CONTRACT MANAGEMENT PRACTICES AND SUCCESS OF ROAD CONSTRUCTION PROJECTS IN UGANDA: A CASE STUDY OF LUKULI ROAD MAKINDYE DIVISION, UGANDA

BY
NNASSUUNA RUTH
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JANUARY, 2022
DECLARATION

“I, Nnassuuna Ruth, declare to the best of my knowledge that this research report is truly my original work and has not been submitted for the fulfilment of any requirement for award of a degree in any other institution of higher learning, so it is entirely out of my own efforts.”

Signature

Date: 5th /02/2022

NNASSUUNA RUTH
APPROVAL
“This is to satisfy that this research report is done under my supervision and it is now ready for submission to the College of Humanities and Social Sciences, Kampala International University with my approval.”

Signature:  

Date 10th/02/2022  

DR. KATUNGUKA AARON
DEDICATION

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving parents who have meant and continue to mean so much to me. Although they are no longer of this world, their love for me knew no bounds and they taught me the value of hard work.

My beloved children Sheila, Benjamin and Anita, your words of encouragement continue to ring in my ears, you have never left my side and are very special to me.

I also dedicate this dissertation to my beloved Sponsor Madam Barbra Kisubi, who has generously supported me throughout the process. I will always appreciate all what you have done to help me improve my carrier.

I give thanks to my best friends and class mates; you have been my best cheerleaders.
ACKNOWLEDGEMENT

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LIST OF ABBREVIATIONS

CVI: Content Validity Index

GDP: Gross Domestic Product

KCCA: Kampala City Council Authority

PLCC: Pearson’s Linear Correlation Coefficient

PPOA: Public Procurement Oversight Authority

RAFU: Road Agency Formation Unit

SPSS: Statistical Package for Social Scientists

UNRA: Uganda National Roads Authority

BOQs: Bills of Quantities
ABSTRACT
This study was conducted to establish the relationship between contract management practices and success of road construction projects in Uganda, using a case study of Lukuli road project in Makindye Division, Kampala Uganda. Three objectives were examined, which included examining the relationship between; 1) contractor monitoring; 2) risk management; and 3) evaluation and success of Lukuli road construction. The study employed a case study design together with a descriptive correlational and a cross sectional survey design. Data was collected from a sample of 115 stakeholders of Lukuli road construction, who include the employees and officials of road construction at Makindye Division, contractors’ managers, local government leaders and Local Council leaders of the communities around the road. Purposive and convenient sampling techniques were used to select respondents. Data collection was done using a researcher made questionnaire and an interview guide. Data analysis was done using a researcher made questionnaire and an interview guide. Data analysis was done using frequency counts, percentages, means and standard deviations at a descriptive level. At the inferential level, the Pearson’s Linear Correlation Coefficient was used. The findings revealed that Lukuli road construction was fairly successful (average mean=3.03, SD = 0.324), Contractor monitoring (average mean=3.26; SD=0.416), risk management (average mean = 3.20; SD=0.330) and evaluation (average mean=3.33; SD=0.280) were all fairly effective. Contractor monitoring (r-value = 0.255, sig. = 0.006) and risk management (r-value = 0.294, sig. = 0.001) were found to be positively and significantly correlated with Lukuli road construction success. On the other hand, evaluation was found to be negatively but insignificantly correlated with road construction success (r-value = -0.029, sig. = 0.758). The researcher concluded that contractor monitoring and risk management are important in enhancing road construction success of Lukuli project, but evaluation is not important, so it should not be given much focus. The researcher recommended that the administration of Makindye Division should improve contractor monitoring by focusing on monthly inspections, maintaining a record book, time management and sticking to approved BOQs. The administration should also try to improve risk management by ensuring that they identify the possible risks early before construction works begin, regular supply of construction materials and equipment, timely response to risks identified during construction, consideration of risks arising from weather changes and ensuring that funds are released in time.
CHAPTER ONE

INTRODUCTION

1.0 Introduction

The chapter contains the background, statement of the problem, purpose, objectives, research questions, scope and significance of the study. “Contract management for roads has been an important aspect globally, some countries do not have a sufficient industry of independent contractors and road works are mostly done by force on account or awarded to state construction agencies on a negotiated basis.” “In many such countries, construction costs are high but the quality of construction is always low; there monopoly by suppliers of construction materials, which promotes further the inefficiencies and lowers quality of construction works (World Bank report, 2012).

1.1 Background of the study

1.1.1 Historical Perspective

“Globally, there is a rapid growth within the road construction industry, which outpaces that of global Gross Domestic Product (GDP) with major concentration in China, the United States and India. However, Sub Saharan Africa is characterized by limited number of firms dominating large scale-works, mainly Chinese and European contractors (Queiroz, 2011). There has been growing interest in contract management in the developed world and hence the many studies in this field (Rendon, 2010).”

“In Africa, although use of roads dominates the transport sector, carrying 80% to 90% of passengers and freight traffic in most countries, the condition of these roads remains very poor by international standards (World Bank, 2011). The World Bank report of 2011 indicates that Africa has the lowest spatial density of roads than any other region of the world, only 204 km of roads per 1000 km$^2$ of land area, with only one-quarter paved, while the world average is 944 km/1000 km$^2$, with over half paved (Bagaka et al, 2010). The spatial density of Sub-Saharan Africa’s roads is less than 30% of that of South Asia, where half of the roads are paved and only 6% of that of North America, where two-thirds are paved (Barasa, 2014). In order to respond to this challenge, the World Bank report of 2011 proposes that the African road sector has passed through a wide ranging policy reforms, with most countries embarking on creation of independent source of funding for road maintenance
based on road-user charges (Banaitiene, 2006). However, these reforms have not fully improved the performance of roads in Africa.”

“The Government of Uganda for example, instituted reforms in the road sector in 1996, due to the importance attached to road infrastructure. These reforms culminated into the creation of Road Agency Formation Unit (RAFU) in 1998 and eventual establishment through the Act of Parliament, the Uganda National Roads Authority (UNRA). UNRA replaced the RAFU as an autonomous body mandated to develop and maintain the National Road network. UNRA became operational on 1st July 2008 and as part of the key functions it was mandated to select contractors for road works, monitor road construction and ensure effective performance of road projects (UNRA, 2008).”

“According to the Crossroads Database (2012), Uganda has a total of 746 local roads contractors. It is estimated that 45% of the roads in Uganda are in poor conditions. Districts are worse off with 56% of the roads in poor conditions, yet roads are the major mode of transport in Uganda, linking areas of production to markets as well as facilitating mobility of people and materials. Over 90% of cargo freight and passengers move by road (Bogere, 2013).”

“Bogere (2013) found out that road construction projects are still associated with sub-standard work, loss of government funds and untimely completion of projects. He further asserts that, a lot of funds were set aside for monitoring and supervision in the budget for road projects but roads were found to be of poor quality compared to those works, where there were no funds set aside. The funds were not necessarily put to use especially where works are undertaken by government. An ACODE (2012) study revealed inconsistency in monitoring and supervision at a micro level. Allocation of works for monitoring and supervision of road works was used as a proxy for actual monitoring and supervision of road works contracted is unlikely without finances. A total of 24 road construction projects out of 145 (17%) did not have funds earmarked for monitoring (ACODE, 2012). For those funds that were set aside for monitoring per kilometre, it was UGX 2, 263,000 and UGX 64,000 for periodic and routine maintenance respectively. The costs for monitoring were very high, raising concerns for the cost effectiveness of the contracted road projects.”

“Despite the emphasis and regulatory framework on contract management in Uganda, public procurement compliance with sanctions by the Public Procurement and Disposal of Public
Assets Authority Act, have continuously shown contract management as one of the areas where performance is characterized by unfinished projects, poor service or product delivery, corruption and extended contract periods in the last ten years without major justification (Transparency International, 2009). Taking into account of (2018/2019), in roads and works sector, inadequate funding for road maintenance has continued to downgrade the level of service for road networks. Government of Uganda has to this effect prioritized road maintenance by scaling down on new projects and shift focus to road maintenance (MFPED, 2019). Despite these weaknesses in the road construction sector, very few studies have been conducted on contract management practices and the extent to which they have affected the success of road construction projects in Uganda, a gap to which this study intended to to fill.”

1.1.2 Theoretical Perspective
The study adopted the Agency Theory by Stephen Ross and Barry Mitnick in (1973); the theoretical basis for the Success outcomes of contract management is founded on the agency theory. The theory explains the relationship between the two parties in contract management and conflicts that arise between the contractors and hiring entity. It explains the relationship between the two groups of people in a contract, that is the principal or principals and the agent or agents.

“According to Lician and Jesse (2004), agency occurs when one person or entity, the agent (road project contractor), is able to make decisions on behalf of, or that impact another person or entity (Lukuli Road Local Government) called the principal. This dilemma exists in circumstances where the agent is motivated to act in his own best interest, which are centrally to those of principals (timely delivery, quality of work, customer satisfaction), and is an example of moral hazard.” Validation of this theory was deemed necessary, because it helps to explain the relationship between the key stakeholders in road construction project and these include the contractor (agent) and the government officials (the principal). In addition, no study was found to have used this theory to explain the relationship between contract management practices and success of road construction success in Uganda, hence the need to cover this theoretical gap.

1.1.3 Conceptual Perspective
According to Akaranga (2008) project success is an ongoing review of the efficiency and importance of a given project. It is used as a means of understanding and improving
company, department and personnel success. According to Kylindri, Blanas, Henriksen and Stoyan (2012) success is the accomplishment of a given task measured against preset known standards of accuracy, completeness, costs and speed. In a contract, success is deemed to be the fulfillment of an obligation, in a manner that releases the performer from all liabilities under the contract. It can also refer to accomplishment or fulfilment of a contract with all its agreed terms. In this study, road construction project success was used to refer to the construction of a road project and deliver it in a timely manner, with effectiveness and efficiency, delivering the expected quality of works that satisfies customers or the road users. According to North (2016) road budget management, which in this study was looked at as efficiency, is one of the road construction activities that should be closely monitored. And according to Byaruhanga (2016); Jha and Misra (2007), other aspects closely monitored regard the quality of the road construction works, which they referred to as avoiding shoddy works, cost overruns and corruption, irresponsible construction, ensuring that there is compliance with road safety standards, while constructing the road, which means that the customers or the road users will find it easy and safe to use the road.

The IACCM (2019) defines contract management as a discipline that supports commercial management through the preparation, negotiation, implementation and oversight of legally enforceable success commitments and risk positions, both outbound (to the market) and inbounds (from the market). It converts commercial policies and practices and technical capabilities into specific terms and conditions that are offered to or required from its suppliers, customers or business partners, ensuring compliance or gaining approvals for non-compliance. Through active monitoring of success needs and outcomes, contract management informs commercial management with regard to actual and required commitment capabilities, together with their financial and risk impact.” The contract management practices are many but those examined in this study include contract monitoring (Nsanzimana & Mulyungi, 2018), risk management (Mwelu et al., 2019) and roach construction evaluation (Muzaale et al., 2018).

1.1.4 Contextual perspective
Makindye has much economic activities being carried out, with a poor road network, since major roads are not constructed as expected by the UNRA, causing a big problem of accidents, traffic jam, environmental pollution and slow movement of goods and services. There are a number of roads for example Bukasa Close, Namuwongo Road, Salama Road,
Namasole Road, Mbogo Road End Connectivity, Busabala road that marked by UNRA and require construction but are not yet completed and this has resulted into low economic performance in Makindye Division. This has also contributed to Traffic congestion in Makindye that is fast growing due to a combination of poor roads network, uncontrolled traffic junctions and insufficient roads capacity, which is out of phase with the increasing traffic (vehicular and pedestrian) on Makindye roads.

