre-award activities include: a) Preparing the business case and securing management approval; b) Assembling the project team; c) Developing contract strategy; d) Risk assessment; e) Developing contract exit strategy; f) Developing a contract management plan; g) Drafting specifications and requirements; h) Establishing the form of contract; i) Establishing the pre-qualification, qualification & tendering procedures; j) Appraising suppliers; k) Drafting ITT documents; l) Evaluating tenders; m) Negotiation; and n) Awarding the contract.

Preparing the business case and securing management approval

According to CIPS (2007) all contracts are predicated on the need to obtain management commitment and approval at the appropriate level. This involves the formulation of a sound business case aligned to the organisation's corporate and functional strategies. The business case sets out the policy, business and contract objectives and the issues that affect the decision and the investment. It should seek to establish that the proposed contract will meet the need that it is achievable and affordable, and it should address issues such as: the outcome(s) of the contract, critical success factors, the possible alternatives, including, existing contracts, the risks including the extent and where they may fall, identification of any contingent needs and ramifications of proceeding timescale. The business case should be

prepared with the involvement of the stakeholders, including where and if possible, the end users. Thus, CAA should have a built business case for sustainable procurement and supply concerns in its works projects and this was sought to be established by the study.

In addition, CIPS (2007) advances that; such a business case should be documented and signed off by the sponsor or patron. The business case is a working document and should form the basis of the post-implementation review and used as a management tool to ensure that the original outcomes and benefits have been achieved. If the project is large, complex and in particular, innovative in nature, the market should be approached concurrently with the preparation of the business case, firstly to alert them to the potential need and secondly to take soundings on such issues as feasibility, capacity, capability, approach and level of interest.

Assembling the project team and developing a contract strategy

According to CIPS (2007), the need to assemble a team to manage a contractual procurement programme will be determined not only by the scale, nature, complexity and significance of the procurement and the necessary skills and experience but also by the extent to which it is considered appropriate, beneficial or a requirement to comply with organisational policy to involve stakeholders in the project. Factors to be considered when assembling the team are: the nature of the project; the nature of the work environment and the management style of the team; communication internally and externally. Levin (2014) in support adds that, in addition to the need to identify the necessary technical skills, knowledge and experience with the appropriate level of authority required of the members of the team, the importance of the ability of team members to work together effectively and the significance of the role of the project leader should be recognized. This is critical to successful implementation of sustainable supply of works in public aviation entities like CAA.

Levin (2014) and Adams (2016) concur with CIPS (2007) that the strategy relating to a particular contract should accord with the organisation's overall procurement and supply strategy. The development of a contract strategy is designed to establish the form of the

procurement and provide assistance in determining the formulation and award of the contract and the style and type of management to be adopted for the subsequent sustainable supply management. Concurrently with determining the contract strategy, consideration should be given to the evaluation strategy which sets the direction for the overall evaluation of suppliers and the associated tender process for economic, social and environmental parameters.

Risk assessment and developing a contract exit strategy

Risk can be defined as "the probability of an unwanted outcome happening". Risk assessment should be viewed in the overall context of risk management. Risk analysis is the process of identifying all the potential issues that can go wrong with an activity and then estimating the probability of each happening. It should form part of any significant contract management process and is a fundamental part of determining the contract strategy (CIPS, 2007). Therefore, in managing their supply contracts, public entities need embed assessment of the potential risk to sustainable supply of works throughout the contract management cycle.

In addition, a contract will conclude when both parties have satisfactorily fulfilled their responsibilities under the terms of the contract. This, for example, will occur when the goods or services have been supplied and payment made and/or at the end of a pre-agreed period of time. Adams (2016) however notes that, this situation does not remove the need to develop a contract exit strategy as part of the process of risk identification and reduction, and reinforces the importance of establishing the foundations of sound contract management. In the pursuit of sustainable supply of works, entities like CAA need to prepare a contract exit strategy that includes evaluation of the achievements made in sustainable efforts.

Developing a contract management plan and drafting specifications

During pre-contract award stages, it is normal for time to be devoted to the preparation of the business case, drafting specifications and tender documents selecting potential suppliers, and so on. However, time and effort must also be spent on determining how the contract will work once it has been awarded. It is vital that a contract management plan is drawn up in

advance of contract award. This should set out how the obligations of all the parties should be carried out effectively and efficiently (CIPS, 2007).

In addition, a specification is a statement of needs and its purpose is to present to potential suppliers a clear, accurate and comprehensive statement of the organization's needs in order that they can propose solutions to those needs. At the same time, the specification should enable the organisation to readily evaluate offers, provide the basis for performance measurement and be a record of evidence in any dispute. Whether CAA has a contract management plan and drafts specifications that cater for sustainable supply concerns in works procurement was at the center of this study.

Establishing the form of contract, pre-qualification & tendering procedures

According to CIPS (2007), contracts can range from a single, adhoc agreement for the provision of a product or service of relatively low monetary value, requiring little more than a short term, formal relationship, or an overarching framework agreement, through contracts for long term product or service contracts, to a series of contracts for large, complex construction or leading edge research and development contracts with multi-million pound values requiring the establishment of strategic partnerships and alliances. Adams (2016) and NIGP (2012) recognise that such strategic partnerships and alliances are essential to optimization of sustainable supply in organisations. They also add that, evaluating the suitability of potential suppliers to meet the commercial and sustainable supply requirements of the organisation should normally be undertaken via a pre-qualification system. This is the most efficient method of assessing suitability to meet the required criteria and is carried out prior to inviting them to tender.

Appraising suppliers and Drafting ITT documents

According to CIPS (2007), supplier appraisal establishes (or otherwise) a potential supplier's capability and capacity to deliver goods and services to your organisation now and in the future. The assessment process should establish the supplier's capability to control quality, delivery, quantity, price and all the other factors contained in the contract social and

environmental metrics. Following a successful appraisal, the supplier is placed on an approved list of suppliers. In addition, as with drafting specifications, great attention should be paid to ensuring that the contract document as a whole sets out clearly, comprehensively and unambiguously, the obligations of the parties to the agreement.

Evaluating tenders

According to Elsey in CIPS (2007), the formal opening procedure is followed by the tender evaluation process which. Tenders should be initially evaluated under the twin considerations of commercial and technical, the latter possibly carried out without price information, to ensure that the bids are brought to a comparable basis for more a thorough evaluation and study, without the influence of commercial considerations. However, Adams (2016) recognises that such considerations should incorporate social and environmental criteria. The criteria for tender evaluation should follow the award criteria set out in the tender documents and communicated to the potential suppliers. How this has been embraced by CAA in its tender evaluation process and documentation, is sought to be investigated in this study.

Negotiation and awarding the contract

CIPS (2007) notes that; it is the aim of every purchasing professional to conclude the best deal for the organisation he or she represents. This is often achieved by post-tender negotiation (PTN) and is an activity to be considered and planned for in the formulation of the contract strategy. Also Elsey in CIPS (2007) adds that, following tender evaluation and, where appropriate, negotiation, the project team will satisfy itself that an offer has been made which meets its requirements in all respects, including budgetary, and consider that it is in a position to accept an offer and award the contract to the tenderer who has made the most economically advantageous offer to the organisation. It may then move directly to the award stage or make a recommendation to higher authority levels within the organisation for acceptance. Hence, CAA's commitment to sustainable supply of works requirements in contract negotiation and award was sought to be established in this study.

2.6 Relationship Management and sustainable supply of works

The Chartered Institute of Procurement and Supply (CIPS), UK, (2007) defines relationship management as the implementation of a planned, coordinated, and controlled association that commits an organisation to its supplier(s) for some time with varying degrees of dependency. The Office of Government Commerce, (2002) recognises that, as well as the contractual and commercial aspects, the relationship between the parties is vital to making a success of the arrangement. The approach to this will vary depending on the contract, but it is important that the specific responsibilities are not neglected, even though there may not be a nominated individual assigned to the role of relationship manager. In long term contracts, where interdependency between customer and provider is inevitable, it is in the interests to make the relationship work. CAA's pursuit of sustainable supply of needs committing to effective relationship management in managing its works contracts.

Elsey in CIPS (2007) notes that it is important to make the relationship work effectively by developing mutual trust and understanding, creating an open and constructive environment, and contributing to the joint management of the contract delivery. It is primarily through the development of mutual trust and confidence that the other elements for success are created. The Office of Government Commerce (2002) also adds that 'the three key factors for success relationship management are trust, communication, and recognition of mutual aims. So, these are embedded in CAA's contract management in committing to sustainable supply of works ends was sought to be established by the study.

As the supplier gains greater understanding of the organisation's business needs and style and develops a level of confidence and trust, it will be more willing to be proactive and innovative in bringing forward improvements and savings to mutual benefit, more willing to share problems, plans and concerns, more willing to negotiate and more confident in investing for the longer term. The organisation benefits by gaining a greater understanding of the strengths and weaknesses of the supplier, enabling it to concentrate its management and development support in those areas (Elsey in CIPS, 2007). Therefore, CAA's practice in

creating contract relationships that make its suppliers share sustainable supply problems, plans and concerns in works projects was at the center of this study.

Management structures for the contract need to be designed to facilitate a good relationship, and staff involved at all levels must show their commitment to it. Information flows and communication levels should be established at the start of a contract, and maintained throughout its life. The three primary levels of communication in a contractual arrangement are operational (end-users/technical support staff), business (contract manager and relationship manager on both sides) and strategic (senior management/board of directors). The right attitudes and behaviours, based on trust rather than adversarial models, should be encouraged (Office of Government Commerce, 2002). Fostering sustainable supply communications with key stakeholder's and considering sustainable supply as a strategic aspect of both CAA and its suppliers was an aspect of investigation in this study.

CIPS (2013)The terms of the contract should include an agreed level of service, pricing mechanisms, provider incentives, contract timetable, means to measure performance, communication routes, escalation procedures, change control procedures, agreed exit strategy and agreed break options, and all the other formal mechanisms that enable a contract to function. These formal contract aspects form the framework around which a good relationship can grow. If the contract was poorly constructed, it will be much more difficult to make the relationship a success.

In addition, the provider may also become more efficient and, therefore, cheaper for this type of service; the provider feeling more confident in investing for the longer term – for example, in more flexible infrastructure, staff training and so on; the customer gaining from knowing the provider's strengths and weaknesses, and focusing contract and contract management effort into those areas where they will bring most return on effort (Office of Government Commerce, 2002). CIPS (2007) in agreement notes that training of stakeholders is essential to achievement of good relationships. It is hence incumbent upon CAA to train stakeholders in contract management including its suppliers and how sustainable supply can be achieved in works contracts.

2.7 Service delivery management and sustainable supply of works

The Office of Government Commerce (2002) recognizes that the critical success factors of contract management primarily include service delivery management and contract administration. Effective governance will ensure that the customer gets what is agreed, to the level of quality required. The performance under the contract must be monitored to ensure that the customer continues to get value for money. In addition to these, is good preparation, single business focus, relationship management, continuous improvement, people, skills and continuity, knowledge, flexibility, change management, and proactivity. This view signals the integration and importance of service delivery management as a key element of good practice contract management in CAA that should be consistently pursued with other elements to realise intended outcomes like sustainable supply of works.

According to CIPS (2007), service delivery management is described as a proactive measure of supplier or contractor performance aimed at improving attainment of expected service. They should not be seen as a method of control, but as a proactive means of improving the performance of the contractor. Contractors should always be requested to improve their performance, and incentives, used appropriately, should encourage improvement including significant progress in sustainable supply. Performance measurement results can be used to inform decisions on the type and extent of incentives.

Elsey, (2007) adds that, it is important that the performance measures selected provide clear and demonstrable evidence of the success (or otherwise) of the relationship and, in principle, issues such as the following should be covered: cost and value obtained; performance and customer satisfaction; delivery improvement and added value; delivery capability; benefits realised; relationship strength and responsiveness to demands of sustainability. The OGC (2002) in support views service delivery management is the process of managing the performance provided to the customer as specified in the contractual performance metrics. So, CAA should set clear metrics against which sustainable supply of works will be measured.

In addition, Elsey (2007) asserts that once chosen, the requirements underpinning the performance measures should be the primary focus for contract management. They should form the framework on which information needs and flows and contract management teams, skills, processes and activities are developed and improved in conjunction with the supplier to successfully commit to sustainable supply. They should not be seen as a method of control, but as a proactive means of improving the performance of the contractor. Contractors should always be requested to improve their performance, and incentives, used appropriately, should encourage improvement. Performance measurement results can be used to inform decisions on the type and extent of incentives towards sustainable supply of works.

Service delivery management recognises a number of themes which could be used to measure supplier performance: product quality - Mean Time Between Failure (MTBF), Mean Time to Repair (MTTR), percentage of delivery rejects, warranty claims; service quality using Service Level Agreements (SLA) – call-out time, customer service response time, performance against agreed delivery, lead times; relationship Management– accessibility and responsiveness of supplier management; commercial – costs are maintained or reduced, service improved. There are three aspects to performance measurement; gathering of factual, objective information from the supplier – usually obtained from IT systems, gathering feedback from users about the service received – typically through questionnaires, surveys, telephone or face-to-face enquiry; and understanding the supplier's own experience of dealing with the organization (CIPS, 2007). That is many of these measures and instruments were integrated in this study on contract management and sustainable supply of works in CAA.

The Office of Government Commerce (2002) notes that, responsibilities for managing service delivery and for managing customer obligations must be clear and appropriately apportioned between the organization and its supplier. The supplier is driven by the terms of the contract and the payment/reward mechanisms it sets out. They may be free to vary the means by which the service is provided – for example, to reduce their costs, to reduce the risk of failing to meet targets or to improve the flexibility of their infrastructure. In order to

meet customers' business needs and gain optimum customer satisfaction whilst meeting the provider's business goals, the provider has to optimize the relationship between cost and quality of the services delivered whilst committing to social and environmental responsibility. Service delivery management plays an important role for the provider in balancing cost and quality of services in order to provide the customer with sustainable value for money in works procurement - an element that the current study sought to establish in CAA.

2.7.1 The 360^{O} view of Service Delivery Management Model

Advanced by the Institute of Contract and Project Managers, USA (1998) in Cooper (2000), the 360^{o} view of Service Delivery Management highlights four major elements of service delivery management focus: communication; delivery; escalation; service level agreements (SLAs) and key performance indicators (KPIs). Communication between the contracting entity, the contractors and other stakeholders, and approval of changes is essential in sustainable service delivery management. Supply excellence and quality improvement in CAA should be sought during contract management and ongoing contract performance assessments should be measured against Service Level Agreements, Key Performance Indicators, and ensuring that performance meets and exceeds targets.

Thus, well-structured service delivery management in CAA would help the contractor to: quantify sustainable supply benefits and costs; ensure that responsibilities are clearly defined and agreed; charge for works delivered efficiently and fairly; clearly define works and their deliverables (useful if services or service components are to be subcontracted); ensure that the services provided comply with the agreed business and sustainability requirements; and have a better knowledge of current and future customer needs.

Conclusively, committing to sustainable contract management and supply is aimed at: *Protecting human health*: avoiding hazardous chemicals; promoting good diet and raising household incomes; *promoting fair working conditions: improving pay, working hours and equality in supply chains;* promoting social enterprise and improving local skills: enhancing

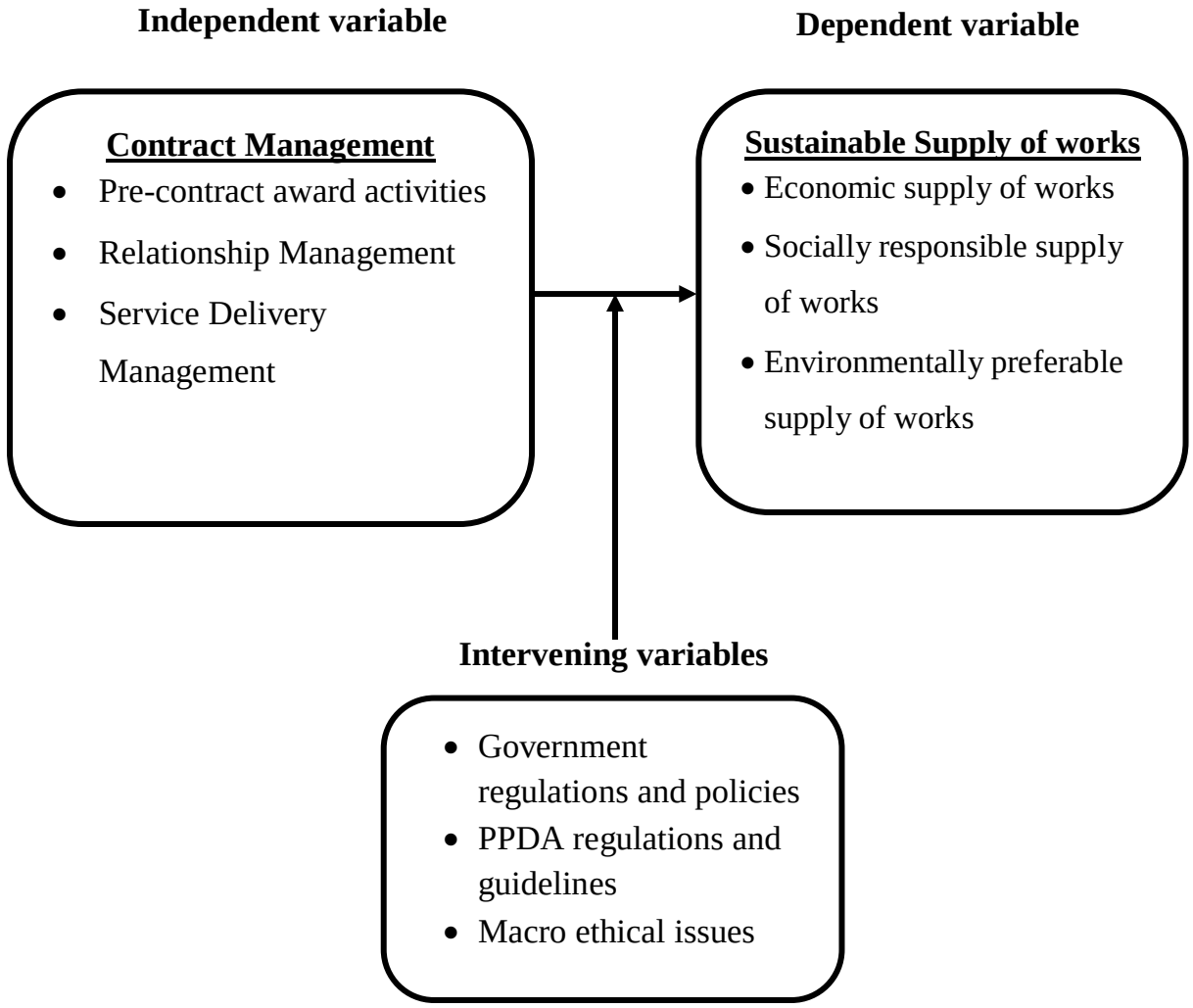
social and environmental objectives of suppliers; enabling access to quality employment; reducing soil, water & air pollution: avoiding chemicals harmful to health and environment; reducing energy consumption & climate change: avoiding energy intensive activities; improving energy efficiency; seeking non-fossil, renewable energy sources; reducing water consumption: avoiding water intensive activities; improving water efficiency; rainwater capture and greywater recycling; reducing materials, packaging & waste: reducing, re-using and recycling as well as protecting habitats and biodiversity: sourcing sustainable timber, seafood, palm oil and soy; enhancing local habitats.

2.8. The conceptual framework

Conceptual framework is a model of how one makes logical or relationships among the several factors that have been identified as important to the problem (Sekaran, 2003). The conceptual framework for this study is developed to examine the impact of contract management on sustainable supply of works as shown in the figure 2.8.a.

It depicts the relationship between the independent variable, contract management which consists of pre-contract award activities, relationship management and service delivery management and the dependent variable, sustainable. Sustainable supply of works is conceptualized in terms of economic, socially responsible and environmentally preferable supply of works. It assumed that once the constructs of the independent variable mentioned above are in place, then the outcome would be sustainable supply of works. However, the outcome might also be influenced by the intervening variables such as government regulations and policies; PPDA regulations and guidelines; and macro ethical issues.

Figure 2.2.a: Conceptual framework



Source: *Adopted from CIPS, 2007; CIPS, 2013; and ISM (2008).*

CHAPTER THREE
METHODOLOGY

3.1 Introduction

This chapter describes in detail the overall research design that was adopted by the study, area of study, target population, sample size, sampling procedures, data collection methods, data collection instruments, data collection, processing, analysis and limitations of the study.

3.2 Research design

The research design provides the cement that holds the research project together. A design is used to structure and show all the major parts of the research project work together to try to address the central research questions (Trochim, 2006). It is includes the research approach, strategy, and classification.

3.2.1 Research approach

According to Trochim (2006), this is the basic approach to research. The study adopted a phenomenological approach because it is gives the experience of social phenomena by people to involved in the investigation. It gives a greater understanding of what is something is happening and therefore yields valuable data. This made it ideal for causal investigation on contract management and sustainable supply of works in Civil Aviation Authority.

3.2.2 Research strategy

The study adopted a cross sectional survey and case study strategy. A cross-sectional survey strategy was adopted because it makes the research feasible involving only one study population which is to be contacted once for the required data. The justification for the choice of a case study research strategy is that it used specific subjects with common characteristics enough to represent the rest other than studying the entire population and the study was able to dwell on the information from Civil Aviation Authority for deductions and generalization on contract management and sustainable supply of works in the aviation industry of Uganda.

3.2.3 Research classification

The study adopted both a quantitative and qualitative classification of approach to data collection and analysis. According to Sarantakos (2005) a quantitative methodology involves the use of structured technique of data collection that allows quantification measurement and operation using quantitative methods of analysis. On the other hand qualitative methodology will be based on the theoretical and methodology principles of symbolic interactions. Quantitative methods were used in the study because data being sought had to be quantified on a likert scale in order to establish the relationship between contract management and sustainable supply of works by way of correlation.

Qualitative methods were used because obtaining nominal data was critical to giving a detailed picture of contract management practices and sustainable supply of works in CAA. Thus the study used both descriptive and inferential statistics in the analysis, interpretation and drawing conclusions. This involved using frequencies, hypothesis testing by analysis of variance (ANOVA), Pearson's moment correlation analysis, and bivariate regression analysis of findings on the constructs of contract management and sustainable supply of works in CAA.

3.3 Study population

The population studied is **104** including the 5 Directors from the Directorates of Human Resource and Administration; Corporate affairs ; Finance; Safety, Security and Economic Regulation (DSSER); Air Navigation Services; and Airports and aviation security, 13 staff of the Procurement Unit, 5 Contracts Committee staff, 7 Marketing and Commercial services staff, 8 Internal Audit and Risk Management, 2 Quality Assurance staff, 20 Managers, 10 Finance and Accounting staff, 18 Engineering, Planning and Development; and 16 Supplier/Contractors who were accessible at the time. These were targeted because they were presumed to have knowledge on contract management procedures and sustainable supply of works at CAA and associated activities in the community.

3.4 Sample Size

Oppenheim (1996) defines a sample as a collection of some of subset elements of the population. Dealing with the whole population would be costly, time consuming, faces limited cooperation, less accurate, among other limitations and therefore, dealing with a smaller group of population elements yields better research convenience and reliability upon generalizations that apply to the whole population would apply. A sample of **80** was used for the study determined scientifically using the table for sample size determination developed by Krejcie and Morgan (1970).

3.5 Sampling methods and techniques

Determining the elements for the study to constitute the sample size of 80, both the *probability* and *non-probability* sampling methods were used in this study. There is need for non-probability sampling method in which the elements of the population have no known probability of being selected (Bryman, 2001). Though biased, it offers a faster, cheap and less complicated approach to sampling besides not offering any chance to leaving out key informants in the study population.

Under the non probability sampling method, *census* technique was used for key informants especially Procurement staff, managers representing User departments that are charged with contract management, Marketing and Commercial services, and Quality Assurance staff who are directly charged with the effective implementation of sustainable commitments in procurement and contract management processes. This technique was used because according to Mcerudlen, 2004 it is judgmental such that it would enable the researcher to select only those members of the population with sufficient technical knowledge of the subject matter so as to access technically required information.

Contractor/supplier representation in this investigation was critical to assessing their responsibility towards the sustainable supply of works. Because reaching out the whole supplier community would render the investigation less feasible. Therefore, the *convenience sampling* technique was used to narrow down supplier/contractor representation to only those accessible. This according to Moore (1991) and Robson (1990) involves selecting whichever

units of the population are easily accessible. The selected group also had an understanding of what was happening in this critical case so that logical generalization would be made.

The *probability sampling* method in which all the elements of the population have known probability of being selected (Bryman, 2001) was also applied to this study. In this, a *simple random sampling* technique was used in the selection of the respondents from each category where non probability sampling had not been applied. All names in a particular category were put in a box and randomly selected. This technique was selected because it is advantageous in creating equal chances for all respondents to be selected and avoid bias (Winter, 2000). The application of these sampling methods and techniques yielded Table 3.1.

Table 3.1 Sample elements

Category of respondents	**Population size**	**Sample elements**	**Sampling technique**
Directors	5	3	Simple random
Procurement Unit staff	13	13	Census
Contracts Committee members	5	5	Census
Marketing and Commercial services	7	7	Census
Internal Audit and Risk Management	8	4	Simple random
Quality Assurance staff	2	2	Census
Managers	20	20	Census
Finance and Accounting staff	10	6	Simple random
Engineering, Planning and Development	18	10	Simple random
Contractors/Suppliers	16	10	Convenience sampling
Total	**104**	**80**	

Source: *Sampling exercises by the researcher, 2018*

3.6 Response rate

Following the distribution of questionnaires, the researcher expected an above average response rate. Out of the 80 respondents sampled and reached, 65 were able to respond to

questionnaires and availed for collection by the researcher. 15 respondents did not return questionnaires indicating an 81.3% response rate and an 18.7% non response rate as shown in table 3.2.

Table 3.2: Response rate

Response rate		Frequency	Percent	Cumulative Percent
Valid	Response	65	81.3	81.3
	Non response	15	18.7	**100.0**
	Total	**80**	**100.0**	

Source: Primary data

This implies that the information obtained gives a significant representation of the population studied and therefore reliance could be placed on the statistics to draw a conclusion on the relationship between the variables investigated that is contract management and sustainable supply of works in Civil Aviation Authority.

3.7 Background information of respondents

The study sought to establish the background information of respondents such as their age, sex, level of education, occupation, marital status, and the period of work in their occupation within Civil Aviation Authority (CAA). These were viewed to impact in one or the other on their conceptualization and knowledge of contract management and sustainable supply of works in Civil Aviation Authority. Added to this was the view that age and marital status may have a great bearing on their stability and involvement in various operations of the CAA and in particular contract management and procurement of works. The study came up with the following findings:

3.7.1 Age of respondents

The study sought to establish the age of respondents so to make evaluation of maturity and objectivity in decision making as well as the levels of commitment to job by them. This yielded findings as indicated in table 3.3.

Table 3.3: Age of respondents

Age of respondents(years)		Frequency	Percent	Cumulative Percent
Valid	Below 26	04	6.1	6.1
	26 - 35	24	36.9	43.0
	36 – 45	25	38.5	81.5
	46 - 55	08	12.3	93.8
	Above 55	04	6.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

Results in table 3.3 indicate that, 6.1% were below 26 years of age, 36.9% were 26-35 years, 38.5% were 36-45, 12.3% were 46-55 and 6.2% were above 55 years. Results reveal that majority of the respondents were above 35 years of age implying decisions and choices made are those likely to be experienced and are in managerial and technical positions. These represent 57.0% of the total valid respondents. This implies more levels of respondents' commitment and involvement in contract management and works supply activities making data provided them more reliable in analyzing the relationship between contract management and sustainable supply of works in CAA.

3.7.2 Sex of respondents

The study sought to establish the sex of the respondents and findings revealed that, 41 of them were male and 24 were female indicating a sex representation of 63.1% and 36.9% respectively as shown in table 3.4. This implied that gender bias in opinion was checked to facilitate a balanced picture on the evaluation of contract management and sustainable supply of works in CAA.

Table 3.4: Sex of respondents

Sex of respondents		Frequency	Percent	Cumulative Percent
Valid	Male	41	63.1	63.1
	Female	24	36.9	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

3.7.3 Respondents' level of education

The study also sought to establish the respondents' level of education and results are as indicated in table 3.5. Majority respondents 47.7% were holders of a bachelor's degree, 23.0% masters degree holders, 23.0% Diploma holders, 3.0% certificate holders, and 3.0% held other qualifications. This signifies the great degree of reliance that can be placed on the information obtained as the number of educated respondents surpassed the confidence margin reducing the chance of error in responses given by them on contract management and sustainable supply of works in CAA.