“This study addresses the phenomenon of contract management and project success in the road construction sector in Uganda, the study loot at a case of Kampala district. Uganda’s infrastructure needs remain substantial. With a 10 percent per annum growth rate in car ownership, Uganda’s road network is overburdened, leading to congestion around cities and crowding on highways (Uganda Roads Authority Report, 2020). Furthermore, Uganda’s roads are poorly maintained, making transportation costly and dangerous. In addition to roads, Uganda faces an 8 million unit housing shortage according to the Uganda National Planning Authority. With an estimated 300,000 housing units needed per year, commercial construction and residential construction in Uganda are booming, putting much pressure on the few existing roads, calling for improved management practices so as to enhance success of road projects.”

Available evidences indicate that in 10 years back, the road construction completion of over 50 road projects in the country, either did not or deferred, hit by cost overruns or collapsed due to poor quality construction works (Booth et al., 2015; Uganda Road Fund, 2015). Some of the roads that experienced these problems include The Kawempe-Kafu Road (166 Km), was delayed and poorly constructed, with weak underlying layers, (Booth et al., 2015; Ssebanakitta, 2013). The construction of several other roads, including Lukuli Road (7.7 kilometers) had either shoddy road works or delayed construction (Booth et al., 2015). Despite the several cries about these high rates of project failures in road construction in Uganda, the problem still continues. Therefore more research studies are still needed to come up with better solutions to the problem.

1.3 Statement of the Problem
Despite reforms and increased funding in roads construction sector, the success rate is still very low (Byaruhanga et al., 2017). There is delayed completion of many road projects, poor quality of road works, costs overruns, many constructed roads being earmarked for
reconstruction, an indication of shoddy construction works done. In the last 10 years, more than 50 road projects in Uganda experienced failed or delayed completion, cost overruns and road collapse cases (Booth et al., 2015; Uganda Road Fund, 2015). The Kawempe-Kafu Road, a 166 Km, constructed by M/s Energoprojekt Niskogradnja at UGX. 140,556,490,385, was among the delayed and poorly constructed road projects in Kampala, with weak underlying layers, which called for its reconstruction (Booth et al., 2015; Ssebanakitta, 2013). Mulumba (2016) reports that shoddy road works were done on 80% of the road constructed between 2015 and 2018. Mukalazi (2020), reported four roads within Kampala whose construction works has over stayed since May 2019 and remained incomplete by November 2020. These include one road in Makindye Division called Lukuli Road (7.7 kilometers) among others.

If the problem of low success rates of road construction projects continues, Uganda may fail to achieve its industrialization drive and continue to lose billions of money in failed or poorly executed roads. Many businesses make losses and others may fail completely. It also results into low value for money due to shoddy works, overestimated budget costs and time overruns by the contractors. The causes of low success rate in road construction projects in Uganda need to be identified, assessed and ranked, if the problem is to be dealt with. Some of the identified causes, include corruption, deviation from procurement principles, poor monitoring and supervision, inadequate funding, poor contract management practices among others (Byaruhanga et al., 2017; Mulumba, 2016; Mwelu et al., 2019; Muzaale et al., 2018; Booth et al., 2015;). While various studies have been conducted, the reasons for low success of road construction projects in Uganda, may differ from one road to another. Besides, no study was found to have examined the relationship between contract management practices and success of road construction projects in Uganda, and more so, no report was found specifically on road projects of Makindye, hence the need for this study to cover these gaps.

1.4 Purpose of the Study
The purpose of this study is to examine the effect of contract management practices on success of road construction projects in Makindye Division, Kampala Uganda.

1.5 Specific Objectives of the Study
The study sought to achieve the following objectives:-
(i) To examine the relationship between contractor monitoring and success of Lukuli Road construction in Makindye Division Kampala district.

(ii) To establish the relationship between risk management and success of Lukuli Road construction in Makindye Division Kampala district.

(iii) To determine the relationship between evaluation and success of Lukuli Road construction in Makindye Division Kampala district.

1.6 Research Questions
The study answered the following research questions:
(i) Is there a significant relationship between contractor monitoring and success of Lukuli Road construction in Makindye Division Kampala district?
(ii) Is there a significant relationship between risk management and success of Lukuli Road construction in Makindye Division Kampala district?
(iii) Is there a significant relationship between evaluation and success of Lukuli Road construction in Makindye Division Kampala district?

1.7 Hypothesis
The study tested the following hypotheses:
(i) There is no significant relationship between contractor monitoring and success of Lukuli Road construction in Makindye Division Kampala district.
(ii) There is no significant relationship between risk management and success of Lukuli Road construction in Makindye Division Kampala district.
(iii) There is no significant relationship between evaluation and success of Lukuli Road construction in Makindye Division Kampala district.

1.8 Scope of the study
1.8.1 Geographic Scope
The study was carried out in Lukuli Parish within Makindye Division Kampala Uganda. It mainly focused on the Lukuli road, which is the main road joining Lukuli Parish to the rest of Kampala. Lukuli road is a 7.7 kilometer road under the control of Kampala City Council Authority. Lukuli road is one of the roads in Kampala under reconstruction, but its reconstruction works that started in 2019 have not been completed up to date (February, 2021). There is no research report on the factors that have affected the success of Lukuli road construction, hence the need for this study to fill this gap.
1.8.2 Theoretical Scope
The study utilized the Agency Theory developed by Stephen Ross and Barry Mitnick in 1973, to explain the relationship between contract management practices and success of Lukuli road construction. The relevance of the theory is that the divergences will occur when a principal, for example client, community members, agent and project manager, their interests are different in the execution of a project and utilization of the road network.

1.8.3 Content Scope
“The study focused on contract management practices as the independent variable and project success as the dependent variable. The independent variable has three attitudes which include: contractor monitoring, evaluation and risk management; while the dependent variable is based on four major indicators which include: timely delivery, effectiveness and efficiency, quality of work and customer satisfaction.”

1.8.4 Time Scope
The study examines contract management practices as factors affecting Lukuli road construction success from 2019 to 2021. This will help to effectively capture data relating to contract management practices and extent of construction success of Lukuli road. During this period Makindye division experienced major developments in the road construction sector where some projects were generally completed while others were unsuccessful (Uganda Roads Authority Report, 2020).

1.9 Significance of the study
“The findings of this study will help the concerned bodies dealing in road construction such as Uganda National Roads Authority, Ministry of Works and Transport, Local Government road construction committees at the district, and private organizations to focus on the root causes of incomplete road projects than giving attention to the observed problems. In addition to this, the policies may facilitate further studies on the problem since there is little relevant and comprehensive data on the study in Uganda.”

“The information obtained during the study will ultimately build on the existing body of knowledge to pave way for further research in the field of contract management and Success in academia. While a lot of attention has been directed toward implementation procedures in acquisition of goods and services in public organizations, little has been done to establish the best practices in compliance to contract regulations in Uganda.”
“This study will generate information relating to contract management and success of road projects, specifically Lukuli Road. It is hoped that the findings of this study will be a useful source of information to Lukuli Road stakeholders in strengthening the acquisition, implementation and integration of contract management practices like monitoring, risk management and evaluation. The study may also influence government policies with regard to contracts and also form a basis on which academic researchers can do further studies in monitoring and evaluation.”

The study further brings out the proper image to the international community for the newly constructed road network and the real image on how the economic activities are strongly supported.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
This chapter presents the theoretical review and the theoretical framework will review the related literature in relation to the study variables as guided by the study objectives which were: to examine how contracts are managed, to examine the levels of contract management, to assess the Success of the road construction projects and to analyze the relationship between contract management and Success of the road construction projects in Lukuli Road. Research gaps were identified and this provides a basis for the justification of the study.

2.1 Theoretical review
This study which addresses independent variable and dependent variable will based on Agency Theory by Stephen Ross and Barry Mitnick in (1973).

2.1.1 Agency Theory
The Agency theory was used to underpin this study because it well explains the nature of the relationship between the two parties involved a road construction contract (the contractors and the hiring entity) and it guides how to deal with any conflicts that may arise between these two parties. According to Lician and Jesse (2004), the agency theory occurs when one person or entity, the agent (road project contractor in this case), is able to make decisions on behalf of another person or entity (hiring entity, in this case Lukuli Road Local Government, which is the Makindye Division) the principal. The conflict may exist in case the agent tries to act in his own best interest, which may be contrarily to the interests of their boss, the principal (timely delivery, quality of work, customer satisfaction). In some cases, the agent may supply wrong information or may block the flow of true information to the principal, hence the problem of moral hazards occurs.

“Ngosong (2015), indicated that the agency problem arises where the two parties have different interests and asymmetric information (the agent having more information) such that the principal cannot directly ensure that the agent is acting in his interest (Lukuli Road) particularly when activities that are useful to the principal and costly to the agent (enough quantity and desired road quality materials), and where elements of what the agent does are costly for the principal to observe (monitoring intensity, evaluation, and risk management). The deviations from the principal’s interests (efficiency and effectiveness, timely delivery,
customer satisfaction) by the agent are called the agency costs. Various mechanisms may be used to align the interest of the agent with those of the principal. The principal may use piece rate (commissions, Success measurement, or the threat of termination of employment (contract) to align workers (project contractors) interest with their own (Lukuli Road). However, the theory does not show the relationship between the interest of the principal and the agent to the elements observed by the principal to minimize the costs. Further, the theory does not indicate how the principal minimizes the information asymmetry (through monitoring intensity, risk management and evaluation) to achieve the interest of the principal (which include efficiency and effectiveness, timely delivery, reduction in road construction costs, and customer satisfaction).”

Figure 2:1 The agency Theory with asymmetric information

![Diagram](image)

\[ P \text{ (Principal), } A \text{ (Agent)} \]

Source: *Modified from Stephen Ross, 1973 and the Researcher, 2020*

“According to Hirst, (2019) indicated that as managers (contractors) identify stakeholder (in this case Lukuli Road Local Government) values, they also need to identify the tools, resources, and constraints that define the range of action they might take in delivering services (risk management, evaluation, and monitoring in the study). Here, two institutions are central to the contracting process: The contractors and Government entity (Lukuli Road Local Government). Contract laws set the boundaries within which managers (contractors)
must operate, thereby permitting, authorizing, or requiring a range of actions. At its root, a contract is a legal instrument, an “agreement by particular parties who accept a set of rules to govern their relationship, whether it is for the purchase of services or for a cooperative working agreement”. As the law establishes what is authorized and prohibited, it also defines a manager’s (contractor’s) zone of discretion, either through legal ambiguity or direct delegation. Discretion allows for considerable flexibility, creativity, and innovation in contracting, whereas legal aspects can restrict discretion to such an extent that managers have limited ability to manage contracts effectively. However, the theory did not indicate how the adherence to the laws, ordinances, and administrative statutes such as monitoring by the road inspectors would impact on the Success of the road construction projects.”

“Along with legal resources and constraints, organizational arrangements also define the capacity, resources, and transaction costs for managing Success by the principal. If the goal is success, then contracting with a private vendor may be more desirable, because private employees (contractors) operate with higher-powered, compensation-based, and profit oriented incentives. Effective management is necessary to monitor how contractors and public entities are achieving Success values (e.g. efficiency, quality, and equity). To this end, building contract management capacity includes acquiring and nurturing physical infrastructure, financial resources, and perhaps more important, human capital. However, the theory did not show how and why effectiveness and efficiency were achieved when services were contracted to private service providers.”

Byaruhanga & Basheka (2017) emphasized that contract management problems stem from relationships in which a principal (a contracting government) contracts with an agent (a vendor) for the production of goods and services in which the agent has expertise. The principal looks to prevent the agent from opportunistically exploiting its information advantages by carefully designing contracts, offering incentives, and monitoring the agent so that it performs according to contract specifications. Strong and effective markets, however, require some fairly strict conditions. They need large numbers of buyers and sellers, participants need to be well informed about products and each others’ preferences, and actors must be able to enter and exit the market and exchange resources at low costs. However, he did not indicate how the use of information advantage such as designing the contract, offering incentives and monitoring incentives would affect the Success of the projects, which research gap will be addressed by this study.”
“The Agency Theory explains how to best organize relationships in which one party determines the work while another party does the work. In this case, the study examined the relationship between Lukuli Road road construction departments through contract management with the contractors. In this relationship, the principal (Lukuli Road) hires an agent (contractors) to do the work, or to perform a task the principal is unable or unwilling to do (road construction). For example, in corporations, the principals are the shareholders of a company, delegating to the agent i.e. the management of the company, to perform tasks on their behalf. Agency theory assumes both the principal and the agent are motivated by self-interest. This assumption of self-interest dooms agency theory to inevitable inherent conflicts. Thus, if both parties are motivated by self-interest, agents are likely to pursue self-interested objectives that deviate and even conflict with the goals of the principal. Yet, agents are supposed to act in the sole interest of their principals (Pepper & Gore, 2012).”