Table 3.5: Respondents' level of education

Level of Education		Frequency	Percent	Cumulative Percent
Valid	Others	2	3.0	3.0
	Certificate	2	3.0	6.0
	Diploma	15	23.0	29.2
	Bachelors Degree	31	47.7	76.9
	Masters Degree	15	23.0	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

3.7.4 Occupation of respondents

Critical to evaluating the respondents' knowledge of contract management and sustainable supply practices of Civil Aviation Authority is their occupation. Establishing this yielded findings as indicated in table 3.6.

Table 3.6: Occupation of respondents

Occupation of respondents		Frequency	Percent	Cumulative Percent
Valid	Director	1	1.5	1.5
	Manager	17	26.2	27.7
	Contracts Committee	5	7.7	35.4
	Procurement Unit	13	20.0	55.4
	Marketing & Commercial Services	7	10.8	66.2
	Internal Audit & Risk Management	4	6.1	72.3
	Quality Assurance	2	3.1	75.4
	Finance and Accounting	6	9.2	84.6
	Engineering, Planning & Dev't	6	9.2	93.8
	Contractors/Suppliers	4	6.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

Table 3.6 shows the distribution of respondents by occupation in Civil Aviation Authority. 1.5% respondents were Directors, 26.2% were Managers, 7.7% Contracts Committee members, 20.0% were Procurement Unit staff, 10.8% were Marketing and Commercial Services staff, 06.2% were Internal Audit and Risk Management staff, 03.1% were Quality Assurance staff, 09.2 were Finance and Accounting, 9.2% were Engineering, Planning and Development, and 6.2% were contractors. These statistics therefore imply that majority of the respondents were knowledgeable about contract management and sustainable supply of works in CAA with procurement, managers other key staff having adequate representation which gives data provided by them a qualified and reliable base for the study.

3.7.5 Marital status

The study also sought to establish the marital status of respondents. Results as presented in table 3.7 reveal that 12.3% respondents were single, 67.7% were married, 7.7% divorced, 7.7% separated, and 4.6% were widowed. This implies a stable and committed workforce in Civil Aviation Authority that was stably involved in operations in particular contract management and sustainable supply practices on works projects in Civil Aviation Authority.

Table 3.7: Marital status of respondents

Marital status		Frequency	Percent	Cumulative Percent
Valid	Single	8	12.3	12.3
	Married	44	67.7	80.0
	Separated	5	7.7	87.7
	Divorced	5	7.7	95.4
	Widowed	3	4.6	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

3.7.6 Respondents' Period of work in CAA

Obtaining objective and appropriate responses on contract management and sustainable supply of works in Civil Aviation Authority from respondents required assessment of respondents' occupation or role in the operations of Civil Aviation Authority. This yielded findings as shown in table 3.8. From table 3.8, majority of the respondents that is 40.0% had worked in Civil Aviation Authority for 6-10 years, 30.8% for 11-15 years, 23.0% for 16-20 years, 3.1% for over 20 years and 3.1% had served for less than 6 years.

Table 3.8: Respondents' period of work in CAA

Period of work (years)		Frequency	Percent	Cumulative Percent
Valid	Below 6	2	3.1	3.1
	6 - 10	26	40.0	43.1
	11-15	20	30.8	73.9
	16 - 20	15	23.0	96.9
	Above 20	2	3.1	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

This implies that majority of the respondents are well versed with the activities of Civil Aviation Authority and therefore, have adequate knowledge of contract management practices and sustainable supply of works in the Authority. And given the scope of the study to be 5 years, reliance can be placed upon the information provided by them to answer the questions of the study.

3.8 Data Collection Methods

Two kinds of data were collected for this study that is, primary data and secondary data. Primary data were collected through survey and interviews. Review of documents on contract management, procurement policies and supply policies, and reports was done to collect secondary data. Multiple methods of data collection were used because no single method of data collection would guarantee one hundred percent accuracy.

3.8.1 Interviewing

An interview is an oral questioning method of data collection where the investigator directly engages in a verbal interaction with participants (Amin, 2005). Interviews were conducted to obtain data on contract management activities in particular pre-contract award activities, relationship management and service delivery management and how they linked to sustainable supply of works in CAA. These were conducted with key informants like the

Directors, some managers, and Contract Committee members. These gave vital and in-depth data on contract management and sustainable supply of works that was the gist of the study.

3.8.2 Survey/questionnaire method

Survey is a self reporting method of data collection involving the use of a questionnaire to gather data about the variables of interest in an investigation (Oppehein, 1996). It gathers data in accordance with the specifications of the research objectives, questions and hypotheses. It was necessary for this study to give an in-depth and wider coverage of both the unit of investigation and the study variables, and also provided savings in time. Questions were coded following a likert scale of 1 to 5 as the translated progression from levels of disagreement to high levels of agreement.

3.8.3 Document review

Document review is method that involves the research reading about other people's work or already existing data in print or published form (Kothari, 2004). It is necessary to collect secondary data required by the study. The study involved a review of documents including those relating to contract management, procurement and supply operations of CAA. These documents included but not limited to: records of contract management activities, performance reports, compliance audit reports, and others of CAA. The data obtained, provided a backup and supportive role to the raw data that was obtained using primary data sources and methods.

3.9 Data Collection Instruments

The study needed both primary and secondary data and hence adopted several data collection instruments that included self administered questionnaires, interview guides, observation and documentary review checklists together with other gadgets like notebooks that were used to capture observed data.

3.9.1 The Self-Administered Questionnaires (SAQs)

The used self administered questionnaires to collect primary data. The questionnaires were physically by the researcher to respondents in the sample who filled them and later collected by the researcher from the point designated for their return. These tools contained questions on contract management and sustainable supply of works in CAA. The questions required the respondents to tick their favored options supplied on a five point Likert scale to which levels of agreement; Strongly Disagree, Disagree, Not Sure, Agree and Strongly Agree were weighed as *1, 2, 3, 4* and *5* in score. This instrument was chosen because it was easy to administer and responses could easily be analyzed.

3.9.2 Interview Guide

Interview guides were used to gather consistent general information about contract management practices and sustainable supply of works in CAA. In addition to answering questionnaires, the interviews targeted key respondents in CAA like the Directors, Managers in the Procurement, Finance, Engineering, Marketing and Commercial Services Units. This method was appropriate because it ensured proper understanding and capturing detailed facts about the various activities associated with contract management and sustainable supply of works in CAA. There is a planned face-to-face interaction before the actual interview of respondents. Appointments with respondents were made, and time of the interview was also agreed upon in advance. At analysis, the data obtained from the interviews was triangulated with the data from other methods before conclusions were made.

3.9.3 Document review checklists

Documentary review checklists are informational job aids that spell out what items and documents to be reviewed respectively (Sarantakos, 2005). They were necessary because they ensured consistence and completeness of what was being observed and reviewed to gather secondary data as was intended to be collected by them.

3.10 Administration of the instruments

A pre-test of instruments was carried out before administering the questionnaires. Pre-testing would allow adjustments to the questionnaire by incorporating comments from the pre-test respondents in addition to assessing the language simplicity, ability to get information needed, acceptability and privacy of the respondents. This would give clues to the unforeseen in the study since a thorough check of planned procedures is appraised (Mitchell, 1996). Hence, content validity tests, reliability tests and guarantee of respondents' privacy by data collection instruments were put into consideration. In addition, all the respondents who were issued with questionnaires and all participating in the study were expected to be informed and knowledgeable about contract management and sustainable supply practices in works procurement in CAA.

3.10.1 Content Validity tests

Validity refers to the extent to which the quality of a research procedure or instrument is accurate, correct, meaningful and right. Content Validity focuses on the extent to which the content of an instrument corresponds to the content of the theoretical concept it is designed to measure (Bell, 1999). Content validity testing of the self administered questionnaire, interview guide and checklists for this study was carried out following computation of the Content Validity Index (CVI) with acceptance at CVI $\geq$ 0.7 and where it falls below, then revisions would be made following the advice of the experts and rerun of test done to reach an acceptable index. The content validity formula below was used:

$$\text{CVI} = \frac{\text{Number of valid judgments (items)}}{\text{Total number of test Judgments (items)}}$$

The study subjected the tools to a content validity test by distributing samples to 10 experts with knowledge of contract management and sustainable supply of works in CAA. Those that judged the content of self administered questionnaires and interview guides as valid were 8 and 7 out of 9 judges that gave feedback. This gave Content Validity Indices (VDIs) of $^{8}/_{9}$ and $^{7}/_{9}$ i.e. 0.889 and 0.778 respectively which all implied acceptance of the

instruments since they surpass the minimum bar of acceptance of the CVI ≥ 0.7. Therefore, the content of the instruments used in the study adequately measured the relationship between contract management and sustainable supply of works in CAA.

3.10.2 Reliability tests

Reliability is the measure of the internal consistency of the research instruments (Amin, 2005). The reliability of questionnaires as the major data collection instrument is concerned with the consistency of responses to the questions. To measure the consistency of responses across all the scaled questions or group of the questions from the questionnaire would be by establishing the Cronbach's alpha (**α**) coefficient using SPSS. For the questionnaire and any instrument to be considered reliable, it would have to yield a Cronbach's alpha (**α**) coefficient **α** ≥ 0.7 (Nunnaly, 1978). Any value less, would require a revision of the questions and scaling until the acceptable alpha coefficient is realized. On performing the test, the Cronbach's Alpha coefficient **α** = 0.824 was obtained as indicated in matrix 3.9.

Matrix 3.9: Cronbach's alpha reliability test results

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of items
.824	.801	46

From matrix 3.9, the alpha index α = 0.824 indicates very high internal consistency of the questionnaire implying greater reliability to be placed on the questionnaire as data collection tool since it is significantly greater than 0.7. This therefore yielded data that reliably tested the relationships existent between contract management and sustainable supply of works in CAA.

3.10.3 Ethics and data collection procedures

Confidentiality and privacy of respondents were respected in this study. This was done by inserting confidentiality clauses into research instruments and adhering to corporate ethics and research procedures of both Nkumba University and Civil Aviation Authority. And because of the nature of the study being based on contract management in public entities, it is so sensitive in one way or the other; it assesses the personnel mandated to run such organizations. However, the researcher followed all the professional guidelines of researchers including acquisition of an introductory letter from the School of Business Administration, Nkumba University and permission from the Manager Human Resources of Civil Aviation Authority to conduct a research in the organization. At the same time the researcher before engaging particular respondents, the researcher requested for consent of respondents.

3.10.4 Measurement of variables

The variables of the study in the questionnaire were measured on a five likert scale ranging from 1, 2, 3, 4, and 5 as ranking/weights to Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree respectively. The choice of this measurement is that each point on the scale carried a numerical score which was used to measure the opinion of respondents and it is the most frequently used scale in the study of business and social attitude.

3.11 Data processing, analysis and presentation

Data collected was processed and analyzed using the SPSS data analysis program version 20 by running descriptive analyses to establish frequencies and percentages as well as hypothesis testing, analysis of variance, and correlation/regression analysis. This yielded frequency tables, ANOVA matrices, correlation matrices, and model summaries that were the mode of presenting and basis of interpreting findings. Qualitative data from the field was analyzed using critical judgment by considering those elements which tally with the study elements in the conceptual framework. Presentation also considered triangulation of findings obtained using various methods and instruments of data collection that were used in the study.

3.12 Limitations of the study

Because the study intended to assess the effect of contract management on the sustainable supply of works, the researcher encountered some form of falsification of information especially from user departments and engineering directorate that are entrusted with contract management with the intention of concealing their ineffectiveness. However, the researcher tried to assure all respondents a high level of confidentiality that though not exhaustive, gave access to vast bases of data on major works projects. The study was also challenged by time constraint. The time given for the research was so short coinciding with other academic activities. However, in limiting the impact of the time constraint on the study, the researcher endeavored to obtain data from key respondents with the knowledge of the subject matter by sending them the questionnaires and interview questions in early enough and also agreeing on appointed date for the interview meeting. This enabled them prepare themselves and minimize the contact time and exercised patience where appointments may seem so tight to fit into during the study. Financial limitation also hampered the effectiveness of the study. However, the researcher endeavored to work within the financial resources available to her and support from close people.

CHAPTER FOUR

PRE-CONTRACT AWARD ACTIVITIES AND SUSTAINABLE SUPPLY OF WORKS IN CIVIL AVIATION AUTHORITY

4.1 Introduction

This section presents empirical findings obtained to answer the research question on pre-contract award activities and sustainable supply of works in Civil Aviation Authority. It gives descriptive statistics as well as inferential statistics relating to the study including frequencies and percentages presented in tables. Analysis of variance, correlation and regression analyses on the relationship between pre-contract award activities and sustainable supply of works are also provided following matrices generated from the data collected by the study.

4.2 Preparing and securing management approval for sustainability initiatives

Preparing and securing management approval of the business case for sustainable procurement and supply initiatives is an essential component of pre-contract award activities so that proper resource allocation and mobilization are done. This is necessary effective implementation and alignment of sustainable supply initiatives for works procurement in Civil Aviation Authority. On investigation the study yielded findings as indicated in table 4.1.

Table 4.1: Preparing and securing management approval for initiatives in CAA

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.1	3.1
	Disagree	19	29.2	32.3
	Not Sure	8	12.3	44.6
	Agree	26	40.0	84.6
	Strongly Agree	10	15.4	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 4.1, it is noted that 3.1% strongly disagreed with preparing and securing management approval of the business case for sustainable procurement and supply initiatives in CAA, 29.2% disagreed, 12.3% were not sure, 40.0% agreed, and 15.4% strongly agreed. From the general point of view, 55.4 % of the total respondents in were in agreement that in CAA there is preparation and securing management approval of the business case for sustainable procurement and supply initiatives before the award and commencement of contracts for supply of works. This was in agreement with the face-to-face interviews held with the Manager Procurement, who noted that,

> *"…… before award and commencement of works contracts, securing the approval of the board and the support of the whole authority's management is a critical success factor. Procurement alone can address the diverse concerns of sustainability. We need to walk in the same direction" (June 5th 2018).*

This indicated a strong responsibility to prepare and secure management approval of the business case for sustainable initiatives to have successful implementation of sustainability in supply of works in CAA. However, 32.3% of the respondents were in disagreement that there is preparation and securing management approval of the business case for sustainable procurement and supply initiatives before the award and commencement of contracts for supply of works in CAA. This gave an implication that gaps exist in the pre-contract award activities of CAA leading to failure in optimizing sustainability in the contracts of supply of works in CAA.

4.3 Assembling project teams for sustainable supply programmes

The study revealed that project teams for contract management and sustainable supply programmes are usually assembled in CAA. This follows responses that 1.5% disagreed, 16.9% were not sure, 47.7% agreed and 33.8% strongly agreed with project teams for contract management and sustainable supply programmes being assembled in CAA as shown in the table 4.2.

Table 4.2: Assembling project teams for sustainable supply programmes

		Frequency	Percent	Cumulative Percent
Valid	Disagree	1	1.5	1.5
	Not Sure	8	16.9	18.5
	Agree	31	47.7	66.2
	Strongly Agree	22	33.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 4.2, 81.5% of the respondents generally agreed that project teams for contract management and sustainable supply programmes are usually assembled in CAA. This finding stood to be supported by personal interview majority responses in which notable significance was to the Principal Procurement Officer-Mr. Samuel Owere Jamwa who noted that,

> "…. *One of the major considerations during pre-contract award stage in CAA is assembling and constituting a team of qualified personnel to manage works projects. They are tasked with ensuring that sustainability is not comprised" (June, 8th 2018).*

However, 18.5% of the respondents disagreed with project teams for contract management and sustainable supply programmes being assembled in CAA. This implied that whereas there assembly of project teams to manage works contracts and there are inadequacies and lack of commitment to addressing sustainability issues in the pre-award phase thus failing the realization of optimal levels of sustainability in supply of works within CAA.

4.4 Developing a contract strategy for procurement and sustainable supply

The study sought to establish whether CAA develops a contract strategy for procurement and achieving sustainable supply so that contract management helps the realization of sustainability in works contracts. Findings on this were that; 18.5% strongly disagreed, 23.1% disagreed, 16.9% were not sure, 36.9% agreed and 4.6% strongly agreed as indicated in table 4.3.

Table 4.3: Developing a contract strategy for procurement and sustainable supply

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	12	18.5	18.5
	Disagree	15	23.1	41.6
	Not Sure	11	16.9	58.5
	Agree	24	36.9	95.4
	Strongly Agree	3	4.6	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

The findings indicate 41.6% of total respondents were in disagreement and coupled with the 16.9% not sure, the levels of total disagreement came to 58.5% that CAA develops a contract strategy for every procurement and achieving sustainable supply to ensure that contract management helps the realization of sustainability in works contracts. However, 41.5% of respondents were in agreement to pre-contract award activities in CAA involving the development of contract strategy procurement and achieving sustainable supply to ensure that contract management helps the realization of sustainability in works contracts. These statistics are in agreement with responses obtained following personal interviews in which the majority interviewees indicated limited commitment to a clear strategy on sustainability as was noted in a statement by the Manager Internal Audit and Risk Management that,

> *"…. The strategy on sustainability in works supply is not clear especially in the implementation process…… We should make much bigger strides towards this" (June 13th 2018)*

The general implication here was that, the lack of a clear strategy on sustainability in the pre-contract award phase creates gaps in contract management that fails the satisfaction of sustainability expectations of works contracts in CAA.

4.5 Assessment of potential economic, social and environmental risk

Whether procurement and supply needs of works are assessed for potential economic, social and environmental risk during the pre-award stage in CAA was sought to be established by

the study. Findings revealed 9.2% respondents to strongly disagree, 21.5% disagreed, 13.9% were not sure, 44.6% agreed and 10.8% strongly agreed as indicated in table 4.4.

Table 4.4: Assessment of potential economic, social and environmental risk

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	6	9.2	9.2
	Disagree	14	21.5	30.7
	Not Sure	9	13.9	44.6
	Agree	29	44.6	89.2
	Strongly Agree	7	10.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 4.4, findings reveal that 55.4% of the respondents agreed that at the pre-contract award stage in CAA there assessment of potential economic, social and environmental risk to ensure that works projects minimize the damage to society and the environment as well as reduce the potential of compromise to value for money. This implies the significance of risk assessment at pre-contract award stage in the pursuit of sustainable supply of works in CAA. However, the 30.7% of respondents disagreed; indicating lack of effective assessment of social, economic and environmental risk before awarding contracts of supply of works in CAA.

4.6 Contract management planning to execute commitments to sustainability

At pre-contract award stage, contract managers or teams should plan how contracts of works will be managed so as to execute commitments to sustainability. A contract management plan should be set out to have parties effectively and efficiently execute their commitments to sustainable supply of works in CAA. Therefore, whether this is set out in contract management activities of CAA to realize acceptable works deliverables was sought to be

established by the study. It was found out that 1.5% of the respondents strongly disagreed, 4.6% disagreed, 55.4% agreed, while 38.5% strongly agreed as indicated table 4.5.

Table 4.5: Contract management planning to execute commitments to sustainability

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.5	1.5
	Disagree	3	4.6	6.1
	Agree	36	55.4	61.5
	Strongly Agree	25	38.5	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 4.5, 93.9.8% of total respondents agreed with the view that a contract management plan is set out to have parties effectively and efficiently execute their commitments to sustainable supply of works in CAA. However, 6.1% of the respondents were in disagreement. Thus, the so deviant percentages implied the strong emphasis of CAA contract management planning in its works projects so to realise acceptable quality, timely and cost effective supply of works. Focus on proper planning of works projects is thus an important element of the pre-contract award phase that should not be ignored if contract management activities in CAA are to satisfy sustainable supply of works requirements.

4.7 Specifications and ITTs incorporating statement of sustainable supply needs

The study sought to establish whether specifications and instructions to tenderers (ITTs) are drafted incorporating accurate statement of CAA's sustainable supply needs. These would provide a point reference in guiding contract managers and contractors towards sustainable supply expectations in works projects of CAA. Responses to this were 10.8% strongly disagreed, 7.7% disagreed, 13.9% were not sure, 53.8% agreed and 13.9% strongly agreed as indicated in table 4.6.

Table 4.6: Specifications and ITTs incorporating statement of sustainable supply needs

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	7	10.8	10.8
	Disagree	5	7.7	18.5
	Not Sure	9	13.9	32.3
	Agree	35	53.8	86.1
	Strongly Agree	9	13.9	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

The findings in table 4.6 indicate that 67.7% of the total respondents were in agreement with the view that specifications and instructions to tenderers (ITTs) are drafted incorporating accurate statement of CAA's sustainable supply needs. However, in significant contrast was the 32.3% of respondents who were in disagreement and undecided about specifications and instructions to tenderers (ITTs) incorporating accurate statement of CAA's sustainable supply needs. This significant deviance in agreement-disagreement levels implied gaps in drafting specifications or scopes of works and therefore, leading to unsatisfactory performance towards sustainability in procurement of works contracts. Similarly, on undertaking a documentary review of Contract Documents, 2014/2015 for the ongoing contracts on upgrade and expansion of Entebbe International Airport as well as upgrade of major aerodromes, documentation of commitments to sustainability was found to have gaps. Hence, tracking and evaluating such major works projects for sustainability in CAA may be constrained.

4.8 Negotiations and appropriate contracts are established to meet sustainability

The study sought to establish whether negotiations and appropriate contracts are established by CAA to meet it economic, social and environmental needs in supply of works by contractors. The responses on the view were; 4.6% in disagreement, 71.9% agreed and 21.5% strongly agreed, as indicated in the table 4.7.

Table 4.7: Negotiations and appropriate contracts are established to meet sustainability

		Frequency	Percent	Cumulative Percent
Valid	Disagree	3	4.6	4.6
	Agree	48	71.9	78.5
	Strongly Agree	14	21.5	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

The findings reveal a very high level of agreement with total responses of 95.4% on negotiations and appropriate contracts being established by CAA to meet it economic, social and environmental needs in supply of works by contractors. This implies that CAA has effectively discussed sustainability concerns with contractors and established contracting systems that ensure achievement of such commitments. This implies the potential of stakeholders in works projects working towards coordinated and collaborative efforts to achieve sustainable supply of works in CAA. However, 4.6% of the respondents disagreed with the view that negotiations and appropriate contracts being established by CAA to meet it economic, social and environmental needs in supply of works by contractors.

In addition to this position interviews revealed that site visits and pre-bid meetings with potential bidders were organized at the pre-contract award stage to clarify sustainability issues. On this, the Procurement Manager noted that,

> *".....site visits and pre-bid meetings besides environmental and social impact assessments are undertaken with bidders to discuss and clarify contract expectations. One of the key issues discussed is sustainability .....Neglect of this may cripple the success of works projects. So we take on the right contract and contractor"*

This signals that any inefficiencies in a move towards sustainability during the pre-contract award stage significantly hinders the attainment sustainable supply of works in CAA. Therefore, an improvement in negotiation and contracting processes would bring about a significant improvement in realizing sustainable supply of works in CAA.

4.9 Prequalification and tendering procedures for sustainable supply

Establishing prequalification, qualification and tendering procedures addressing sustainable supply needs by CAA was sought to be established by the study. Findings revealed that 9.2% respondents to strongly disagree, 9.2% disagree, 12.3% were not sure, 64.6% agreed and 4.6% strongly disagreed as shown in table 4.8.

Table 4.8: Prequalification and tendering procedures for sustainable supply

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	6	9.2	9.2
	Disagree	6	9.2	18.5
	Not Sure	8	12.3	30.8
	Agree	42	64.6	95.4
	Strongly Agree	3	4.6	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 4.8, 69.2% of the respondents generally agreed that pre-contract award activities in CAA involve establishing prequalification, qualification and tendering procedures addressing sustainable supply needs in works projects. These provide a framework within which later activities of the contract management process are guided to achieve sustainable supply of works. However, 30.8% of the total respondents disagreed to establishing prequalification, qualification and tendering procedures addressing sustainable supply needs at the pre-award stage. This was evident further following revelations of interviews where one interviewee who cried anonymity noted that,

> *"…….major focus of the pre contract award stage and tendering is majorly centered on resource mobilisation and supplier selection driven towards value for money. Attention to social and environmental concerns is secondary to this."*

These implied gaps in contract management process particularly the pre-contract award activities for sustainable supply of works.

4.10 Appraising contractors for sustainability

Levin (2014) advances that suppliers should appraised for the capacity and capability to meet sustainable supply needs/requirements of organisations. The study sought to establish this in CAA and findings to this were: 3.1% of the respondents strongly disagreed, 7.7% disagreed, 7.7% were not sure, 56.9% agreed while 24.6% strongly agreed as indicated in the table 4.9.

Table 4.9: Appraising contractors for sustainability in CAA

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.1	3.1
	Disagree	5	7.7	10.8
	Not Sure	5	7.7	18.5
	Agree	37	56.9	75.4
	Strongly Agree	16	24.6	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From the table 4.9, findings indicate that 81.5% of total respondents agreed to service providers or contractors being appraised for the capacity and capability to meet sustainable supply needs/requirements of Civil Aviation Authority. And that this is essential to timely completion of works contracts while putting into regard the interests of society and environmental protection. Results of interviews with managers highlight similar commitment from them when the Manager Procurement and Disposal Unit hinted that,

> *"……it is the mandate of CAA to operate sustainably. Therefore as procurement we are equally obliged to evaluate contractors for similar commitments"*

However, 18.5% of the total respondents disagreed to the view that service providers or contractors are appraised for the capacity and capability to meet sustainable supply needs/requirements of Civil Aviation Authority. The implication of these statistics is that, in

CAA there are still gaps in the sustainable procurement policy and its implementation that fail realization of sustainable supply of works.

4.11 Contract exit strategies to reinforce sustainable contract management

The study sought to establish whether contract exit strategies are prepared to reinforce sustainable contract management and sustainable supply practices in CAA. Results indicated that 13.8% of the respondents strongly disagreed, 55.4% disagreed, 15.3% were not sure, 6.5% and 9.2% strongly agreed as indicated in table 4.10.

Table 4.10: Contract exit strategies to reinforce sustainable contract management

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	9	13.8	13.8
	Disagree	36	55.4	69.2
	Not Sure	10	15.3	84.5
	Agree	4	6.1	90.7
	Strongly Agree	6	9.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 4.10, 69.2% and 15.3% of total respondents were in disagreement and not sure respectively of contract exit strategies being prepared to reinforce sustainable contract management and sustainable supply practices in CAA. However, a small proportion of 15.7% of the total respondents agreed with position. This implies that, if contractors never met sustainability requirements in works being delivered by them there would be no way of rectifying it effectively within the limits of the contract. This therefore indicates that sustainability failures are not addressed in the early stages of the contract management process. Similarly, a review of the 2013/2014 contract document for the upgrade of the Mbarara aerodrome indicated the lack of a clear exit strategy based on the possibility of

sustainable works supply inefficiencies. This opens the contract management process for works in CAA to sustainable supply failures.

4.12 Hypothesis testing

To reject or maintain the null hypothesis required testing that the means of all the elements sampled for pre-contract award activities and sustainable supply of works in Civil Aviation Authority came from populations with equal means and differ only because of sampling error. An analysis of variance test to establish the F value and its statistical significance that indicate this variance was done, yielding results as shown in table 4.11.

Table 4.11: Analysis of variance in pre-contract award activities and sustainable supply of works in CAA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242.231	1	242.231	15.613	.000[a]
	Residual	1039.508	63	16.500		
	Total	1281.739	64			

a. Predictors: (constant), Pre-contract award activities
b. Dependent Variable: Sustainable supply of works.

From table 4.11, with **F** = 15.613 and **p** <0.05, it was established that there is a significant and positive relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority. Hence, pre-contract award activities are important to achieving sustainable supply of works in Civil Aviation Authority with low levels of variance at 15.61% and levels of significance at .000 less than 5% i.e. $p<0.05$. These implied rejection of the null hypothesis H_{O1} and support of the alternative hypothesis H_{A1} that there is a significant positive relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority.

4.13 Correlation analysis

To determine the strength of the relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority, a correlation analysis was done and produced results as indicated in table 4.12.

Table 4.12: Correlation of pre-contract award activities and sustainable supply of works in CAA

Correlations

		Pre-contract award activities	**Sustainable supply of works**
Pre-contract award activities	Pearson Correlation	1	.711
	Sig. (2-tailed)		.000
	N	65	65
Sustainable supply of works	Pearson Correlation	.711	1
	Sig. (2-tailed)	.000	
	N	65	65

a. Predictors: (Constant), Pre-contract award activities

From table 4.12, correlation results indicated a strong positive relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority given **r**= .711 at significance levels **p** = 0.000 less than 0.05. This implies that if pre-contract award activities embraced a greater integration of sustainable concerns there will be a significant positive improvement in the direction towards sustainable supply of works in the aviation industry.