“According to Pepper and Gore (2012), to determine when an agent does (and does not) act in their principal’s interest, the standard of “Agency Loss” has become commonly used. Agency loss is the difference between the best possible outcome for the principal and the consequences of the acts of the agent. For instance, when an agent acts consistently with the principal’s interests, agency loss is zero. The more an agent’s acts deviate from the principal’s interests, the more agency loss increases. When an agent acts entirely in his own self-interest, against the interest of the principal, then agency loss becomes high. Apart from discussing how the agency costs arise, he did not discuss any initiatives such as monitoring intensity, evaluation, and risk management by both the agent and the principal to reduce the agency losses which research gap was addressed by the study.”
2.2 Conceptual Framework

Fig. 2.1: The linking contract management practices and road construction project success.

<table>
<thead>
<tr>
<th>CONTRACT MANAGEMENT PRACTICES (INDEPENDENT VARIABLES)</th>
<th>PROJECT SUCCESS (DEPENDENT VARIABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monitoring intensity</strong></td>
<td>• Timely deliveries</td>
</tr>
<tr>
<td>• Compliance with specification (BOQs)</td>
<td>• Efficiency and effectiveness</td>
</tr>
<tr>
<td>• On-site inspection</td>
<td>• Quality of works</td>
</tr>
<tr>
<td>• Complaints management</td>
<td>• Customer satisfaction</td>
</tr>
<tr>
<td>• Allocation and utilization of resources</td>
<td></td>
</tr>
<tr>
<td>• Timely and constant feedback</td>
<td></td>
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<tr>
<td><strong>Risk management</strong></td>
<td></td>
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<tr>
<td>• Risk identification</td>
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<tr>
<td>• Risk analysis</td>
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<tr>
<td>• Diverse expectations and interest</td>
<td></td>
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<tr>
<td>• Interpretation of contract language</td>
<td></td>
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<tr>
<td>• Design and construction complexity</td>
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<tr>
<td>• Resource requirement</td>
<td></td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td></td>
</tr>
<tr>
<td>• Documentation</td>
<td></td>
</tr>
<tr>
<td>• Voice to participant’s experiences</td>
<td></td>
</tr>
<tr>
<td>• Provision of information</td>
<td></td>
</tr>
<tr>
<td>• Problem identification</td>
<td></td>
</tr>
<tr>
<td>• Assessment of goals and objectives</td>
<td></td>
</tr>
<tr>
<td>• Decision making</td>
<td></td>
</tr>
</tbody>
</table>

**INTERVENING VARIABLES**

- Government polices
- Variation on donor support

**Source:** Adopted from the contract management Principles Model by Pepper (2012)

Contract management involves problems that stem from relationships in which a principal (a procurement and disposing entity (PDE) contracts with an agent (a contracted firm) for doing the work in which the latter has expertise. By doing this, the principal looks to ensure careful designing and monitoring the agent Success as per the initial specifications which include timely deliveries and quality of works deliveries.”

2.3 Contractor Monitoring and project success

“The quality of construction is a key component of perceived value to both clients and contractors. The International Federation of Consulting Engineers (FIDIC) noted that “lack of quality in construction is manifested in poor or non-sustainable workmanship and unsafe structures; and in delays, cost overruns and disputes in construction contracts”. Value and
quality of construction are of concern to both public and private sector clients (Ngosong, 2015).”

“Monitoring the performance of the contractor regularly is a very important part of road construction. The monitoring system differs among the road authorities. However, a monitoring system is necessary to maintain the quality of work and also to record the data for future Research and Development in the road authorities.”

“As the construction industry significantly expands, the role of the private sector has changed from the simple execution of works to the management and conservation of road assets. In order to be entitled to the monthly payment for maintenance services, the contractors must ensure that the roads under contract comply with the service quality levels which have been specified in the bidding document. It is possible that during some months, they will have to carry out a rather large amount of physical works in order to comply with the required service levels and very little work during other months. Yet their monthly payment remains the same as long as the required service levels are complied with (The World Bank, 2004). Therefore, as suggested by Queiroz (2005), five steps can be followed to ensure the quality in monitoring intensity such as: contractor’s self-control system; formal monthly inspections; supervisors (formal/informal) inspections; project managers (formal/informal) inspections; and maintaining a record book to follow the comments or complaints of roads users. This approach is able to ensure the quality of maintenance work.”

“Prager (1994) in Oluka and Basheka (2013) contends that proper and effective management and monitoring of contracts helps improve the quality of goods and services and reduces procurement cost, thus achieving three broad goals: quality products and services, timely delivery of products and services, and cost effectiveness (within budget). Davison and Sebastian (2009) in Oluka and Basheka (2013) established the likelihood of contract problems for a given type of contract, and which type of contract is likely to encounter the most problems. For example, for construction contracts, change order, delays, and cost have a statistically similar chance of occurring and were significantly more likely to occur than the remaining problems, and that construction contracts are more likely to experience problems than other types of contracts.”

“The traditional methods of contracting are more prone to corruption because of the nature of the decision-making processes. Monitoring has the potential to promote transparency and
good governance in road maintenance works (Liautaud, 2001; Zietlow, 2004). According to Tineo (2007), the limited experience with output-based approach in developing countries has prevented a comprehensive examination of its effects on lowering corruption. However, even at an early stage, monitoring intensity can reasonably be expected to reduce administrative discretion and increase efficiency; two factors associated with corruption. The logic here and the rest of the parts is a demonstration of how monitoring intensity in specific terms is associated with performance of road construction projects and offering evidence that has been established about this relationship. This part requires specific statements.”

2.4 Risk Management and Success of Road Construction Projects
Banaitiene and Banaitis (2012) define a project risk as “an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective”. “Risk management in the construction project management context is a comprehensive and systematic way of identifying, analyzing and responding to risks to achieve the project objectives”. “Effective risk management is a critical component of any winning management strategy (Banaitiene and Banaitis, 2012)”. Raz et al. (2002), indicated that “there are many possible risks which could lead to failure of the construction project, and through the project, it is very important to identify what risk factors are acting simultaneously”. Rae et al. (2002) indicated that too many project risks as undesirable events may cause construction project delays, excessive spending, unsatisfactory project results or even total failure.”

“The benefits of the risk management process include identifying and analyzing risks, and improvement of construction project management processes and effective use of resources. Construction projects can be extremely complex and fraught with uncertainty. Risk and uncertainty can potentially have damaging consequences for the construction projects (Flanagan and Mills, 2001). Construction projects are always unique and risks raise from a number of different sources (Oyegolle, 2006; Pheng and Chuan, 2006). Construction projects are inherently complex and dynamic, and involving multiple feedback processes (Uher and Loosemore, 2004).”

“A lot of participants individuals and organizations are actively involved in the construction projects, and their interests may be positively or negatively affected as a result of the project execution or project completion (Banaitiene & Banaitis, 2012). Different participants with different experience and skills usually have different expectations and interests (Dey and Oguluna, 2004). This naturally creates problems and confusion for even the most experienced
project managers and contractors (Banaitiene & Banaitis, 2012). However, they never indicated the methodology they used to come up with such conclusions. It was further not clear about the Success indicators they used for their findings which research gap was addressed by the study.”

“Risk management helps the key project participants – clients, contractor or developers, consultants, and suppliers to meet their commitments and minimize negative impacts or construction project Success in relation to cost, time and quality objectives (Banaitiene and Banaitis, 2012). Eskesen et al, (2004) indicated that project risk management includes: (1) risk management planning, (2) risk identification, (3) qualitative risk analysis, (4) quantitative risk analysis, (5) risk response planning, and risk monitoring and control. The use of risk management from the early stages of a project where major decisions such as choice by alignment and selection of construction methods can be influenced is essential. The benefits of risk management processes include; identifying and analyzing risks, and improvement of construction project management processes and effective use of resources.”

“A change in the method of specification from work output to Success, allocates the risk exposure of road authority to the service provider, i.e. contractor (Carpenter et al., 2003; Frost, 2001; Frost and Lithgow, 1996; Segal et al., 2003). There is evidence that risk management results in better outcomes at lower cost with less risk and more financial predictability for highway agencies (Hyman, 2009). Moreover, risk allocation to the contractors would be beneficial for the road authorities only when contractors are better to manage the risk (Austroads, 2003; Hardy, 2001). The contractors must be able to properly understand risk management to successfully interpret contract language and share the risk.”

“Large construction projects are exposed to uncertain environment because of such factors as planning, design and construction complexity, presence of various interest groups (owner, consultants, contractors, suppliers), resources (manpower, materials, equipment, and funds) availability, environmental factors, the economic and political environment, and statutory regulations (Banaitiene & Banaitis, 2012). This concurred with Zoy et al., (2007) who indicated that the construction projects can be unpredictable. Managing risks in construction projects has been recognized as a very important process in order to achieve project objectives in terms of time, cost, quality, safety and environmental sustainability. Project risk management is an iterative process; the process is beneficial when is implemented in a systematic manner through the life cycle of the construction project from planning stage to
completion (Banaitiene and Banaitis, 2012). However, both studies did not analyze the relationship between risk management and Success of projects that involve contracts which research gap was addressed by the study.”

“Banaitiene and Banaitis (2012) further indicated that where the private sector is relied on for the construction of roads, it is the bidding and contracting documents which are the foundation of the construction process. In recent years, as the process of contracting has quickly evolved, and contractors have experimented with new ways of acquiring new business and enhancing profit, there is an awareness of the need to refine these basic documents, particularly in the areas of risks and incentives. The construction industry has historically not dealt well with risk, leading to many failed contractors through poor planning, poor budgeting, and poor resource management. On the owner’s side, the push to minimize costs is often an absolute goal, regardless of market realities, resulting in impossibly low prices being accepted as part of bids and contracts which give owners all the rights and contractors all of the obligations. To overcome these problems during road construction, such as project delays, excessive expending and unsatisfactory project results or even total failure, clear terms and conditions should be spelled out. The owner must also be protected against irresponsibly low bids that later result in excess claims and controversy. However, other than discussing the outcomes of poor risk management, they did analyze the different forms of risks and the relationship between risk management and Success in the road construction sector.”

2.5 Evaluation and project Success

“The development of revised Success evaluation procedures will ensure the reliability of the overall Success (de la Garza et al. 2009). Pinero (2003), Pinero and de la Garza (2004), de la Garza et al., 2009) identified five components in order to develop a framework for monitoring Success which are level of service effectiveness, timeliness of response, safety procedures, quality of services, and cost-efficiency.”

“Professor Kaoru Ishika initiated a model of evaluation - Cause and Effect Analysis in the 1960s. The technique uses a diagram-based approach for thinking through all of the possible causes of a problem. This helps to carry out a thorough analysis of the situation. Kaoru (1960) indicated four steps to evaluate projects using the cause and effect analysis: identify the factors that may be part of the problem. These may be systems, equipment, materials, external forces, people involved with the problem, and so on. Try to draw out as many of
these as possible. As a starting point, use models such as the McKinsey 7S Framework (which offers you Strategy, Structure, Systems, Shared values, Skills, Style and Staff as factors to be considered) or the 4Ps of Marketing (which offers Product, Place, Price, and Promotion as possible factors).”