4.14 Regression analysis

A regression analysis was performed to determine the influence of pre-contract award activities on sustainable supply of works in Civil Aviation Authority. This yielded a summary of results as indicated in table 4.13.

Table 4.13: Model Summary of pre-contract award activities and sustainable supply of works in CAA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711[a]	.505	.493	.20231

a. Predictors: (Constant), Pre-contract award activities

Linear regression analysis with results in table 4.13 was performed to support the results of correlation analysis in establishing the relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority. With ***r*** = 0.711, it can be concluded that pre-contract award activities have a strong positive relationship with sustainable supply of works in CAA. This means an improved integration of sustainability criteria in pre-contract award activities will lead to a positive improvement in sustainable supply of works in CAA by 71.1%. And the coefficient of determination i.e. the Adjusted *R* Square values suggest that this improvement in sustainable supply of works can be 49.3% predicted by a positive change in pre-contract award activities of Civil Aviation Authority.

CHAPTER FIVE

RELATIONSHIP MANAGEMENT AND SUSTAINABLE SUPPLY OF WORKS IN CIVIL AVIATION AUTHORITY

5.1 Introduction

This chapter provides presentations, analyses and interpretation of findings on relationship management and sustainable supply of works in Civil Aviation Authority. It gives descriptive statistics as well as inferential statistics relating to the study presented in tables. Analysis of variance, correlation and regression analyses to the test hypothesis and strength of the relationship between relationship management and sustainable supply of works in Civil Aviation Authority are also provided.

5.2 Harmonizing and discussing contract objectives, goals and planning

Harmonizing and openly discussing contract objectives, goals and planning with contractors is critical to successful relationship management and achievement of sustainable supply in contracts of works. This was sought to be established in Civil Aviation Authority by the study and findings were: 1.5% of the respondents strongly disagreed, 4.6% disagreed, 66.2% agreed and 27.7% strongly agreed as indicated in table 5.1.

Table 5.1: Harmonizing and discussing contract objectives, goals and planning

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.5	1.5
	Disagree	3	4.6	6.1
	Agree	43	66.2	72.3
	Strongly Agree	18	27.7	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.1, 93.9% of the respondents were in agreement with CAA harmonizing and openly discussing contract objectives, goals and planning with contractors. This was backed by the results of the interviews with directors, managers and other key informants who noted

that contract objectives, goals and planning are harmonized and discussed with potential contractors. However, 6.1% of the respondents disagreed. In interviews held with key informants, it was noted that pre-contract award activities in CAA were lacking clear cut commitment to harmonization and open discussion of contract objectives, goals and planning with contractors and that there was a lot of improvement needed towards that direction.

One officer from the Internal Audit and Risk Management noted that,

> *".....though efforts are made to discuss contract goals and objectives with contractors, there is lack of detailed criteria in the policy to effectively discuss and harmonized sustainable supply goals and objectives before award of contract".*

This deviation in the opinion implies that CAA is harmonizing and openly discussing contract objectives, goals and planning with contractors and therefore nurturing healthy relationships between CAA and contractors. However, the policy gaps addressing objectives and goals of sustainability in these relationships cannot be ignored. This implies the need to have a more specific approaches and clear lines of responsibility to improve sustainable supply practice in works contracts.

5.3 Contractor confidence to invest in sustainable supply initiatives

The study sought establish whether CAA's relationship with contractors has given them confidence to invest in sustainable supply initiatives and the responses were; 9.2% strongly disagreed, 44.6% disagreed, 16.9% were not sure, and 29.3% agreed as shown in table 5.2.

Table 5.2: Contractor confidence to invest in sustainable supply initiatives

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	6	9.2	9.2
	Disagree	29	44.6	53.8
	Not Sure	11	16.9	70.7
	Agree	19	29.3	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

Table 5.2 shows that, the largest percentage of respondents 70.7% were in disagreement with CAA's relationship with contractors giving them confidence to invest in sustainable supply initiatives. However, 29.3% respondents agreed with CAA's relationship with contractors giving them confidence to invest in sustainable supply initiatives. The deviance in opinion was further noted in works contract management reports of FY2014/15 on the upgrade of the airport and aerodromes in CAA. In these reports, contractors were reported not to have hard sufficient sensitization of the communities affected by their construction work activities. And they were so reluctant to take local people to work on these projects. This implies inefficiencies in the management of relationships in ongoing works contracts and therefore fracturing the commitments to social responsibility.

5.4 Contract relationships facilitating efficiency and cost effective delivery

Contract relationships facilitate contractor efficiency and cost effective delivery while committing to social and environmental responsibilities in works project. Whether this was embraced in the contract management activities of CAA was sought to be established by the study and responses were; 12.3% strongly disagreed, 15.4% disagreed, 10.8% were not sure, 49.2% agreed and 12.3% strongly agreed as indicated in table 5.3.

Table 5.3: Contract relationships facilitating efficiency and cost effective delivery

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	8	12.3	12.3
	Disagree	10	15.4	27.7
	Not Sure	7	10.8	38.5
	Agree	32	49.2	87.7
	Strongly Agree	8	12.3	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.3, the majority of the respondents that is 61.5% were in agreement with the view that contract relationships in CAA facilitate contractor efficiency and cost effective delivery while committing to social and environmental responsibilities in works project. However, 38.5% of total respondents disagreed indicating that contract relationships in CAA do not facilitate contractor efficiency and cost effective delivery while committing to social and environmental responsibilities in works project. Thus, inadequacies in CAA's commitment to sustainable supply of works are imminent as relationship deficiencies in contract management are not adequately addressed.

5.5 Building mutual trust and understanding with contractors

Building mutual trust and understanding with contractors to have joint commitment to sustainable supply is essential to achieving sustainable supply of works in CAA. Investigating this in CAA, the study findings were; 20.0% of respondents strongly disagreed, 10.8% disagreed, 46.1% agreed, and 23.1% strongly agreed as shown in table 5.4.

Table 5.4: Building mutual trust and understanding with contractors

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	13	20.0	20.0
	Disagree	7	10.8	30.8
	Agree	30	46.1	76.9
	Strongly Agree	15	23.1	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.4, 30.8% of the total respondents were in disagreement with CAA Building mutual trust and understanding with contractors to have joint commitment to sustainable supply is essential to achieving sustainable supply of works, while 69.2% majority respondents agreed with the view. This implies that, sustainable supply gaps could not be wholly attributed to the lack of trust and understanding with contractors. However, the noted

gaps could have a profound effect on sustainable supply of works in CAA. This was also noted in documentary review results in which the Contract Monitoring Report of Arua Airfield Upgrade, 2014 revealed lack of trust impeding an open relationship of some major contracts in CAA.

5.6 Maintaining open and excellent communications with stakeholders

Maintaining open and excellent communications with its suppliers, society, authorities, and other stakeholders is vital to achieving viable relationships in contract management and achieving sustainable supply of works in the Aviation sector (Waly, et al., 2013). The study thus, sought to establish whether relationship management in works contracts results in CAA facilitated open and excellent communications with contractors, society, authorities and other stakeholders to enable steady progress, uninterrupted and timely completion of contracts of works. Findings to this investigation were: 23.1% of the respondents strongly disagreed, 20.0% disagreed, 4.6% were not sure, 41.5% agreed and 10.8% strongly agreed as shown in table 5.5.

Table 5.5: Maintaining open and excellent communications with stakeholders

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	15	23.1	23.1
	Disagree	13	20.0	43.1
	Not Sure	3	4.6	47.7
	Agree	27	41.5	89.2
	Strongly Agree	7	10.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

This is indicative of 43.1% total respondents in disagreement with the view and 52.3% majority respondents in agreement. This has enabled meeting requirements of timelines and efficiency in works contracts. The implication of this is that, fostering open communications in managing contracts of works is essential to achieving improved sustainable supply of

works in the aviation industry. However, in the case of Civil Aviation Authority, there is need to improve on its communication practices with stakeholders to have better relationships to gain greater momentum towards sustainable supply of works.

5.7 Maintaining collaborative management structures

According to the Victorian Procurement Audits (2011), achieving sustainable value for money should be the center of all contract management activities. There should be collaborative management structures committed to achieving this throughout the contract management process. The study sought to establish whether relationship management in Civil Aviation Authority involved establishment of such structures and findings revealed that; 32.3% disagreed, 23.1% were not sure, 35.4% agreed, and 9.2% strongly agreed as indicated in table 5.6.

Table 5.6: Maintaining collaborative management structures

		Frequency	Percent	Cumulative Percent
Valid	Disagree	21	32.3	32.3
	Not Sure	15	23.1	55.4
	Agree	23	35.4	90.8
	Strongly Agree	6	9.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.6, a majority percentage of 55.4% disagreed with CAA maintaining collaborative management structures and teams committed to achieving sustainable value for money in works contracts. This was further cemented by results of interviews with one respondent, who noted that,

> *"…… much as strides towards addressing concerns for sustainability have been made, the Authority still lacks proper structures to implement this. Joint contract*

management teams are usually focused on completion of the contract with at times low ranks assigned to sustainability."

This implied a low concern for collaborative structures by CAA with its contractors and other key stakeholders to ensure that key contract activities like impact assessments are undertaken in contracts of works. However, with 44.6% in agreement implies efforts of CAA towards establishment of such teams for achievement of sustainable supply of works.

5.8 Top management is championing the commitment to sustainable supply

Top management championing the commitment to any programme is a vital component of effective relationship management ongoing contracts of works. The investigation on this in Civil Aviation Authority, it was revealed that; 13.8% of respondents strongly disagreed, 15.4% disagreed, 12.3% were not sure, 38.5% agreed, and 20.0% strongly agreed as shown in table 5.7.

Table 5.7: Top management is championing the commitment to sustainable supply

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	9	13.8	13.8
	Disagree	10	15.4	29.2
	Not Sure	8	12.3	41.5
	Agree	25	38.5	80.0
	Strongly Agree	13	20.0	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.7, only 29.2% of the total respondents disagreed with CAA's top management championing the commitment to sustainable supply of works in its contract management processes while 70.8% majority respondents agreed. This implied that failure to realize sustainable supply targets may be attributed to low levels of top management commitment. And if top management got more involved, then a positive drift towards sustainable supply may be attained.

In addition to this, were the revelations of the interview with the Procurement Manager who noted that,

> *"……. the involvement of everyone is critical to the success of efforts towards sustainability. Special involvement and commitment should be seen from the whole management team"*

However, the majority view that top management is championing the commitment to sustainable supply of works in its contract management processes in CAA implied significant steps towards sustainability in contracts of supply of works.

5.9 Sustainable supply as a long-term strategic issue in supply relationships

The study sought to establish whether CAA has centered sustainable supply as a long-term strategic issue in supply relationships. Finding revealed that; 10.8% of the respondents strongly disagreed, 23.1% disagreed, 10.8% were not sure, 49.2% agreed, and 6.1% strongly agreed as indicated in table 5.8.

Table 5.8: Sustainable supply as a long-term strategic issue in supply relationships

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	7	10.8	10.8
	Disagree	15	23.1	33.9
	Not Sure	7	10.8	44.7
	Agree	32	49.2	93.9
	Strongly Agree	4	6.1	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.8, 44.7% of the respondents disagreed to the view that CAA has centered sustainable supply as a long-term strategic issue in supply relationships. And 55.3% of total respondents agreed to CAA centering sustainable supply as a long-term strategic issue in supply relationships. A review the Strategic Plan of CAA revealed that, the Authority set itself a mission that seeks *"to maintain the highest standards of safety, security and service in*

Civil Aviation." As a way of achieving its mission, the Authority is propelled by the cardinal objective of its establishment which is "*to promote the safe, secure, regular and efficient use and development of civil aviation inside and outside Uganda*."

The review of CAA's Strategic Plan, revealed some of the secondary objectives of the Authority to be: maximization of revenue by providing facilities and services on cost recovery basis to the extent possible; and the promotion and support of efforts for protection of the environment. These implied a strategic commitment by CAA to sustainable operations. However, there are still gaps which hamper effective decision making towards improved integration of sustainable supply in contract management practices.

5.10 Sharing plans on the future of sustainable supply practices

The study sought to establish whether CAA has aided the sharing plans and information on the future of its sustainable supply practices with stakeholders. The findings had 15.4% with strong disagreement levels, 15.4% found to disagree, 12.3% were not sure, 43.1% agreed, and 13.8% strongly in agreement as indicated in table 5.9.

Table 5.9: Sharing plans on the future of sustainable supply practices

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	10	15.4	15.4
	Disagree	10	15.4	30.8
	Not Sure	8	12.3	43.1
	Agree	28	43.1	86.2
	Strongly Agree	9	13.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.9, 43.1% of respondents disagreed with the view that CAA in her relationship management practices had aided the sharing plans and information on the future of its sustainable supply practices with stakeholders, implying that subsequent contract

performance limits the effectiveness of relationship management strategy to respect of human rights, community involvement, environmental sustainability, and streamlining governance to winning public trust. However, 56.9% of the respondents agreed with CAA aiding the sharing plans and information on the future of its sustainable supply practices with stakeholders. This implied improvement in relationship management practices of CAA as plans are shared and deviations from sustainability are resolved and harmonized with service level agreements set out in the contract documents. This helps realise targets of sustainable supply of works in CAA.

5.11 Giving contractors insight into CAA's operations and management

Giving contractors insight into CAA's operations and management style, is critical to making proactive suggestions towards sustainable supply practices during contract management. Thus, the study sought to establish whether this is fostered in CAA's relationship management processes and findings were that; 20.0% of the respondents strongly disagreed, 35.3% disagreed, 36.9% agreed, and 7.7% strongly agreed as indicated in table 5.10.

Table 5.10: Relationships giving insight into CAA's operations and management

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	13	20.0	20.0
	Disagree	23	35.3	55.3
	Agree	24	36.9	92.3
	Strongly Agree	5	7.7	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 5.10, 55.3% majority respondents were in disagreement with the view on CAA giving contractors insight into its operations and management style. This has limited contractors from making proactive suggestions towards sustainable supply practices. However, 44.6% minority respondents were in agreement that, CAA's relationship

management activities have enabled contractors to proactively make suggestions towards the attainment of sustainable supply of works to the authority. This implied CAA's laxity in giving contractors insight into its operations and management style. This has therefore failed the realization of value for money and overall improvement in sustainability outcomes from works contracts.

5.12 Hypothesis testing

To reject or maintain the null hypothesis that there is no significant relationship between relationship management and sustainable supply of works in Civil Aviation Authority required testing that the means of all the elements sampled for relationship management and sustainable supply of works in CAA came from populations with equal means and differed only because of sampling error. An analysis of variance test to establish the F value and its statistical significance that indicate this variance was done, yielding results as shown in table 5.11.

Table 5.11: Analysis of variance between relationship management and sustainable supply of works in CAA

ANOVA[b]

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	117.774	1	117.774	15.331	.000[a]
	Residual	426.176	63	6.764		
	Total	543.950	64			

a. Predictors: (Constant), Relationship management
b. Dependent Variables: Sustainable supply of works

The ANOVA results in table 5.11 indicate that relationship management strongly affects sustainable supply of works in Civil Aviation Authority. The values **F** = 15.331 with the Sig. less than 0.05 i.e. $\boldsymbol{p}$ = 0.000 < 0.05 with regression and residual mean square values of 117.774 and 6.764 respectively indicate a significant relationship between relationship

management and sustainable supply of works in CAA. Therefore, this implied rejection of the null hypothesis H_{O2} that: there is no significant relationship between relationship management and sustainable supply of works in CAA and henceforth support of the alternative H_{A2} that, there is a significant relationship between relationship management and sustainable supply of works in CAA.

5.13 Correlation analysis

To determine the strength of the relationship between relationship management and sustainable supply of works in Civil Aviation Authority, a correlation analysis was done and produced results as indicated in table 5.12.

Table 5.12: Correlation of relationship management activities and sustainable supply of works in CAA

Correlations

		Relationship management	**Sustainable supply of works**
Relationship Management	Pearson Correlation	1	.695
	Sig. (2-tailed)		.000
	N	65	65
Sustainable supply of works	Pearson Correlation	.695	1
	Sig. (2-tailed)	.000	
	N	65	65

a. Predictors: (Constant), Relationship management

From table 5.12, correlation results indicated a moderately strong positive relationship between relationship management and sustainable supply of works in Civil Aviation Authority given **r** = .695 at significance levels **p** = 0.000 less than 0.05. This implies that if relationship management embraced a greater integration of sustainable concerns there will be a moderately significant positive improvement in the direction towards sustainable supply of works in the aviation industry.

5.14 Regression analysis

A regression analysis was performed to determine the influence of relationship management on sustainable supply of works in Civil Aviation Authority. This yielded a summary of results as indicated in table 5.13.

Table 5.13: Model Summary of relationship management and sustainable supply of works in CAA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	.483	.469	.29225

a. Predictors: (Constant), relationship management

Linear regression analysis was further conducted in addition to correlation analysis to establish the relationship between relationship management and sustainable supply of works in Civil Aviation Authority. With ***r*** = 0.695 in table 6.14, it can be concluded that sustainable supply deliverables from contracts of works can be improved by 69.5% through improved relationship management predictable at a 46.9% positive change in the contract management practices of Civil Aviation Authority.

CHAPTER SIX

SERVICE DELIVERY MANAGEMENT AND SUSTAINABLE SUPPLY OF WORKS IN CIVIL AVIATION AUTHORITY

6.1 Introduction

This chapter provides presentations, analyses and interpretation of findings on service delivery management and sustainable supply of works in Civil Aviation Authority (CAA). According to the Chartered Institute of Procurement and Supply (CIPS), UK service delivery management deals with the fundamental aspect of contract management that is performance assessment. Therefore, assessing CAA's performance against sustainable criteria in works supply was sought to be established. Hence, this chapter gives descriptive statistics as well as inferential statistics relating to the study including frequencies and percentages presented in tables. Analysis of variance, correlation and regression analyses on the relationship between service delivery management and sustainable supply of works in CAA are also provided as shown in the results' tables and matrices.

6.2 Service level agreements and terms incorporate sustainable supply metrics

The study sought to establish whether CAA incorporated sustainable supply metrics in its service level agreements and contract terms against which sustainable supply performance assessment would be done in on-going contracts of works. Responses to this effect were; 4.6% strongly disagreed, 12.3% disagreed, 10.8% were not sure, 40.0% agreed, and 32.3% strongly agreed as shown in table 6.1.

From table 6.1, 62.3% of total respondents were in agreement with CAA incorporating sustainable supply metrics in its service level agreements and contract terms against which sustainable supply performance assessment would be done in on-going contracts of works. However, a minority percentage of respondents i.e. 27.7% were in disagreement and not sure. On holding interviews, one respondent from the Engineering Unit noted that,

> "…..*though works projects have shown a concern for sustainable operations, the terms of contracts have on several occasions not addressed it adequately. Some*

projects have been slowed down by processes of resolving conflicts with communities".

Table 6.1: Service level agreements and terms incorporate sustainable supply metrics

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	3	4.6	4.6
	Disagree	8	12.3	16.9
	Not Sure	7	10.8	27.7
	Agree	26	40.0	67.7
	Strongly Agree	21	32.3	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

This indicated gaps in the commitment of CAA to sustainable supply of works confirmed by the review of the Aerodromes Upgrade Report 2013/14 in which contractors complained on lack of specificity in the terms of contract as far as sustainable supply expectations to be met by them were concerned. This implied the importance given to service delivery management as an irrefutable element of contract management activities towards sustainable supply of works in CAA. So, clarity of such commitments in service level agreements if improved, will improve accomplishment of goals towards sustainable supply of works in CAA.

6.3 Assessing contractors' performance for sustainability

According to the Victorian Government Audits (2011), assessing contractors' performance in on-going contracts is essential for optimizing sustainability in public sector contract management. The study thus, attempted to establish whether CAA commits to assessing contractors' performance in on-going contracts and be able to achieve sustainable supply targets. Responses to this effect were; 9.2% in strong disagreement, 15.4% disagreed, 6.2% not sure, 35.4% agreed, and 33.8% strongly agreed as indicated in table 6.2.

Table 6.2: Assessing contractors' performance for sustainability in CAA

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	6	9.2	9.2
	Disagree	10	15.4	24.6
	Not Sure	4	6.2	30.8
	Agree	23	35.4	66.2
	Strongly Agree	22	33.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.2, 69.2% of total respondents agreed to performance of contractors being assessed for economic, social and environmental responsibility in CAA. This was further noted in the interviews with managers and personnel in key departments like procurement where there is noted commitment to performance assessments in contract management. Particularly, one procurement staff noted that,

> "*….we must see a proactive commitment of contractor to sustainability targets. Attempting to check this after contract completion, may be too late to rectify'*

This implies the significance of service delivery management in contract management towards the improvement in sustainable supply of works in CAA. However, 30.8% of the respondents disagreed to CAA assessing contractor performance in on-going contracts of works. Hence, the low commitment to assessment of contractor performance in service delivery management, has potentially threatened the achievement of sustainable supply of works in CAA.

6.4 Performance metrics agreed upon before commencement of contracts

On the question of whether performance metrics for sustainable supply responsibility are agreed upon before commencement of contracts in CAA, results were: 20.0% strongly disagreed, 43.1% disagreed 7.7% were not sure while 15.4% agreed and 13.8% strongly agreed as shown in table 6.3.

Table 6.3: Performance metrics agreed upon before commencement of contracts

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	13	20.0	20.0
	Disagree	28	43.1	63.1
	Not Sure	5	7.7	70.8
	Agree	10	15.4	86.2
	Strongly Agree	9	13.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.3, majority of the respondents that is, 63.1% were in disagreement with the view that performance metrics for sustainable supply responsibility are agreed upon before commencement of contracts in CAA. This is coupled with the 7.7% who were not sure indicating that, there are inadequacies and optimal achievement of sustainable supply of works in CAA. However, 29.2% of the respondents believed that performance metrics for sustainable supply responsibility are agreed upon before commencement of contracts in CAA which helps improve performance sustainable supply of works in CAA. The overall view on this matter therefore is that; the failure to have clear performance metrics for sustainable supply responsibility creates gaps in service delivery management that will consequently fail sustainable supply of works deliverables.

6.5 Benchmarking sustainable supply performance with other public entities

Service delivery management in managing contracts of works requires that there is benchmarking of sustainable supply performance with other public entities. Hence, on attempting to ascertain whether CAA benchmarks its sustainable supply performance with other public entities the findings were; 12.3% respondents strongly disagreed, 30.8% disagreed, 47.7% were not sure, and 9.2% agreed as indicated in table 6.4.

Table 6.4: Benchmarking sustainable supply performance with other public entities

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	8	12.3	12.3
	Disagree	20	30.8	43.1
	Not Sure	31	47.7	90.8
	Agree	6	9.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.4, majority respondents that is, 90.8% disagreed to CAA benchmarking its sustainable supply performance with other public entities. However, the 9.2% minority respondents that agreed with CAA benchmarking its sustainable supply performance with other public entities are indicative of the gaps in service delivery management that explain sustainable supply inadequacies in CAA. To back this up were observation results where, works at the Kiggungu cargo management construction works had stalled which when investigated, managers expressed concern of lack clear measurement standards and that benchmarking was necessary to establish such standards for improved sustainable supply of works.

6.6 Identification, analysis and mitigation of sustainable supply risk

Having risks to sustainability identified, analyzed and mitigated in ongoing supply contracts is an important element of service delivery management that should part of any contract management process that seeks to maximize sustainable outcomes from supply of works. This study sought to establish whether CAA undertakes identification, analysis and mitigation of risk to sustainable supply in its contract management efforts. The results to this were that; 24.6% of the total respondents disagreed, 36.9% were not sure and 38.5% agreed as indicated by table 6.5 statistics.

Table 6.5: Identification, analysis and mitigation of sustainable supply risk

		Frequency	Percent	Cumulative Percent
Valid	Disagree	16	24.6	24.6
	Not Sure	24	36.9	61.5
	Agree	25	38.5	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.5, 61.5% of the total respondents did not agree with the view that, CAA undertakes identification, analysis and mitigation of risk to sustainable supply in its contract management efforts. This implies poor sustainable supply performance in many CAA works projects and other contracts may be attributed to this sighted lack of adequate identification, analysis and mitigation of risk to sustainable supply in contract management. However, 38.5% of the total respondents agreed to CAA undertaking identification, analysis and mitigation of risk to sustainable supply. This was noted in interviews that revealed success stories on contracts under the implementation programme for upgrade and expansion of Entebbe International Airport highlighting completion of a number of development projects. The project manager noted that,

> *".....though several projects have been a success in this direction including: Automation of the Aeronautical Information Management System; Baggage Handling System; Landside expansion of the Passenger Terminal; and the Cargo handling Centre, we have had a great deal of social problems arising during their construction"*

This was further supported by the 2014/2015 contract performance report in which many community complaints were reported by contractors like Vanderlande Industries B.V of Netherlands, M/s. Seyani Brothers (U) Ltd and China Construction Communications Company (CCCC). These delayed work on on-going projects thus compromising both economic and social benefits.

6.7 Maintaining continuity and contingency plans for failed sustainable supply

Whether CAA maintains continuity and contingency plans for failed sustainable supply programmes was sought to be established by this study. Findings showed that; 12.3% of respondents disagreed, 61.5% not sure and 26.2% agreed as shown in table 6.6.

Table 6.6: Maintaining continuity and contingency plans for failed sustainable supply

		Frequency	Percent	Cumulative Percent
Valid	Disagree	8	12.3	12.3
	Not Sure	40	61.5	73.8
	Agree	17	26.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.6, 12.3% of the total respondents disagreed and 61.5% were not sure on CAA maintains continuity and contingency plans for failed sustainable supply programmes while majority respondents that is, 26.2% agreed with the view. This implies that failed optimization of sustainable supply of works from contracts of CAA was a consequence of service delivery management integrating the maintenance of continuity and contingency plans in her contract management activities. This implied inefficiencies in service delivery management in form of delayed completion in some projects of works like the Entebbe Airport upgrade programme arising from absence of contingency plans to deal with sustainability risk.

6.8 CAA providing incentives to motivate contractors

Providing incentives to motivate contractors towards improving their sustainable supply practices is important to achieving sustainability in ongoing contracts of works. Thus, this study sought to establish whether this was the case in CAA. Responses obtained showed 20.0% of respondents to strongly disagree, 13.8% disagreed, 38.6% were not sure, 13.8% agreed and 13.8% strongly agreed as indicated in table 6.7.

Table 6.7: CAA providing incentives to motivate contractors

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	13	20.0	20.0
	Disagree	9	13.8	33.8
	Not Sure	25	38.6	72.4
	Agree	9	13.8	86.2
	Strongly Agree	9	13.8	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.7, 72.4% of the total respondents disagreed with the view that CAA provides incentives to motivate contractors towards improving their sustainable supply practices while 27.6% were in agreement with the position. This implies a low degree of service delivery management integration as a means of achieving sustainability in contracts of works in CAA that has consequently failed the realization of financial stewardship, social welfare, ethical trading practices, improved health and safety. This is majorly viewed in most works projects in the Entebbe Airport upgrade programme where contractors have presented more cost overruns and failed to complete work as scheduled and as a result led to sub-optimization of sustainable supply of works in CAA.

6.9 Building sustainable supply incentives into contract terms

Establishing whether sustainable supply incentives of CAA are built into contract terms and are balanced to encourage appropriate contractor behavior was part of the study. In response to this, 7.7% respondents strongly disagreed, 4.6% disagree, 47.7% were not sure, 33.7% agreed, and 6.2% strongly agreed as shown in table 6.8. From the table, 60.1% of total respondents did not agree with CAA building sustainable supply incentives into contract terms and balanced to encourage appropriate contractor behavior. However, minority respondents 39.9% agreed with the view that CAA builds sustainable supply incentives into contract terms.

Table 6.8: Building sustainable supply incentives into contract terms

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	5	7.7	7.7
	Disagree	3	4.6	12.4
	Not Sure	31	47.7	60.1
	Agree	22	33.7	93.8
	Strongly Agree	4	6.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

In an interview with the Risk and Quality Assurance Manager, he noted that,

> *"…lack of specific terms of contract binding contractors in responsibility for liability arising from non-performance of sustainable supply obligations has failed effective implementation of sustainability in works projects. ….we have found it very costly responding to contract deficiencies as far as sustainability is concerned*"

This implied that service delivery management in CAA has low integration of sustainability in contract terms that has hindered the optimal realization of sustainable supply of works.