“Kaoru (1960), identified the following factors to be used by the manager while evaluating projects (1) Site, (2) Task, (3) People, (4) Equipment, and (5) Control. After identification, the project manager brainstorms possible causes of the problem that may be related to the factors. Kaoru (1960) indicated that where a cause is large or complex, then it may be best to break it down into sub-causes. For each of the factors he identified, the manager brainstorms possible causes of the problem. Depending on the complexity and importance of the problem, investigate the most likely causes further. This may involve setting up investigations, carrying out surveys, and so on. These will be designed to test which of these possible causes is actually contributing to the problem. A useful way to use this technique with a team is to write all of the possible causes of the problem down on sticky notes. However, his model does not analyze how this evaluation process is related to project Success in form of efficiency, value for money, timely completion of the project and customer satisfaction.

According to Mitch and Brian (2013), evaluation is an important component of refining programmes and documenting impacts. Evaluation aids the profession as a whole and assists Extension faculty in meeting promotion requirements. Qualitative methods are commonly used in evaluations in order to explore specific facets of programmes and to give voice to participants’ experiences. These methods provide in-depth information that can assist Extension staff in enhancing the quality of their programs.”

**2.6 Review of the empirical studies and synthesis of Literature Review**

“A lot of literature has been reviewed in relation to contract management in general. Much of the literature review explains the process of contract management with limited studies analyzing the relationship between the study independent variables that is risk management, evaluation, and monitoring intensity to Success of the road construction projects. Most of the literature is from the developed countries and therefore the conclusions may not be applied to the developing countries like Uganda.”

“There are various studies conducted both globally and in Kenya relating to contract management practice and operational Success. Unfortunately, most of the studies regard
procurement and Success in different sectors of economy, while none of them specifically concerns contract management and operational Success in state corporations in Kenya. Outside Kenya, Holt and Graves (2001) also conducted a study on benchmarking UK public procurement Success and discovered a positive correlation between benchmarking and procurement Success in the country. As well, a study by Bassioni, Price and Hassan (2004) dwells on the Success measurement in construction industry. Moreover, Jeanette (2008) conducted a study on the benchmarking and its importance on procurement Success. Brandmeier and Rupp (2010) also studied effects of benchmarking procurement functions and Success, while Quesada, González, Mueller and Mueller (2010) sought to establish the effect of e-procurement on procurement and Success and identified a positive link between the variables."

“In Kenya, Amin (2012) conducted a study on e-procurement and organizational Success in commercial parastatals in Kenya. He discovered that the practice enhances organizational Success. Another study by Manyenze (2013) on procurement Success in public universities in the country revealed that corruption, non-transparent procurement practices and inadequate technological infrastructure negatively affects public procurement Success in the institutions. Further, Canadian Missionary Kid Network (2012) highlights some of the factors that contribute to inefficiency in public procurement in Kenya’s public procurement. Corruption, delayed payments, poor planning, statutory amendments, insufficient use ICT, low public participation, and improper payment procedures negatively affects public procurement in the country. However, it fails to relate them with operational Success of state corporations in Kenya.”

“Magutu, Chirchir and Mulama (2013) studied the effect of outsourcing logistics services on Success in large manufacturing companies in Kenya. They established that the practice enhanced both organizational and operational Success of the firms in Kenya. Mohammed (2008) also sought to establish the effects of Success contracting on banking industry’s operational Success. The study reveals a positive relationship between the two variables. The Public Procurement Oversight Authority (PPOA) also conducted a study on the procurement system in Kenya and found out ineffective contract management practice as one of the reasons for poor procurement Success. It recommends more studies sound contract administration practices in order to boost the Success of the procurement system in Kenya.
Nonetheless, the type of Success measured in the study is unclear (Public Procurement Oversight Authority, 2007).”

“Another study on the Kenyan context of Global Fund of drug procurement, it is evident that Kenya experienced widespread stock-out due to untimely supply by the contractor. This, in turn, affected the country’s Success in terms of fighting Malaria (Tren, Hess & Bate, 2009). The above studies were conducted in various sectors of the country’s economy. Nevertheless, none of them relates to effect of contract management practice and operational Success in the state corporations in Kenya. State corporations are crucial in the country’s economy because they enhance the government’s service delivery to its people. Therefore, it is for this reason that a study on the effect of effective contract management practice on operational Success in the state corporations in Kenya. Besides, identifying the challenges involved in contract management practice in these corporations is highly indispensable. The study aims at establishing the link between the variables, which is missing in the early studies.”

“Gupta, Karayil and Rajendran (2008) reveal that poor contract management causes substantial loss of savings. They also argue that 30 to 70% of each dollar of savings that is negotiated by a strategic outsourcing is lost. This happens through spend-leakage and the subsequent non-compliance. They further argue that poorly managed contracts affect the purchasing firm’s credibility through a snowball effect. This implies the difficulty to internally sell and enforce future contracts. For many years, businesses got the whole concept of contract management wrong, hence the heavy fine for non-compliance. It is also important to note that the implementation of a sound contract management process incurs time, cost, and management effort (Sieke, 2008).”

“Additionally, flexibility or adaptability is another determinant of an effective contract management process. A contracting organization and a contractor must be flexible in order to manage change successfully. This is crucial for both parties because need for change might arise during project implementation. Change happens due to institutional changes, technological developments, as well economic factors. Successful contract management happens when both parties are willing to accept and adapt to change (Wysocki, 2009). As Greve (2008) points out, organizations that achieve success in contract management ensure that they formulate a ‘win- win’ situation for both the contracting authority and contractor. This should be applicable during contract implementation.”
“Oluka and Basheka (2014) reveal that clear description of processes and setting contract management plans, suitable methods of using vital lessons from contract management practice, precise definition of roles and employing knowledgeable contract manager enhance effective contract management process. Finally, for contract management to be successful, the parties need to take initiatives and preventive actions. This implies that the process should be based on preventive actions with anything relating to potential risks, substandard contractor success, supply or delivery of low quality products or services. They should avoid activities of suppressive nature (Benjamin & Belluck, 2001; National Audit Office, 2012).”

“As Mead and Gruneberg (2013) suggest, importance of supplier idea execution is another key operational success measure in contract management. Advanced procurement firms actively seek ideas from suppliers for revenue growth, cost savings among others. The ideas are tracked and their contribution to the firm’s bottom line is measured. This helps to measure the department’s ability to leverage intellect in the supply base. Another useful KPI in operational success is the procurement cycle time. This can be measured by the average time taken between requisition submission and placement of a purchase order. This can also be determined by the time taken from the start of sourcing process to the time of contract signing. The KPI is important in measuring the department’s productivity (Sollish & Semanik, 2012). The aforementioned performance indicators are instrumental in establishing the connection between contract management practice and operational success.”

2.7 Research Gaps

The systematic review of literature reveals that several researches have been conducted in the field of contract management (e.g. Bogere, 2013; Booth & Mutebi, 2015; Byaruhanga & Basheka, 2017; Byaruhanga, 2016; Gledson et al., 2018; Mwelu et al., 2019; Nsanzimana & Mulyungi, 2018). Various constructs have been examined by different scholars and linked them to different criterion variables. Literature reveals that in most cases contract management factors have been used as the explanatory variables against various effect variables such as project performance, project success, contractor performance and so on. Even though studies in this field are many, the conceptualisations used have differed so much. For example, the contract management practices used in this study have not been used by previous researchers. Secondly, most researchers have examined road project performance as their dependent variable against contract management as the independent variables (e.g. Byaruhanga & Basheka, 2017; Muzaale et al., 2018; Mwelu et al., 2019; Byaruhanga, 2016).
No study was found to have examined the link between contract management practices and success of road construction projects. However, the similar concepts of success, such as performance, progress and effectiveness have been researched by those researchers mentioned above and many others. Even then, the management practices used by those researchers were different and no study examined a combination of practices used as per conceptual framework of this study (fig. 2.1). Moreover, no study was found to have examined the link between contract management practices and success of road construction in Makindye division. This study therefore intends to fill these gaps and contribute to existing knowledge in this field.
CHAPTER THREE

METHODOLOGY

3.1 Introduction
In this part of this research proposal, the methods used are stated. Specifically, the chapter shows the research design, target population, sample size, sampling procedures, sources of data, research instruments, how validity and reliability tests were done, the data analysis tools used, ethical considerations and how the anticipated limitations were addressed.

3.2 Research Design
In Sekaran (2004), a research design is defined to be showing the details of the study in relation to purpose, investigation types, extent of researcher involvement, data collection and measurement of variables, unit of analysis, sample size and selection techniques employed, the time taken to collect data and methods. This study used a case study design together with a descriptive correlational and cross sectional survey design, employing mainly a quantitative approach. The case study design was used because, the study was based on only Lukuli road construction project in Makindye Division, despite the fact that there were more other roads under construction. The researcher wanted to make a deep analysis of the case to understand the effectiveness of contract management and how it affects the construction success. The descriptive design was used by collecting responses on contract management practices, in which respondents described their opinions on the extent of agreement of the given statements on the said practices. The cross sectional survey design was used because there was a single round of data collection across a big number of respondents at the same point in time. The correlational design was used because, the researcher wanted to collect data on the independent variable and dependent variable separately and then correlated the two to establish if there is a significant relationship between the two variables.

3.3 Study Population
The study targeted the stakeholders of Lukuli Road construction project. These included the employees and officials in the construction of the said road, the contractor managers, Local Government administrators of Makindye Division and the members of community along Lukuli road. These were targeted because the researcher believed that they have relevant information about the factors affecting road construction success. Official statistics on the number of community members along Lukuli road as well as the number of employees in the
construction of this road was not available by the time of the study. So a total of 162 members was estimated and comprised of 35 road construction employees and officials, 06 contract managers, 86 local government leaders and 35 community leaders in the villages along Lukuli road.

3.4 Sample Size
The study target population was estimated to be around 162 from which the sample size of 115 respondents was obtained through Sloven’s formula of sample size determination. Table 3.1 shows the proposed population and sample size distribution.

Table 3.1 Study Target Population

<table>
<thead>
<tr>
<th>Study group</th>
<th>Population</th>
<th>Sample Size</th>
<th>Sampling Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees and official of road construction</td>
<td>35</td>
<td>25</td>
<td>Convenient sampling</td>
</tr>
<tr>
<td>Contract managers</td>
<td>06</td>
<td>04</td>
<td>Purposive sampling</td>
</tr>
<tr>
<td>Local government leaders</td>
<td>86</td>
<td>61</td>
<td>Convenient sampling</td>
</tr>
<tr>
<td>Community leaders</td>
<td>35</td>
<td>25</td>
<td>Convenient sampling</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>162</strong></td>
<td><strong>115</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: KCCAMakindye Division Offices

3.5 Sampling Techniques
Mugenda and Mugenda (2003); Sekaran (2004), indicate that sampling is a process that involves selecting an adequate number of subjects from a given target population, for purposes of studying that sample and understand its characteristics so as to make possible generalizations to the said population. In this study, purposive and convenient sampling techniques were used in selecting members of the target population. Purposive sampling was used to obtain desired information from selected respondents who met the following conditions; community leader and local government leaders who had stayed in the area for at least two years; contract managers, employees and officials on Lukuli road construction. These were considered to have adequate information about the studied road and so could be able to respond to the questionnaire genuinely. Convenient sampling was used to select those respondents who qualified according to the inclusion criteria and they could be easily accessed. The convenient method was used because, the respondents of the study were very
busy people, who could not easily be accessed in a shorter period the researcher had to accomplish the study.

3.6 Sources of Data and Collection Methods

Primary Data
Data was got directly from the field by use of questionnaires distributed and administered among the respondents.

3.7 Data collection instruments

3.7.1 Survey Questionnaire
The questionnaire was the key instrument employed for primary data collection. The questionnaire method was chosen due to its advantage of eliciting more information in a short time. Using questionnaires the relevant responses were elicited from the study respondents, in a less costly way. The self-administered questionnaires helped in maintaining the confidentiality of respondents (Amin, 2005).

3.7.2 Interview
In addition to data collection using a questionnaire as the main data collection instrument, data collection through interviews was also used as a supplementary method to quantitative data collection. Face to face interviews with the technical people at the Division offices of Makindye, including engineers and other staff in the road construction unit, were conducted. This method of collecting data involved presentation of questions orally, with participants responding verbally. This method was preferred because it is flexible enough and allowed the interviewer to ask supplementary questions.