6.10 Continued commitment to the realization of sustainable supply

The study sought to establish whether there is a continued commitment to the realization of sustainable supply in contract management activities of CAA. It was found that 3.1% of the respondents strongly disagreed, 10.8% disagreed, 10.8% were not sure, 53.8% agreed and 21.5% strongly agreed as indicated in table 6.9.

From table 6.9, 24.7% of the respondents disagreed with contract management activities in CAA having a continued commitment to realization of value for money. However, 75.3% majority respondents agreed with CAA having a continued commitment to the realization of sustainable supply throughout its works contract management activities. This implies that service delivery management by way of commitment to the realization of sustainable supply is helping realise targeted sustainable supply of works in CAA.

Table 6.9: Continued commitment to the realization of sustainable supply

		Frequency	Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.1	3.1
	Disagree	7	10.8	13.9
	Not Sure	7	10.8	24.7
	Agree	35	53.8	78.5
	Strongly Agree	14	21.5	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

6.11 Contract review to encourage performance improvement

Review of contracts so as to encourage improvement in performance of contractors is a key component of service delivery management in any ongoing contract management effort. The investigation on service delivery management with focus on whether contracts are reviewed and contractors encouraged to improve performance towards sustainable supply targets in CAA found out that 1.5% of the respondents to disagree, 3.1% not sure, 46.2% agreed, and 49.2% strongly agreed as shown in table 6.10.

Table 6.10: Contract review to encourage performance improvement

		Frequency	Percent	Cumulative Percent
Valid	Disagree	1	1.5	1.5
	Not Sure	2	3.1	4.6
	Agree	30	46.2	50.8
	Strongly Agree	32	49.2	**100.0**
	Total	**65**	**100.0**	

Source: Primary data

From table 6.10, 4.6% of the respondents disagreed with CAA undertaking review of contracts so as to encourage improvement in performance of contractors towards sustainable supply targets. This then signifies the inadequacies in contract management that has failed the realization of sustainable supply of works in CAA. However, 95.4% of the respondents agreed to review of contracts in CAA that has provided a base for encouraging performance improvement in the sustainable supply of works. This implies improved sustainable supply of works in CAA as service delivery failures regarding sustainable supply performance are addressed before contracts come to an end.

6.12 Hypothesis testing

To reject or maintain the null hypothesis required testing that the means of all the elements sampled for service delivery management and sustainable supply of works in Civil Aviation Authority came from populations with equal means and differ only because of sampling error. An analysis of variance test to establish the F value and its statistical significance that indicate this variance was done, yielding results as shown in table 6.11.

Table 6.11: Analysis of variance in service delivery management and sustainable supply of works in CAA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	203.864	1	203.864	12.672	.001[a]
	Residual	1072.638	63	17.026		
	Total	1276.502	64			

a. Predictors: (constant), Service delivery management
b. Dependent Variable: Sustainable supply of works.

From table 6.11, with **F** = 12.672 and **p** <0.05, it was established that there is a significant and positive relationship between service delivery management and sustainable supply of works in Civil Aviation Authority. Hence, service delivery management is an important aspect of contract management in achieving sustainable supply of works in Civil Aviation

Authority with low levels of variance at 12.67% and levels of significance at .001 less than 0.05 i.e. $p<0.05$. These implied rejection of the null hypothesis H_{O3} and support of the alternative hypothesis H_{A3} that there is a significant positive relationship between service delivery management and sustainable supply of works in Civil Aviation Authority.

6.13 Correlation analysis

To determine the strength of the relationship between service delivery management and sustainable supply of works in Civil Aviation Authority, a correlation analysis was done and produced results as indicated in table 6.12.

Table 6.12: Correlation of service delivery management and sustainable supply of works in CAA

Correlations

		Service delivery management	**Sustainable supply of works**
Service delivery management	Pearson Correlation	1	.783
	Sig. (2-tailed)		.001
	N	65	65
Sustainable supply of works	Pearson Correlation	.783	1
	Sig. (2-tailed)	.001	
	N	65	65

a. Predictors: (Constant), Service delivery management

From table 6.12, correlation results indicated a strong positive relationship between service delivery management and sustainable supply of works in Civil Aviation Authority given **r** = .783 at significance levels **p** = 0.001 less than 0.05. This implies that if service delivery management in contracts of works embraced a greater sustainable concern there will be a significant positive improvement in the direction towards sustainable supply of works in the aviation industry.

6.14 Regression analysis

A regression analysis was performed to determine the influence of service delivery management on sustainable supply of works in Civil Aviation Authority. This yielded a summary of results as indicated in table 6.13.

Table 6.13: Model Summary of service delivery management and sustainable supply of works in CAA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783[a]	.613	.599	.31941

a. Predictors: (Constant), Service delivery management

Linear regression analysis with results in table 6.13 was performed to support the results of correlation analysis in establishing the relationship between service delivery management and sustainable supply of works in Civil Aviation Authority. With r = 0.783, it can be concluded that service delivery management has a strong positive relationship with sustainable supply of works in CAA. This means an improved integration of sustainability criteria in service delivery management will lead to a positive improvement in sustainable supply of works in CAA by 78.3%. And the coefficient of determination i.e. the Adjusted R Square value of 0.298 suggests that this improvement in sustainable supply of works can be 59.9% predicted by a positive change in service delivery management within contracts of works in Civil Aviation Authority.

CHAPTER SEVEN

HARMONISATION OF CONTRACT MANAGEMENT AND SUSTAINABLE SUPPLY OF WORKS IN CIVIL AVIATION AUTHORITY

7.1 Introduction

This chapter sets out to link literature review and study findings on contract management and sustainable supply of works in Civil Aviation Authority (CAA). It deduces implications of study findings against the ideal practice postulated by the literature. As a result, a way forward towards improved contract management practices and sustainable supply of works is drawn. The 2007 CIPS model recognises that, the central aim of contract management is to obtain the services as agreed in the contract and achieve value for money. This means optimizing the efficiency, effectiveness and economy of the service or relationship described by the contract, balancing costs against risks and actively managing the customer–provider relationship. In the case of Civil Aviation Authority, contract management was equally found to be primarily focused on achieving value for money. However, the commitment to sustainable supply outcomes was found to inadequate.

The 2007 CIPS model adds that contract management involves aiming for continuous improvement in performance over the life of the contract. This supported by the 2011 Victorian Procurement Governance model such terms agreed and value for money sought from contract management should embrace social and environmental concerns as well. Though study found Civil Aviation Authority to be guided by the PPDA regulatory framework on contract management, similar elements as set in the CIPS model like pre-contract award activities, relationship management, and service delivery management were found to be embraced by the system and influenced the attainment of sustainable supply of works.

7.2 Pre-contract award activities and sustainable supply

Elsey in CIPS (2007) asserts that, there are a number of other definitions of contract management, the majority of which refer to post-award activities. Successful contract management, however, is most effective if upstream or pre-award activities are properly

carried out. Such upstream or pre-award activities include: a) Preparing the business case and securing management approval; b) Assembling the project team; c) Developing contract strategy; d) Risk assessment; e) Developing contract exit strategy; f) Developing a contract management plan; g) Drafting specifications and requirements; h) Establishing the form of contract; i) Establishing the pre-qualification, qualification and tendering procedures; j) Appraising suppliers; k) Drafting ITT documents; l) Evaluating tenders; m) Negotiation; and n) Awarding the contract.

According to the study, to achieve sustainable supply of works it was agreed that assembling a project team, developing a contract strategy; developing a contract management plan and establishing the form of contract are undertaken. The study further indicates establishing the pre-qualification, qualification and tendering procedures, appraising suppliers, evaluating tenders, and negotiation as critical elements of the pre-contract award phase in which the pursuit of sustainable supply of works can be attained. Addressing concerns for economic, social, and environmental responsibility should therefore adopt a proactive approach rather than a reactive approach so to guarantee reduced cost and pollution as well as improved social welfare, community involvement, ethical trading, health and safety.

However, the study indicated that Civil Aviation Authority lacks a clear exit strategy, ineffectively assesses social, economic and environmental risk before awarding contracts of supply of works, lacks a clear strategy on sustainability in the pre-contract award phase, and the specifications and instructions to tenderers (ITTs) lacking accurate statement of sustainable supply needs. The study further indicated improper address of sustainable supply needs in established prequalification, qualification and tendering procedures and securing management approval of the business case for sustainable procurement and supply initiatives before the award and commencement of contracts for supply of works.

7.3 Relationship Management and sustainable supply of works

The Office of Government Commerce, (2002) recognises that, as well as the contractual and commercial aspects, the relationship between the parties is vital to making a success of the arrangement. The approach to this will vary depending on the contract, but it is important

that the specific responsibilities are not neglected, even though there may not be a nominated individual assigned to the role of relationship manager. The study found Civil Aviation Authority to embrace relationship management in the management of contracts of works and though no specific individual was appointed as a relationship manager, the functions of appointed contract managers and project management teams indicated the assignment of such functions as those of relationship managers.

Elsey in CIPS (2007) notes that it is important to make the relationship work effectively by developing mutual trust and understanding, creating an open and constructive environment, and contributing to the joint management of the contract delivery. It is primarily through the development of mutual trust and confidence that the other elements for success are created. The Office of Government Commerce (2002) also adds that 'the three key factors for success relationship management are trust, communication, and recognition of mutual aims. The study found CAA to have low levels of trust, communication and limited discussion of goals and objectives with contractors towards sustainable supply of works.

The right attitudes and behaviors, based on trust rather than adversarial models, should be encouraged (Office of Government Commerce, 2002). Civil Aviation Authority was found to have less emphasis on the establishment of collaborative structures with its contractors and other key stakeholders to ensure that key contract activities like impact assessments are efficiently undertaken in contracts of works. Also giving contractors insight into its operations and management style as well as sharing plans and information on the future of its sustainable supply practices with stakeholders were lacking. Management structures in place take on a more closed and controlled approach to contract management that limits effective implementation of sustainable of works.

The terms of the contract should include an agreed level of service, pricing mechanisms, provider incentives, contract timetable, means to measure performance, communication routes, escalation procedures, change control procedures, agreed exit strategy and agreed break options, and all the other formal mechanisms that enable a contract to function. These formal contract aspects form the framework around which a good relationship can grow. If

the contract was poorly constructed, it will be much more difficult to make the relationship a success. The case of CAA indicates clear pricing mechanisms with price adjustment formulas set out in the PPDA contract pricing and variations guidelines. However, the study found CAA to lack a clearly agreed exit strategy and key formal mechanisms for the effective integration of sustainable supply of works efforts.

In addition, the customer gaining from knowing the provider's strengths and weaknesses, and focusing contract and contract management effort into those areas where they will bring most return on effort (Office of Government Commerce, 2002). CIPS (2007) in agreement notes that training of stakeholders is essential to achievement of good relationships. The contractor performance assessments that were found to be conducted by CAA in its contract management activities are indicative of the move towards establishing contractor weaknesses and strengths towards delivery of sustainable supply outcomes. However, though training in sustainable supply practices is undertaken by CAA, specific emphasis needs to be given to integration of sustainability in contract management.

7.4 Service delivery management and sustainable supply of works

The Office of Government Commerce (2002) recognizes that the critical success factors of contract management primarily include service delivery management and contract administration. Effective governance will ensure that the customer gets what is agreed, to the level of quality required. The performance under the contract must be monitored to ensure that the customer continues to get value for money. Civil Aviation Authority undertakes effective monitoring of contract activities on on-going works projects. This has aided significant progress towards sustainable supply in many works projects. Performance assessments as regards efficiency, effectiveness and economy have been critical to achieving value for money in works projects.

Elsey, (2007) adds that, it is important that the performance measures selected provide clear and demonstrable evidence of the success (or otherwise) of the relationship and, in principle, issues such as the following should be covered: cost and value obtained; performance and customer satisfaction; delivery improvement and added value; delivery capability; benefits

realised; relationship strength and responsiveness to demands of sustainability. The OGC (2002) in support views service delivery management is the process of managing the performance provided to the customer as specified in the contractual performance metrics. The study established that CAA does adequately benchmark its sustainable supply performance with other public entities. In addition, managers expressed concern of lack clear measurement standards and that benchmarking was necessary to establish such standards for improved sustainable supply of works.

In addition, Elsey (2007) asserts that once chosen, the requirements underpinning the performance measures should be the primary focus for contract management. They should form the framework on which information needs and flows and contract management teams, skills, processes and activities are developed and improved in conjunction with the supplier to successfully commit to sustainable supply. They should not be seen as a method of control, but as a proactive means of improving the performance of the contractor. Performance measurement results can be used to inform decisions on the type and extent of incentives towards sustainable supply of works. Though Civil Aviation Authority was found to undertake performance appraisals based on set criteria, there were established inadequacies in specificity of terms of contract as far as sustainable supply expectations to be met by them were concerned.

Taylor (2009) advances that, in order to meet customers' business needs and gain optimum customer satisfaction whilst meeting the provider's business goals, the provider has to optimize the relationship between cost and quality of the services delivered whilst committing to social and environmental responsibility. Service delivery management plays an important role for the provider in balancing cost and quality of services in order to provide the customer with sustainable value for money in works procurement. Civil Aviation Authority has moderately obtained the balance between quality and cost in works projects. However, there have been gaps in the pursuit of social and environmental within this balance and limited the effectiveness of sustainable supply of works in Civil Aviation Authority.

CHAPTER EIGHT

SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1 Introduction

This chapter sets out to link literature review and study findings on contract management and sustainable supply of works in Civil Aviation Authority (CAA). It deduces implications of study findings against the ideal practice postulated by the literature. As a result, a way forward towards improved contract management practices and sustainable supply of works is drawn.

8.2 Summary of findings

Using a research design that adopted a phenomenological approach, a cross sectional survey and case study strategy, and both quantitative and qualitative methods applied on a sample of 80, the study sought to achieve the following objectives:

a) To examine the relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority.
b) To assess the role of relationship management in achieving sustainable supply of works by Civil Aviation Authority.
c) To examine the relationship between service delivery management and sustainable supply of works in Civil Aviation Authority.

8.2.1 Pre-contract award activities and sustainable supply of works

Successful contract management, however, is most effective if upstream or pre-award activities are properly carried out. Findings reveal that pre-contract award activities have a significant impact on sustainable supply of works. Such pre-award activities as preparing a business case and securing management approval, assembling the project team, developing contract strategy, risk assessment, developing a contract management plan, among others if properly executed lead to a significant improvement towards sustainable supply of works.

With analysis of variance yielding the F value of 15.61 with levels of significance at .000 less than 5% i.e. $p<0.05$, the null hypothesis was rejected and the alternative hypothesis that

there is a significant positive relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority taken. This was supported by correlation and regression results which all indicated a strong positive relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority given **r**= .711 at significance levels **p** = 0.000 less than 0.05.

8.2.2 Relationship management in achieving sustainable supply of works

From the study, having a planned, coordinated, and controlled association that commits an organisation to its contractors for some time with varying degrees of dependency facilitates effective implementation of sustainable supply in contracts of works. Building mutual trust and understanding with contractors, giving contractors confidence to invest in sustainable supply initiatives, top management championing the commitment, sharing plans and information on the future of its sustainable supply practices with stakeholders, and giving contractors insight into CAA's operations and management style were found to significantly lead to improved sustainable supply of works. However, the need to place sustainable supply as a long-term strategic issue in supply relationships, harmonization and open discussion of contract objectives, goals and planning with contractors, maintaining open and excellent communications with stakeholders, and maintaining collaborative management structures were to be lacking in CAA.

With analysis of variance results yielding values of **F** = 15.331 with the Sig. less than 0.05 i.e. $\boldsymbol{p} = 0.000 < 0.05$ with regression and residual mean square values of 117.774 and 6.764 respectively, this was indicative of a significant relationship between relationship management and sustainable supply of works in CAA. Therefore, this implies rejection of the null hypothesis. Correlation and regression results also indicated a moderately strong positive relationship between relationship management and sustainable supply of works in Civil Aviation Authority given **r** = .695 at significance levels **p** = 0.000 less than 0.05. Therefore, if relationship management embraced a greater integration of sustainable concerns there will be a moderately significant positive improvement in the direction towards sustainable supply of works in the aviation industry.

8.2.3 Service delivery management and sustainable supply of works

The revealed that service delivery management is a critical success factor in managing contracts of works towards sustainable supply of works. It was found out that Civil Aviation Authority incorporates sustainable supply metrics in its service level agreements and contract terms against which sustainable supply performance is measured and contractors' performance in on-going contracts is assessed to optimize sustainability in works contracts. Also performance metrics for sustainable supply responsibility are agreed upon before commencement of contracts, benchmarking of sustainable supply performance with other public entities is undertaken, risks to sustainability identified, analyzed and mitigated in ongoing supply contracts, there is a continued commitment to the realization of sustainable supply, and review of contracts so as to encourage improvement in performance of contractors to sustainable supply of works.

However, sustainable supply incentives of CAA being built into contract terms and balanced to encourage appropriate contractor behavior, maintaining continuity and contingency plans for failed sustainable supply programmes, and providing incentives to motivate contractors towards improving their sustainable supply practices were found lacking. Nevertheless, with analysis of variance results yielding **F** = 12.672, correlation and regression results yielding **r** = .783 at significance levels **p** = 0.001 less than 0.05, the null hypothesis had to be rejected as it was established that there is a significant and positive relationship between service delivery management and sustainable supply of works in Civil Aviation Authority.

8.3 Conclusion

It was established that contract management has a positive significant relationship with sustainable supply of works in Civil Aviation Authority. Therefore, the effective implementation and integration of sustainable supply requirements in pre-award activities, relationship management and service delivery management significantly improves sustainable supply of works. This was established following the testing of hypotheses, correlation and regression analyses. With correlation and regression results indicating a strong positive relationship between pre-contract award activities and sustainable supply of works in Civil Aviation Authority given **r**= .711 at significance levels **p** = 0.000 less than

0.05, **r** = .695 at significance levels **p** = 0.000 less than 0.05 for relationship management and sustainable supply of works, and **r** = .783 at significance levels **p** = 0.001 less than 0.05 service delivery management and sustainable supply of works in Civil Aviation Authority, it was concluded that there is a significant relationship between contract management and sustainable supply of works in Civil Aviation Authority.

8.4 Recommendations

The study on contract management and sustainable supply of works sighted gaps that led to the following recommendations:

Civil Aviation Authority should improve and streamline the preparation and securing management approval of the business case for sustainable procurement and supply initiatives before the award and commencement of contracts for supply of works. This is critical to reducing the failure of optimizing sustainability in its contracts of works.

More emphasis on the effective assessment of social, economic and environmental risk before awarding contracts is necessary for improved supply of works in CAA. And that, a clear strategy on sustainability in the pre-contract award phase creates will reduce gaps in contract management that fail the satisfaction of sustainability expectations of works contracts in CAA.

Specifications and instructions to tenderers (ITTs) should incorporate accurate statement of CAA's sustainable supply needs. This should be supplemented by establishing prequalification, qualification and tendering procedures addressing sustainable supply needs at the pre-award stage as well as appraising service providers or contractors are appraised for the capacity and capability to meet sustainable supply needs/requirements of Civil Aviation Authority. Setting an exit strategy based on the possibility of sustainable works supply inefficiencies is also necessary.

CAA should have specific policy guidelines and criteria on the harmonization and discussion sustainable supply of works objectives, goals and planning with contractors. This is critical

to establishing more specific approaches and clear lines of responsibility of improving and integrating sustainable supply practice in works contracts.

In addition, a three-stage envelop system and competitive dialogue should be adopted by Civil Aviation Authority in contracts of works. Using these methods, will allow a multiple stage test of sustainability criteria and also allow significant discussion of sustainable supply needs in contracts of works.

Communication with stakeholders was found to have gaps. Civil Aviation Authority should improve on its communication practices with stakeholders to have better relationships to gain greater momentum towards sustainable supply of works. Fostering open communications in managing contracts of works is essential to achieving improved sustainable supply of works in the aviation industry.

Civil Aviation Authority should have more emphasis on the establishment of collaborative structures with its contractors and other key stakeholders to ensure that key contract activities like impact assessments are efficiently undertaken in contracts of works. With such establishments, the achievement of sustainable supply of works will improve as collective concern and representation in such teams will ease the implementation.

CAA should ensure specificity of terms of contract as far as sustainable supply expectations to be met by contractors id concerned. So, clarity of such commitments in service level agreements if improved, will improve accomplishment of goals towards sustainable supply of works in CAA.

CAA should benchmark its sustainable supply performance with other public entities, set clear measurement standards and maintain continuity and contingency plans for failed sustainable supply programmes.

CAA should improve on its commitment to providing incentives of motivating contractors towards improving their sustainable supply practices. This will improve service delivery management integration as a means of achieving sustainability in contracts of works in CAA that will consequently lead to the realization of financial stewardship, social welfare, ethical trading practices, improved health and safety.

In addition, building sustainable supply incentives into contract terms and balanced to encourage appropriate contractor behavior will help make improvements in sustainable supply of works.

8.5 Areas of further research

Based on the findings of the study, further research may be done on:

- The effectiveness sustainable policy and regulatory framework in supply chain governance, and
- The competing notion between sustainable policy and service delivery in the public sector.

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APPENDICES

APPENDIX I: 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	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	10000 0	384

Note: "N" is population size

"S" is sample size.

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

APPENDIX II: QUESTIONNAIRE

Dear Sir/Madam,

I am **Mbuga Pauline**, a student of Master of Procurement and Logistics Management at Nkumba University. I am conducting a research on "**Contract Management and Sustainable supply of works in the Aviation Industry: A Case Study of Civil Aviation Authority**" in partial fulfillment of the requirements for the Award of the above Degree. You have been selected to participate and hereby requested respond to the questions in this study. The information got from you will be kept confidential and will be used strictly for academic purposes.

Thank you so much for your cooperation.

Section A: Background Information

Pleas mark the applicable box with a tick

1. **Age (years)**

Below 25	26-35	36-45	46-55	Above 55

2. **Sex**

Female ☐ Male ☐

3. **Level of Education**

Masters	Bachelors	Diploma	Certificate	Others (specify)

4. **What is your post/department of occupation**?

Directors ☐ Procurement Unit staff ☐ Contracts Committee ☐
Marketing and Commercial services ☐ Internal Audit and Risk Management ☐
Quality Assurance ☐ Managers ☐ Finance and Accounting ☐
Engineering, Planning and Development ☐

5. Marital status

Single	Married	Divorced	Separated	Widowed	Others (specify)

6. Your period of work with CAA (years)

Below 6yrs	6-10yrs	11-15yrs	16-20yrs	Above 20yrs

For sections B, C, D and E use the scale/ranking below to tick in the box that corresponds with number that best indicates your opinion on the statement or question.

Scale	***1***	***2***	***3***	***4***	***5***
Opinion	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*

SECTION B: Pre-contract award activities in Civil Aviation Authority

No.	**Item**	**1**	**2**	**3**	**4**	**5**
1.	CAA prepares and secures management approval of a business case for sustainable procurement and supply initiatives					
2.	Project teams for contract management and sustainable supply programmes are usually assembled in CAA					
3.	CAA develops a contract strategy for every procurement and achieving sustainable supply.					
4.	Procurement and supply needs are assessed for potential economic, social and environmental risk in CAA					
5.	Contract exit strategies are prepared to reinforce sustainable contract management and supply practices in CAA					
6.	A contract management plan is set out to have parties effectively and efficiently execute their commitments to sustainable supply in CAA					
7.	Specifications and Instructions to Tenderers are drafted incorporating accurate statement of CAA's sustainable supply needs					
8.	Negotiations and appropriate contracts are established by CAA to meet it economic, social and environmental needs in supply					
9.	CAA has established prequalification, qualification and tendering procedures addressing sustainable supply needs.					
10.	Suppliers are appraised for the capacity and capability to meet sustainable supply needs/requirements of CAA.					

SECTION C: Relationship Management in Civil Aviation Authority

No.	Item	1	2	3	4	5
1.	CAA has harmonized and openly discussed contract objectives, goals and planning with suppliers to achieve sustainable supply.					
2.	CAA's relationship with suppliers has given them confidence to invest in sustainable supply initiatives.					
3.	Contract relationships have facilitated supplier efficiency and cost effective delivery while committing to social and environmental responsibilities in CAA.					
4.	CAA has built mutual trust and understanding with suppliers to have joint commitment to sustainable supply.					
5.	CAA maintains open and excellent communications with its suppliers, society, authorities, and other stakeholders.					
6.	CAA maintains collaborative management structures/teams that aid a joint approach to sustainable supply.					
7.	CAA's top management is championing and committed to sustainable supply programmes					
8.	CAA has centered sustainable supply as a long-term strategic issue in supply relationships.					
9.	CAA has aided the sharing plans and information on the future of its sustainable supply practices					
10.	CAA's relationships with suppliers have given them insight into its operations and management style to make proactive suggestions towards sustainable supply practices.					

SECTION D: Service Delivery Management in Civil Aviation Authority

No.	Item	1	2	3	4	5
1.	Service level agreements and terms of supply contracts in CAA include metrics of sustainable supply practice.					
2.	Performance of service providers is assessed for economic, social and environmental responsibility in CAA.					
3.	Performance metrics for sustainable supply responsibility are agreed upon before commencement of contracts in CAA.					
4.	CAA benchmarks its sustainable supply performance with other public entities					
5.	Risks to sustainability are identified, analyzed and mitigated in ongoing supply contracts of CAA.					
6.	CAA maintains continuity and contingency plans for failed sustainable supply programmes.					
7.	CAA provides incentives to motivate suppliers and improve their sustainable supply practices.					

No.	Item	1	2	3	4	5
8.	Sustainable supply incentives of CAA are built into contract terms and are balanced to encourage appropriate supplier behavior.					
9.	There is a continued commitment to the realization of sustainable supply in contract management activities of CAA.					
10.	Contracts are reviewed and contractors encouraged to improve performance so as to meet sustainable supply targets in CAA.					

SECTION E: Sustainable Supply in Civil Aviation Authority

No.	Item	1	2	3	4	5
1.	CAA has an approved an approved and cost effective sustainable supply policy.					
2.	CAA integrates environmental control in its procurement and supply practices.					
3.	CAA specified green building designs and pollution prevention in supply of its construction works.					
4.	CAA conducts environmental impact assessments of its major procurement and supply projects.					
5.	CAA and its suppliers have committed to community involvement and social welfare in supply programmes.					
6.	Diversity and inclusion is visible in CAA's supplier evaluation and selection process.					
7.	CAA commits to suppliers exercising ethical trading practices and financial stewardship.					
8.	CAA undertakes assessment of the supply market for economic prices and cost efficiency to achieve sustainable value for money supply.					
9.	CAA and its suppliers have committed health and safety in supply processes					
10.	Lifecycle costing to establish the total cost of ownership is undertaken in evaluating supply alternatives					

Thanks for your participation.

APPENDIX III: INTERVIEW GUIDE

Dear Sir/Madam,

I am **Mbuga Pauline**, a student of Master of Procurement and Logistics Management at Nkumba University. I am conducting a research on "**Contract Management and Sustainable supply of works in the Aviation Industry: A Case Study of Civil Aviation Authority**" in partial fulfillment of the requirements for the Award of the above Degree. You have been selected to participate and hereby requested respond to the questions in this study. The information got from you will be kept confidential and will be used strictly for academic purposes.

Thank you so much for your cooperation.

1) What is your position at Civil Aviation Authority?

2) How would you describe contracts management and sustainable supply practices in CAA?

3) How important are pre-contract award activities to achieving sustainable supply in CAA?

4) What major considerations are made before contract award to ensure sustainable supply in CAA?

5) What is effect of relationship management on sustainable supply practices in CAA?

6) How do you evaluate contract relationships of CAA with its suppliers?

7) What major relationship aspects are so important to the achievement of sustainable supply in CAA?

8) What is your view of service delivery management and sustainable supply in CAA?

9) How have contract management practices in CAA embraced sustainable supply?

10) Generally, how have contract management practices affected sustainable supply in CAA?

Thank you so much for your cooperation.

APPENDIX IV: Observation and Documentary review checklists

Observation

a) Ongoing works projects at CAA operation sites
b) Outsourced service operations at Entebbe airport
c) Recently completed works at the airport and CAA sites

Documentary review

a) CAA contract completion reports
b) Monthly Procurement Reports
c) CAA internal and external audit reports
d) Marketing and commercial services reports
e) PPDA audit reports
f) Minutes of site meetings
g) Others as may be found relevant