3.8 Validity and Reliability
Validity of a data collection instrument is the extent to which it is relevant in measuring the variable the researcher wants to measure (Mugenda & Mugenda, 2003). Instrument validity was tested by using the Content Valid Index (CVI). To achieve this, a copy of the questionnaire was distributed to supervisors and experts in the field of project planning and management, to rate the relevant items/questions in relation to the research objectives. Relevant questions were then used to calculate the CVI using the following formula;
According to Fisher (2004), for a research instrument to be valid, the CVI should be more than or equal to 0.7. The calculated CVI for this study was 0.76, which showed that the instrument captured what it was intended for.

Reliability of an instrument according to Kasomo (2006), refers to the extent to which it is consistent in measuring the variable the researcher intends to measure. Consistency measures the degree to which research instruments yields almost the same results or data after repeated trials. The test re-test method was used to test the reliability of the instrument for this study. This involved administering the same questionnaire twice to 10 respondents in Lukuli and correlating their responses independently. A correlation co-efficient was computed using SPSS to establish the relationship between the two sets of data. A significant Coefficient of correlation was obtained suggesting that the instrument was reliable.

### 3.9 Data Gathering procedures

The researcher acquired an introduction letter from the College of Humanities and Social Sciences of Kampala International University addressed to the authorities for permission to conduct the study. The researcher and her research assistant went to the field and administered the questionnaires which were retrieved on the same day as the researcher waited for each respondent to complete answering and collected it back, then checked it for completeness and accuracy, before moving to another respondent.

### 3.10 Data Analysis

After retrieval of the questionnaires from the field, the filled questionnaires were coded, cleaned, sorted and entered into the computer’s Statistical Package for Social Scientists (SPSS) software for analysis according to the objectives of the study. Frequency counts were computed for profile variables, while means and standard deviations were computed to determine the extent of success and effectiveness of the three contract management practices, item by item. A composite mean index was computed by combining all the question items asked on each of the three elements, to get the overall picture on the extent to which each construct was effective. These mean indices were then correlated using Pearson’s Linear Correlation Coefficient (PLCC) to establish the relationship between each construct and the dependent variable (Lukuli road project construction success). This helped to achieve the
three study objectives and test the three null hypotheses of the study at the 0.05 level of significance.

3.11 Ethical considerations

The following ethical standards were adhered to by the researcher in this study;
The respondents were requested to sign the informed consent. All the authors whose academic works were used in this study were recognized through citations and referencing. The confidentiality was also adhered to by ensuring that when conducting research, the researcher avoids unnecessary personal facts like names. Further the researcher honoured respondents’ privacy by not revealing who said what. The researcher sought for permission before contacting the respondents, which was granted and data collection went on successfully.

3.10 Anticipated Limitations

1. This study was confined to only Lukuli road in Makindye Division, out of all the roads in Makindye and in Kampala. So generalization of the results may be limited to only Lukuli road.

2. This study’s data was collected from some division administrators of Makindye and those in the road construction department. So the best picture especially about the contract practices and success may be hidden. However, the researcher tried to convince these groups to provide the most accurate information by assuring them anonymity and that no implications from the information they provide.

3. Some intervening variables over which the researcher has no control, like respondents’ experience, education level, social stress and other factors which affect road success other than contract management practices.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction
In this chapter the researcher presents data, analyse and interpret the results in line with objectives of the study. The chapter begins with a presentation of the response rate, then the demographic characteristics of the respondents and finally presentation of findings following the study variables.

4.1 Response Rate
In this study, 120 questionnaires were distributed among employees at Makindye Division and of all what was returned, 115 questionnaires were sorted out as fully answered. The response rate of the returned questionnaires was approximately 96%.

4.2 Demographic Characteristics respondents
Four questions on respondents’ demographic characteristics were tasked and the analysis of these responses was done using frequency counts and percentages. Table 4.1 shows results of the demographic characteristics of respondents;

Table 4.1: Demographic Characteristics of Respondents

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>82</td>
<td>71.3</td>
</tr>
<tr>
<td>Female</td>
<td>33</td>
<td>28.7</td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>100.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 20</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>20-30</td>
<td>36</td>
<td>31.3</td>
</tr>
<tr>
<td>31-40</td>
<td>61</td>
<td>53.0</td>
</tr>
<tr>
<td>41-50</td>
<td>15</td>
<td>13.0</td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>100.0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td>Secondary school</td>
<td>19</td>
<td>16.5</td>
</tr>
<tr>
<td>Certificate</td>
<td>47</td>
<td>40.9</td>
</tr>
<tr>
<td>Diploma</td>
<td>33</td>
<td>28.7</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>11</td>
<td>9.6</td>
</tr>
<tr>
<td>Masters</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Data (2020)
The study results in Table 4.1 indicate that concerning gender, most of the respondents in the sample were male (71.3%) as compared to 28.7% who were female. This shows a relatively bigger gender gap in the sample. Still results in Table 4.1 revealed that majority (53.0%) of the respondents in this study’s sample were aged between 31-40 years, followed by those in the age bracket of 20-30 (31.3%). These results implied that majority of respondents in this sample were in their middle adulthood age of 20 – 39 years, constituting over 84%.

Regarding respondents’ education level, the study findings in Table 4.1 indicate that respondents a certificate level of education (40.9%) dominated the study sample, followed by Diploma holders (28.7%) and others. This implied that most of the respondents were relatively educated, literate, so they could read and write and so they had ability to answer this questionnaire.

4.3 Lukuli Road Project Construction Success

The dependent variable of this study was success of Lukuli road construction, which was measured with six questions in form of qualitative statements, in the questionnaire. All the six questions were based on a five point Likert scale, in which respondents were asked to rate the extent to which Lukuli road construction project has been successful. To do this, respondents had to indicate their extent of agreement or disagreement with each of the six question statement. Their responses were analysed using means, standard deviations and ranks, as presented in table 4.2. Interpretation of the means in Table 4.2, was done following the mean ranges given below:

<table>
<thead>
<tr>
<th>Mean Range</th>
<th>Response Mode</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.21 - 5.00</td>
<td>Strongly agree</td>
<td>Very successful</td>
</tr>
<tr>
<td>3.41 - 4.20</td>
<td>Agree</td>
<td>Successful</td>
</tr>
<tr>
<td>2.61 - 3.40</td>
<td>Not sure</td>
<td>Fairly successful</td>
</tr>
<tr>
<td>1.81 - 2.60</td>
<td>Disagree</td>
<td>Unsuccessful</td>
</tr>
<tr>
<td>1.00 – 1.80</td>
<td>Strongly disagree</td>
<td>Very unsuccessful</td>
</tr>
</tbody>
</table>
Table 4.2: Showing Extent of Lukuli Road Project Construction Success

<table>
<thead>
<tr>
<th>Measures of success</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>The road project meets the expected quality standards</td>
<td>3.54</td>
<td>.901</td>
<td>Successful</td>
<td>1</td>
</tr>
<tr>
<td>Road users are relatively satisfied with construction standard of Lukuli roads.</td>
<td>3.28</td>
<td>1.225</td>
<td>Fairly successful</td>
<td>2</td>
</tr>
<tr>
<td>The road is always safe for the road users</td>
<td>3.10</td>
<td>1.135</td>
<td>Fairly successful</td>
<td>3</td>
</tr>
<tr>
<td>The cost of constructing Lukuli roads is averagely low</td>
<td>2.93</td>
<td>.317</td>
<td>Fairly successful</td>
<td>4</td>
</tr>
<tr>
<td>The road project was completed in the set time frame.</td>
<td>2.79</td>
<td>.408</td>
<td>Fairly successful</td>
<td>5</td>
</tr>
<tr>
<td>Contractors always complete the projects within the budget estimates</td>
<td>2.52</td>
<td>.940</td>
<td>Unsuccessful</td>
<td>6</td>
</tr>
<tr>
<td><strong>Average mean</strong></td>
<td><strong>3.03</strong></td>
<td><strong>.324</strong></td>
<td>Fairly successful</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data (2020)

Results in Table 4.2 reveal that the construction of Lukuli road project was fairly successful. This indicated by the average mean of all the six question items used to measure success of the road construction, which happens to 3.03 and which falls under fairly successful on the interpretation scale. The standard deviation of 0.324, is low, indicating that the responses did not differ so much. Of all the six question items used to measure the road construction success, the highest rated item was on whether ‘the road project meets the expected quality standards’, with a mean of 3.54, which is interpreted as successful on the interpretation guide which has a low standard deviation of 0.901, indicating that the responses did not differ a lot.

4.4 Presentation of findings from the study objectives

4.4.1 Contractor Monitoring and Lukuli Road Construction Success

The first objective of this study was to examine the relationship between contractor monitoring and success of Lukuli Road construction in Makindye Division Kampala Uganda. Contractor monitoring was the first construct used to measure the independent variable (Contract Management Practices). To achieve this first objective, the researcher operationalised contractor monitoring (first element of the independent variable), using nine Likert scaled questions with five point scales, ranging between 1 for strongly disagree to 5 for strongly agree. The responses were used to measure the effectiveness of the contractor monitoring practices. The responses were analysed using descriptive statistics showing means and standard deviations, as indicated in table 4.3.
Table 4.3: Showing Effectiveness of Contractor Monitoring at Lukuli Road Project Construction

<table>
<thead>
<tr>
<th>Items Used to Measure Contractor Monitoring</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisors on the road project carry out necessary road inspection</td>
<td>3.61</td>
<td>1.049</td>
<td>Effective</td>
<td>1</td>
</tr>
<tr>
<td>Road authorities follow standards developed for their methods of contracting</td>
<td>3.41</td>
<td>.907</td>
<td>Effective</td>
<td>2</td>
</tr>
<tr>
<td>Managers do adequate road project inspection to check the required standards.</td>
<td>3.39</td>
<td>.905</td>
<td>Fairly Effective</td>
<td>3</td>
</tr>
<tr>
<td>Contractors complied with service quality level specified in bidding document</td>
<td>3.31</td>
<td>1.038</td>
<td>Fairly Effective</td>
<td>4</td>
</tr>
<tr>
<td>Funds allocated were used only for Lukuli road project</td>
<td>3.26</td>
<td>.441</td>
<td>Fairly Effective</td>
<td>5</td>
</tr>
<tr>
<td>Contractors used the stipulated amount of materials to construct the road as per bills of quantities( BOQs)</td>
<td>3.21</td>
<td>.707</td>
<td>Fairly Effective</td>
<td>6</td>
</tr>
<tr>
<td>Contractors always do required amount of work during the month</td>
<td>3.15</td>
<td>.966</td>
<td>Fairly Effective</td>
<td>7</td>
</tr>
<tr>
<td>There is a record book maintained to follow complaints of road users</td>
<td>3.05</td>
<td>.223</td>
<td>Fairly Effective</td>
<td>8</td>
</tr>
<tr>
<td>Formal monthly inspections are carried out by the road authorities</td>
<td>2.98</td>
<td>.917</td>
<td>Fairly Effective</td>
<td>9</td>
</tr>
<tr>
<td><strong>Average mean</strong></td>
<td><strong>3.26</strong></td>
<td><strong>0.416</strong></td>
<td><strong>Fairly Effective</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data (2020)

The following mean ranges were used to interpret the means in Table 4.3:

<table>
<thead>
<tr>
<th>Mean Range</th>
<th>Response Mode</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.21 - 5.00</td>
<td>Strongly agree</td>
<td>Very effective</td>
</tr>
<tr>
<td>3.41 - 4.20</td>
<td>Agree</td>
<td>Effective</td>
</tr>
<tr>
<td>2.61 - 3.40</td>
<td>Not sure</td>
<td>Fairly Effective</td>
</tr>
<tr>
<td>1.81 - 2.60</td>
<td>Disagree</td>
<td>Ineffective</td>
</tr>
<tr>
<td>1.00 – 1.80</td>
<td>Strongly disagree</td>
<td>Very Ineffective</td>
</tr>
</tbody>
</table>

The study findings in Table 4.3 show that the contractor monitoring was rated fair on most of the items used to measure monitoring effectiveness at Lukuli road construction project. Out of the nine items, seven were rated fair and only two were rated effective. Contractor monitoring was rated high on two aspects, which are; ‘supervisors on the road project carry out the necessary road inspection’, with a mean of 3.61 (SD=1.049); and ‘road authorities follow standards developed for their methods of contracting’, with a mean of 3.41 (SD=0.907). The average mean for all the nine question items used to measure contractor monitoring happens to be 3.26, which falls under fairly effective on the interpretation scale. The standard deviation of 0.416, is low, indicating that the responses did not differ so much.
This confirms that respondents rated the practice contractor monitoring of Lukuli road construction to be fairly effective.

To establish whether there is a significant relationship between contractor monitoring and Lukuli road project construction success, and to test the first hypothesis of the study, the researcher correlated the average mean scores in Table 4.3 (on contractor monitoring effectiveness) with the mean scores in Table 4.2 (on road construction success), using Pearson’s Linear Correlation coefficient and the results are shown in table 4.4.

**Table 4.4: Pearson Correlations for Contractor Monitoring and Lukuli Road Construction Success**

<table>
<thead>
<tr>
<th>Variables correlated</th>
<th>r-value</th>
<th>Sig.</th>
<th>Interpretation</th>
<th>Decision on Ho</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor Monitoring Vs Road Construction Success</td>
<td>0.255</td>
<td>.006</td>
<td>Significant correlation</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Field Data (2020)

The Pearson’s correlation coefficient results in Table 4.4 reveal that contractor monitoring had a significant positive relationship with road construction success (p-values < 0.05). Therefore, based on these results, the null hypothesis is rejected and the alternative hypothesis is accepted that there is a significant correlation between effectiveness of contractor monitoring practices and Lukuli road construction success. This implies that the more effective monitoring of the contractors is, the more the success of the road construction will be achieved and so weak monitoring reduces chances of success.

During the face to face interviews with the technical people at the Division offices of Makindye, the participants were asked; “how effective is monitoring intensity and how is it important in performance of road construction projects in Lukuli Road Makindye Division?”. During this interaction, a number of issues were revealed regarding the effectiveness of monitoring and how it has helped construction success of Lukuli road. One of the interviewees, who was an engineer at the Division explained the importance of monitoring and how it helps in road construction success;

> “effective monitoring helps to make sure that contractors comply to the guidelines and standards set for the road, make sure that there is value for money through effective and efficient use of finances”

This engineer’s views suggest two important determinants of road construction success; one is compliancy to the set guidelines and standards. If the contractors put in practice the set standards, it is possible that the road construction will be a success, with acceptable quality
standards. One of the common causes of poor roads in Uganda is deviation from the set standards (Uganda Road Fund, 2015). The other key factor pointed out is value for money and effective/efficient use of finances. It has been indicated that roads in Uganda are constructed so expensively and thus, it is possible that many roads which are still stuck in completion is due to financial misuse.

This is inline with the views of one interviewee, who pointed out that; “there is always a problem of availability of funds to facilitate regular monitoring of road construction projects in the Division…” It is true that monitoring and supervision is expensive but also, not doing it turns out to be more costly (Inspectorate of Government, 2012). Without effective monitoring, it is difficult to discover errors in time. So if an error is discovered late, it may require redoing the work already done and the cost of redoing may be higher than the cost of constant monitoring.

Another interviewee from the roads construction unit of the Division also explained the importance of effective monitoring in enhancing road construction success. This participant said that;

“...effective monitoring helps to know the status of the project, make checks and balances on whether the set objectives are being achieved...” He added that; “...monitoring helps to interact with the community where the road passes to find out the relevance of the road project to the communities around it and whether they are being negatively affected, so that revisions can be made”. All these views support the findings that monitoring is important in success of a road construction project.

An interview with one of the contractors’ staff revealed that, they understand the importance monitoring and how it can impact on their success. But he indicated that; “monitors do little to check on contractors’ compliance, instead they only want to make reports and receive their allowances...”. He added that;

“... some supervisors do not care as long as their monthly supervision allowances come, yet as the constructing team, we are also constrained by finances, we do little monitoring because, at the end of the day our payments are fixed, they do not add because we have done tight monitoring”
Regarding timely payment of contractors, the participants indicated that timely payment of contractors has a bearing on their performance and so on the road construction success. One of the participants had this to say:

“the biggest challenges road contractors are facing is delayed payment. Certificates are approved and submitted but payment takes up to six months to go through. Without adequate cash flow contractors cannot pay suppliers of materials and workers leading to projects stalling”.

This statement imply that during monitoring, the challenges faced by the contractors can be identified and worked upon by the authorities in government. Therefore ineffective monitoring fails to bring out these rather avoidable challenges, leading to road construction failures. These findings indicate that most people involved in the management of the road construction project, understand the importance of effective monitoring towards success of the road construction project, but in terms of actions, they do little than what is needed. It is therefore finally put that the findings are in agreement with what most people expect and what is indicated in theory that effective monitoring is important in success of the road construction project and it can therefore enhance achievement of the set targets.

4.4.2 Risk Management and Lukuli Road Construction Success

The second objective was to examine the relationship between risk management practices and success of Lukuli Road construction. Risk management was the second construct used to measure the independent variable (Contract Management Practices). To achieve the second objective, the researcher operationalised risk management (second element of the independent variable), using 10 Likert scaled questions with five point scales, ranging between 1 for strongly disagree and 5 for strongly agree. The responses provided were used to measure the effectiveness of the risk management practices. The responses were analysed using descriptive statistics showing means and standard deviations, as indicated in table 4.5.
Table 4.5: Effectiveness of Risk Management at Lukuli Road Project Construction

<table>
<thead>
<tr>
<th>Items Used to Measure Risk Management</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is adequate supply of manpower required for Lukuli road construction</td>
<td>3.72</td>
<td>.812</td>
<td>Effective</td>
<td>1</td>
</tr>
<tr>
<td>Equipments are always available for Lukuli road construction</td>
<td>3.63</td>
<td>1.202</td>
<td>Effective</td>
<td>2</td>
</tr>
<tr>
<td>Political influence does not affect Lukuli road construction</td>
<td>3.50</td>
<td>1.252</td>
<td>Effective</td>
<td>3</td>
</tr>
<tr>
<td>Lukuli road is less challenged with design and construction complexity.</td>
<td>3.19</td>
<td>.700</td>
<td>Fairly Effective</td>
<td>4</td>
</tr>
<tr>
<td>Time is always taken to analyze risks related to Lukuli road construction project</td>
<td>3.17</td>
<td>.620</td>
<td>Fairly Effective</td>
<td>5</td>
</tr>
<tr>
<td>Funds are always available to execute the duties of Lukuli road construction</td>
<td>3.04</td>
<td>.742</td>
<td>Fairly Effective</td>
<td>6</td>
</tr>
<tr>
<td>Lukuli road construction is not much affected by changes in weather conditions</td>
<td>3.02</td>
<td>.795</td>
<td>Fairly Effective</td>
<td>7</td>
</tr>
<tr>
<td>There is timely response to risks to achieve road project objectives</td>
<td>2.99</td>
<td>.521</td>
<td>Fairly Effective</td>
<td>8</td>
</tr>
<tr>
<td>There is regular supply of construction materials for Lukuli road construction</td>
<td>2.86</td>
<td>1.139</td>
<td>Fairly Effective</td>
<td>9</td>
</tr>
<tr>
<td>Contractors can easily identify risks involved in the road construction projects</td>
<td>2.84</td>
<td>.904</td>
<td>Fairly Effective</td>
<td>10</td>
</tr>
<tr>
<td><strong>Average mean</strong></td>
<td><strong>3.20</strong></td>
<td><strong>0.330</strong></td>
<td>Fairly Effective</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data (2020)

According to the findings in Table 4.5 risk management was rated fair on most aspects at Lukuli road construction project. Out of the 10 items, risk management was rated to be fairly effective on seven and effective on only three items. The three aspects where risk management was rated high include; ‘there is adequate supply of manpower required for Lukuli road construction’, with a mean of 3.72 (SD=0.812); ‘equipments are always available for Lukuli road construction’, with a mean of 3.63 (SD=1.202) and ‘political influence does not affect Lukuli road construction’, with a mean of 3.50 (SD=1.252). The average mean for all the 10 question items used to measure risk management effectiveness on Lukuli road construction, came out to be 3.20, which falls under fairly effective on the interpretation scale. The standard deviation of 0.330, is low, indicating that the responses did not differ much. This confirms that respondents rated the practice of risk management of Lukuli road construction to be fairly effective.

To find out if there is a significant relationship between risk management and success of Lukuli road project construction and to test the second study hypothesis, the researcher
correlated the average mean scores in Table 4.5 (on risk management effectiveness) with the mean scores in Table 4.2 (on road construction success), using Pearson’s Linear Correlation coefficient and the results are shown in table 4.6.

Table 4.6: Pearson Correlations for Risk Management and Lukuli Road Construction Success

<table>
<thead>
<tr>
<th>Variables correlated</th>
<th>r-value</th>
<th>Sig.</th>
<th>Interpretation</th>
<th>Decision on Ho</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM Vs Road Construction Success</td>
<td>0.294</td>
<td>0.001</td>
<td>Significant correlation</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Field Data (2020)  
* RM = Risk Management

The results of Pearson’s correlation coefficient in Table 4.6 showed that risk management has a significant positive relationship with road construction success (r-value = 0.294; sig.=.001). Using these results, we reject the null hypothesis and accept the alternative hypothesis and conclude that, there is a significant relationship between risk management effectiveness and Lukuli road construction success. This therefore means that the more effective risk management practices are, the more the success of the road construction is likely to be achieved while weak and ineffective risk management practices are likely to significantly reduce road construction success.

The findings from the interviews concur with quantitative findings in that the views from the interviewees showed that some of the challenges experienced by the contractors are the risks like change in policies resulting into increase costs for the contractors. Risks affect revenue projections leading to losses. During the face to face interviews, participants were asked this question; do the contract managers of Lukuli Road construction project have risk management plans in place? If yes, has it helped in success of this road?. In response, one of the participants said that;

“timely response to risks is important in road project success. Timely supply of construction materials and recruitment of manpower helps in timely completion of road construction”

Risk management in terms of supplies is important in that some of the supplies come from outside the country. So, if supply of equipments and man power is not analysed and planned in time, it can easily affect timely execution of road construction. Participants pointed out other factors that may result into delays in supply of equipments and recruitment of manpower. For example, the conflict of interest among the participants in road construction. Sometimes it affects the quality of the construction projects, which may reduce success rates.
One interviewee from the engineering department said that; “normally contractors execute the construction works and hand over quickly to avoid incurring additional costs”. This participant added that; “unfavorable contract terms such as bid pricing increase risks to the contractors”.

One officer from the Division administration indicated that risks are experienced by both the administration and the contractors, saying that; “contractors are paid 60 to 70% of the sum of the contract cost at the beginning, so if the contractors fail to complete the road construction works, there is no provision to refund the money paid to the contractors”.

Another interviewee revealed that; “road construction projects are exposed to various risks like the uncertain environment due to factors like planning, design and construction complexity and so on”. Another participant added that; there was just fair planning for risks related to Lukuli road construction”. This participant added that; “contractors ask for higher prices to avoid risks related to increase in market prices due to delayed payments from government”. These views reveal that to a great extent participants agreed that risk management is very important in road construction success. One participant from the construction team showed that;

“One of the challenges we experience is the design and construction complexity.
There is also lack of risk management specialists who can help in identifying, analyzing and controlling risks related to road construction”.

Inline with these views, it is clear that risk management plans are deemed important even in Lukuli road construction. However, the available risk management plan seem to be limited, touching a few aspects like planning for delayed payment of contractors, delayed approval of payment requests, change in policies, financial misappropriation by employees, poor weather conditions and so on. However, the available risk management plans seem to focus on mainly financial related risks, ignoring non financial risks.

4.4.3 Evaluation Practices and Lukuli Road Construction Success

The third objective was to examine the relationship between project evaluation practices and success of Lukuli Road construction. Evaluation was the third construct used to measure the independent variable (Contract Management Practices). To achieve the third objective, the researcher operationalised project evaluation (third element of the independent variable), using six Likert scaled questions based on a five point scale, ranging between 1 for strongly
disagree to 5 for strongly agree. The responses were analysed using descriptive statistics showing means and standard deviations, as indicated in table 4.7.

**Table 4.7: Effectiveness of Evaluation Practices at Lukuli Road Construction**

<table>
<thead>
<tr>
<th>Items Used to Measure Evaluation effectiveness</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is adequate information to enhance quality construction of Lukuli road</td>
<td>3.50</td>
<td>.552</td>
<td>Effective</td>
<td>1</td>
</tr>
<tr>
<td>There is appropriate documentation by Lukuli road contractors &amp; other parties</td>
<td>3.42</td>
<td>.495</td>
<td>Effective</td>
<td>2</td>
</tr>
<tr>
<td>Lukuli road contract managers always carry out assessment in relation to goals and objectives as stipulated in the initial agreement</td>
<td>3.38</td>
<td>.488</td>
<td>Fairly Effective</td>
<td>3</td>
</tr>
<tr>
<td>Contractors brainstorm on factors that may affect Lukuli road construction</td>
<td>3.29</td>
<td>.454</td>
<td>Fairly Effective</td>
<td>4</td>
</tr>
<tr>
<td>Lukuli road construction projects give voice to participant’s experience</td>
<td>3.21</td>
<td>.408</td>
<td>Fairly Effective</td>
<td>5</td>
</tr>
<tr>
<td>Timely decisions about future of construction projects are always taken</td>
<td>3.15</td>
<td>.764</td>
<td>Fairly Effective</td>
<td>6</td>
</tr>
<tr>
<td><strong>Average mean</strong></td>
<td><strong>3.33</strong></td>
<td><strong>.280</strong></td>
<td><strong>Fairly Effective</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data (2020)

Results in Table 4.7 reveal that project evaluation of Lukuli road construction was also rated fair on most aspects. Of the six items used to measure project evaluation effectiveness, only two aspects were rated to be effective and the remaining four aspects were rated to be fairly effective. The two aspects where evaluation was rated high are; ‘there is adequate information to enhance quality construction of Lukuli road’, with a mean of 3.50 (SD=0.552); and ‘there is appropriate documentation by Lukuli road contractors and other parties’, with a mean of 3.42 (SD=0.495). The average mean for all the six question items used to measure the effectiveness of evaluation activities at Lukuli road construction, was 3.33, falls under fairly effective on the interpretation scale. The standard deviation of 0.280 indicates that the responses did not differ much, confirming that respondents rated evaluation practices of Lukuli road construction to be fairly effective.

To establish the relationship between evaluation practices and success of Lukuli road project construction and to test the third study hypothesis, the mean scores in Table 4.7 (on evaluation effectiveness) were correlated with the mean scores in Table 4.2 (on road construction success), using Pearson’s Linear Correlation coefficient and the results are shown in table 4.8.
Table 4.8: Pearson Correlations for Evaluation and Lukuli Road Construction Success

<table>
<thead>
<tr>
<th>Variables correlated</th>
<th>r-value</th>
<th>Sig.</th>
<th>Interpretation</th>
<th>Decision on Ho</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation Vs Road Construction Success</td>
<td>-0.029</td>
<td>0.758</td>
<td>insignificant correlation</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Source: Computed form Field Data (2020)

The study results in Table 4.8 reveal that project evaluation has an insignificant negative relationship with road construction success (r-value = -0.029; sig.=0.758). According to these results, we accept the null hypothesis and reject the alternative hypothesis and conclude that, there is no significant relationship between evaluation effectiveness and Lukuli road construction success. The finding that there is a negative correlation between the two variables is surprising and unexpected. This finding implies that the effectiveness of project evaluation practices does not enhance success of the road construction, instead it is likely to reduce it.

During the face to face interviews, participants were asked whether stakeholders in road construction of Lukuli Road participate in the project evaluation and how effective is this evaluation? Several participants were in support of the idea that effective evaluation enhances road construction success. Road construction evaluation starts with evaluation of contractors and if it is effective, the best contractor is selected, which increases the chances of road construction success. In line with this view, one participant indicated that; “Some delays on the roads are caused by the inability of contractor to quickly mobilize resources, which affects construction schedules”. This interviewee also added that:

“Contractors delayed to engage sub-contractors as a requirement, so the roads department of the Division could not remit payments before this requirement is fulfilled. It is a requirement under the PPDA guidelines that a foreign contractor is required to subcontract a certain percentage of works to a local company contractor”

The above views indicate the need for effective evaluation of contractors especially during the selection phase of contractors. Effective evaluation of contractors ensures that the best contractor is chosen. Good contractors evaluation helps to ensure that contractors with ability and experience are selected, which helps to ensure that road construction works are accomplished in time. In line with this view, one interviewee said that;
“Payment delays sometimes occur because the main contractor has financial challenges when road construction works are underway, caused by poor management, failure to make correct cost estimation and so on.”

While delayed payment of contractors is always blamed as the key cause of delays in road construction completion, it is important to note that if the contractor is financially better, he can afford to facilitate construction works as they are waiting for final delivery of payments from the government or external funders. This means that during selection of contractors, if evaluation is done carefully, contractors who more financially stable than others are selected.

The different stakeholders in a road construction project need to participate in evaluation, so that it is not one sided. For example, the local government or UNRA, has to conduct their own evaluation, to ensure that the road construction works are going on as agreed upon in the road construction documents. Likewise, the contractors also need to have an evaluation team to ensure that what is being done is what is expected by the bosses. One of the participants noted that; “Without effective evaluation of road designs to assess the worth of every phase of the road construction project, the road construction targets cannot be achieved”. This view is in line with the view presented by Mulumba (2016), who noted that; “road designs that are done without extensive evaluation of the site may contain potential errors”. This implies that road designs with limited evaluation may result into additional works and contract revisions during the road construction phase. Effective evaluation will affect overall road construction completion in time with less costs.

One interviewee from the road construction unit of Makindye Division, when interviewed on existence of evaluation plans for Lukuli road construction project, noted that;

“Evaluation process took longer because evaluators concentrated on technical issues which would be handled after contractor selection. There is a need to adjust the evaluation criteria so that aspects like site organization, method statement, mobilization schedules, construction schedules, quality assurance systems, equipments, personnel, environmental and social management plans are handled at post qualification because these can change any time during implementation”.

This participant showed that, while there are evaluation plans at the side of the government, the plans are not focusing on the real issues that require constant checks. It even came out
from the interviews that most of the time, the would be evaluators take a lot of time and money on travels but during which they do little technical monitoring. It was also revealed that technical people are at times not the ones sent for evaluation, leading to poor results.
CHAPTER FIVE
DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
In this chapter, the discussion of findings, conclusions and recommendations, is done following the study objectives. The chapter also shows the areas for further research.

5.1 Discussion of Findings
5.1.1 Contractor Monitoring and Road Construction Success
In the first objective of the study we examined the correlation between contractor monitoring effectiveness and road construction success. The study findings revealed that contractor monitoring was generally fairly effective (average mean =3.26). Pearson’s Linear Correlation coefficient results revealed that the two variables (Contractor Monitoring and Road Construction Success) are positively and significantly correlated (r-value =0.255 sig. =0.006). The findings imply that monitoring effectiveness enhances road construction success. The findings also show the importance of monitoring in success of a project task execution.

According to Wysocki (2009) flexibility or adaptability of a contractor enhances success. Flexibility is important for both parties due to the need for change that may arise during project execution. It is true that natural or human factors can happen during project execution and are almost inevitable. But for successful road construction, management needs to have effective monitoring of the contractor. Close monitoring enhances good communication between the project manager and the contractor, which creates good communication between the two parties, making it possible for both parties to accept and adapt to changes. Greve (2008) explains that, managers who achieve success in any contract formulate a ‘win-win’ situation for the contractor.

Monitoring effectiveness differs according to the monitoring system employed by the road management authorities. Other researchers have also argued that contractor monitoring is necessary to maintain the quality of work agreed upon at the beginning and so to avoid deviation from acceptable/agreed upon quality standards (World Bank, 2004; Queiroz, 2005). According to Queiroz (2005), effective contractor monitoring may follow these five steps; contractor’s self-control system, formal monthly inspections, supervisors (formal/informal) inspections, project managers (formal/informal) inspections and maintaining a record book to
follow the comments or complaints of roads users. Queiroz (2005) adds that such effective monitoring systems will help to enhance the quality of maintenance work.”

The findings from studies like that of Mwelu et al. (2019) are in agreement with the current study’s findings on a significant relationship between monitoring and project success. Mwelu et al. (2019) indicates that, several aspects of a road construction project require to be monitored and their effective monitoring increases road construction success. These include regular monitoring of budgets, supervising and controlling personnel, tracking contractors, avoiding shoddy works, misuse of financial resources and avoiding corruption tendencies. Love, Veli, Davis, Teo and Morrison (2016) added that monitoring irresponsible staff for safety precautions to avoid accidents also helps in successful completion of road construction success. It is also important to note that road construction monitoring does not end in its self, rather, it is important that after or during effective monitoring, corrective actions are implemented to guide the best courses of actions for successful road construction implementation. The findings by Ntayi et al. (2010) are also inline with those of this study. They explained that weak monitoring practices, methods and strategies and contractors who are not committed are a big challenge to the road construction industry and are partly responsible for cases of road construction failure.

Tabish and Jha, (2015) presented contradicting findings indicating that monitoring is an insignificant predictor of road construction success. They indicated however that effective monitoring can significantly influence staff behavior though it may not result into road construction success. This study suggests that the determinants of road construction success factor are from other factors, though they did not describe them according to their beliefs.

5.1.2 Risk Management and Road Construction Success
According to the second objective of this study risk management correlated positively and significantly with road construction success. The study findings also revealed that risk management practices at Lukuli road construction was fairly effective (average mean=3.20; SD = 0.330). The findings imply that the more risk management is effective, the higher the chances of road construction success and vice versa. The findings therefore suggest that risk management is an important element in project management of a road construction.

Banaitiene and Banaitis (2012) also indicated that in any project, it is important to identify and assess all the possible uncertain events or conditions that are likely to disrupt the
achievement of a project’s objectives if they occurs. When these risks are comprehensively and systematically analyzed and responded to, their negative impact on the project and its objectives are reduced. This is agreed upon by Raz et al. (2002), who added that that various risks may lead to failure of a road construction project, such as delays, excessive spending and natural factors which may results into project completion failure.

The study findings of this study are line with those of Flanagan and Mills (2001) who identified that effective risk management results into effective utilization of resources. There are several reasons why risk assessment is important and probably why it is rated to be significantly correlated with project performance. For example, according to Oyegolle (2006), road construction projects are highly complex and full of uncertainties, which can potentially damage the construction success of projects. This makes risk management an important factor in determining road construction success. Another aspect related to risk management but which is very important in influencing project success is constant feedback. As indicated by Pheng and Chuan (2006); Uher and Loosemore, (2004), risks for road construction projects can arise from different sources and some are too abrupt and natural in nature. This makes road construction projects a bit unique and inherently complex and as well dynamic, hence the need for constant and multiple feedbacks. Constant and multiple feedback helps to handle risks that have occurred so that works can continue and the effects of the risk can be reduced, which eventually leads to project success.

Another potential risk area in road construction comes from differing and the conflicting interests, experiences and expectations of the different individuals actively involved in the construction of the road, which may positively or negatively affect the successful completion of a road construction (Banaitiene & Banaitis, 2012; Dey & Oguluna, 2004). In a negative way, these differences may create confusion for not only the project managers but also the contractors and other participants (Banaitiene & Banaitis, 2012). Identification of risks through the various risk meetings helps to identify the activities needed to deal with identified risk and or what is needed to do to avoid them from occurring, which helps participants like contractors, funders, consultants, suppliers, supervisors and managers to plan in advance and meet their commitments that helps to minimize negative effects on road construction processes, hence success (Eskesen et al, 2004). When decisions are made in time and with a combination of stakeholders on the risk management committee, efficient solutions can be
reached in terms of choice and selection of construction methods, all of which can increase success.

One important function of risk management is supervision and monitoring, which if it is done well, it reduces the risk exposure of road authority (Carpenter et al., 2003; Frost, 2001; Frost and Lithgow, 1996; Segal et al., 2003). The findings of this study are in agreement with those of Hyman (2009), who produced evidence that risk management results in reduced road construction costs and increases chances of financial predictability and this eventually leads to success. Also, risk management increases the ability of the participants in understanding the various risk potentials and also leads to proper risk allocation, for example to people like the contractors who can manage them better. This helps the road authorities in proper handling of risks and increases construction success (Austroads, 2003; Hardy, 2001).

The findings by Ondara (2017) concluded by providing the different risks that need to be managed well and whose effective monitoring will have a significant effect on project performance. These include resource risk, personnel risk and project control risk. His study advocated for implementing effective risk management strategies and if done so, performance of road construction would significantly improve. Accordingly, some risk management practices were found not to have a significant effect on project success. For example litigation risk management push insurance risk management, implying that more efforts have to be put on other forms of risks.

5.1.3 Evaluation and Road Construction Success
From the findings of the third objective of this study evaluation did not positively correlate significantly with road construction success. While the respondents rated road construction project evaluation to be generally fairly effective just like the previous two management practices (average mean=3.33; SD = 0.280), the results showed that evaluation was not a positive correlate of project success (r-value = -0.029, sig. = 0.758). The negative sign implied that the efforts on evaluation are not necessary. Though this is a bit striking and may call for further investigation, possibly in another road construction project, it suggests that road construction project managers should focus more on the other two practices (contractor monitoring and risk management) than on risk evaluation. Though we are not firmly sure to say that evaluation is useless in a road construction project, one needs to emphasize the need for ongoing monitoring and supervision as well as risk management, so that the road is
completed as required. Since success is measured at the end and many aspects of evaluation are also at the end, it may be that identifying the wrong when it is already done may not contribute to success (de la Garza et al. 2009).

The findings of this study deviate from those of the few researchers on the importance of project evaluation in promoting completion success. For example, Mitch and Brian (2013), found evaluation to be important in refining programmes and documenting their impacts. Though this is true, based on the findings of the current study, one may say that evaluation helps improve the future projects than the already completed one. It helps more the professional development than the success of a project being evaluated. However, if the evaluation is not assumed to be an end activity/practice, then in one way or the other it may help enhance successful completion of an ongoing project.

5.2 Conclusions
From the findings of the study, the researcher derived the following conclusions, as per the study objectives.

5.2.1 Contractor Monitoring and Road Construction Success
Contractor monitoring, which was rated fairly effective, has a big positive potential to promote successful completion of the Lukuli road construction project. Even though monitoring is just fair, the little monitoring that was done was instrumental in the success of this road’s construction. It can therefore be deduced that effective contractor monitoring will lead to successful construction completion of this road and the reverse is also true.

5.2.2 Risk Management and Road Construction Success
Effective risk management has a positive significant relationship with project success of road construction in the case of Lukuli road project. Therefore an improvement in risk management is likely to increase chances of construction success in case of Lukuli road and vice versa.

5.2.3 Evaluation and Road Construction Success
Project evaluation of Lukuli road construction has a negative but insignificant relationship with project success. Improved construction project evaluation at Lukili road did not contribute positively and significantly to its completion success. A continuous evaluation system may have a positive impact than a summative evaluation which comes at the end of a
project. It may thus be shocking to conclude that road construction evaluation may be neglected, since it may partly explain the low level of success at Lukuli road.

5.3 Recommendation

Based on the findings of this study, the researcher provides the following recommendations. These recommendations are inline with the study objectives. The management of Makindye Division and the head of the road construction Unit should ensure that they:

5.3.1 Contractor Monitoring and Road Construction Success

Improve monitoring of all contractors, to increase monitoring effectiveness to enhance road construction success. The key aspects which they need to focus at in their monitoring include; instituting monthly inspections by the road authorities, strict maintenance of the record book to ensure that they are able to capture all the complaints of road users and other things they are able to identify on the road quality, time management by the contractors and or other road construction workers, ensuring that contractors and road authorities follow strictly the bills of quantities (BOQs) agreed upon at the beginning, strict financial controls and continuously checking to see if the road standards are being met during the actual construction rather than waiting for end evaluations.

5.3.2 Risk Management and Road Construction Success

Improve risk management of all road construction projects in the Division. The risk management should be started before the constructions begins and continues during the entire construction phase. The key aspects which management needs to give priority in order to improve risk management, which were found to be fair include; early identification of risks involved in the road construction project, regular supply of construction materials, timely response to risks identified during the construction activity, making clear planning of the risks due to changes in weather conditions like heavy rainy seasons, availing funds in time for risk management and road construction and ensuring that road construction designs are clear to the contractors and road authorities.

5.3.3 Evaluation and Road Construction Success

Improve or introduce continuous evaluation system of road construction projects at Makindye Division. They should drop the current evaluation approach of road construction projects which takes place after the construction is over, since it does not help improve construction completion improvements.
5.4 Areas for further research
Prospective researchers and even students are encouraged to research on the following areas;

1. More studies should be done on the impact of road project evaluation on road construction success. This study found a negative insignificant relationship between evaluation and road construction success, which was unexpected. So future studies may help identify the system of evaluation used, whether continuous or project end evaluation and try to ascertain and evaluate the direction of correlation and why it is negative.

2. Future studies may be conducted using a mixed approach of qualitative and quantitative. This study used a quantitative approach and collected data using a questionnaire. The objectivity of the responses may be limited so the findings from a qualitative study may help to add to what this study and the previous ones did.
REFERENCES
Byaruhanga, A. (2016). Contractor Selection, Monitoring and Performance of Road Infrastructure Projects in Uganda
Cross Roads, (2015). Assisting the development of the road sector in Uganda” December 2015 five years of progress


Ministry of Works and Transport; Annual Sector Performance Report FY2016/17MWT


Uganda Roads Authority Report (2020). *Proposed Works under the Project for Traffic Improvement and Decongestion of Kampala City Road Upgrading And Reconstruction in Nakawa And Makindye Divisions*


APPENDIX I
TRANSMITTAL LETTER FOR THE RESPONDENTS

Dear Respondent,

I am Nnassuuna Ruth, Reg No 2018-08-01329, a candidate of Masters in Arts, Project Planning and Management (MPP) at Kampala International University and currently pursuing a research study entitled; *Contract Management Practices and Success of Road Construction Projects in Uganda, a Case Study of Lukuli Road Makindye Division*. In line with this, I kindly request you to be part of this study by answering the questions attached. Be rest assured that the information you provide shall be kept with utmost confidentiality and will be used for academic purposes only.

I kindly request you to answer all questions in this questionnaires to enable me achieve the set objective. Further, I also request that I get back the filled questionnaire today!

Thank you very much in advance

Yours faithfully,

NNASSUUNA RUTH
APPENDIX II: INTRODUCTORY LETTER

Directorate of Higher Degrees and Research
Office of the Director

Wednesday 23rd December, 2020

Ms. Ruth Nnassuna
Kampala International University
P. O. Box 20000 Kampala (U)

Dear Ms. Ruth,

RE: MINUTES OF PROPOSAL HEARING – WEDNESDAY 16TH DECEMBER, 2020

Refer to the above subject.

This serves to notify you that official minutes of your proposal hearing on Wednesday 16th December, 2020 are hereby attached for your action. For your convenience, a soft copy has also been sent to your email address.

I am hereby informing you that you passed with minor corrections. However, you are required to address all the issues captured in the minutes and write an elaborate compliance report in response to the issues raised. A sample compliance report template is attached for your guidance.

Please submit the signed compliance report, plagiarism report, and the signed revised version of the proposal booklet to DHDR within ONE MONTH from the date of this letter. You should also submit copies of the same documents to your Head of Department (HoD) to facilitate clearance for progress and graduation.

Yours sincerely,

[Signature]

Wardah M. Rajab-Gyagenda, PhD
Director

C.c. Principal CHSS
HoD Political and Administrative Studies
Student’s Supervisor – Dr. Aaron Katunguka

“Exploring the Heights”
APPENDIX III
INFORMED CONSENT

I am giving my consent to be part of the research study of Nnassuuna Ruth that focuses on “Contract Management Practices and Success of Road Construction Projects in Uganda, a Case Study of Lukuli Road Makindye Division”. I am assured of privacy, anonymity and confidentiality and that I will be given an option to withdraw my participation any time. I am aware that participation is optional and I can be provided with results if I ask so. I am therefore willing to give the truth to the best of my knowledge.

Initials: _____________    Date: _____________
APPENDIX IV
QUESTIONNAIRE

SECTION A: DEMOGRAPHIC CHARACTERISTIC

<table>
<thead>
<tr>
<th>Question</th>
<th>Category</th>
<th>Tick here</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is your gender</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>2. Age group</td>
<td>Below 20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20-30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>41-50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>51-60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>above 60 years</td>
<td></td>
</tr>
<tr>
<td>3. Years spent working with road construction projects</td>
<td>Less than a year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 – 3 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 - 6 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 – 9 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>above 9 years</td>
<td></td>
</tr>
<tr>
<td>4. What is your education level?</td>
<td>Primary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Secondary school</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Certificate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Masters</td>
<td></td>
</tr>
</tbody>
</table>

PART B: CONTRACT MANAGEMENT PRACTICES

The following statements are about contract management practices as applied to Lukuli road construction project. Kindly indicate the extent to which you agree or disagree with each, by ticking your preferred option; 5 = strongly agree (SA), 4 = Agree (A), 3= Not sure (NS), 2 = Disagree (D) 1= Strongly disagree (SD).

<table>
<thead>
<tr>
<th>B1 MONITORING INTENSITY</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road authorities follow standards developed for their methods of contracting</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Contractors complied with service quality level specified in bidding document</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Contractors always do the required amount of work during the month</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Contractors used the stipulated amount of materials to construct the road as per bills of quantities( BOQs)</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Formal monthly inspections are carried out by the road authorities</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Supervisors on the road project carry out the necessary road inspection</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Managers do adequate road project inspection to check the required standards.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>There is a record book maintained to follow the complaints of road users</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Funds allocated were used only for Lukuli road project</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

B2 RISK MANAGEMENT

| Contractors can easily identify risks involved in the road construction projects     | 5  | 4 | 3  | 2 | 1  |
| Time is always taken to analyze risks related to Lukuli road construction project   | 5  | 4 | 3  | 2 | 1  |
There is timely response to risks to achieve road project objectives 5 4 3 2 1
Lukuli road is less challenged with design and construction complexity. 5 4 3 2 1
There is adequate supply of manpower required for Lukuli road construction 5 4 3 2 1
There is regular supply of construction materials for Lukuli road construction 5 4 3 2 1
Equipments are always available for Lukuli road construction 5 4 3 2 1
Funds are always available to execute the duties of Lukuli road construction 5 4 3 2 1
Lukuli road construction is not much affected by changes in weather conditions 5 4 3 2 1
Political influence does not affect Lukuli road construction 5 4 3 2 1

B3: EVALUATION
There is appropriate documentation by Lukuli road contractors and other parties 5 4 3 2 1
Lukuli road construction projects give voice to participant’s experience 5 4 3 2 1
There is adequate information to enhance quality construction of Lukuli road 5 4 3 2 1
Contractors brainstorm on factors that may affect Lukuli road construction 5 4 3 2 1
Lukuli road contract managers always carry out assessment in relation to goals and objectives as stipulated in the initial agreement 5 4 3 2 1
Timely decisions about the future of the construction projects are always taken 5 4 3 2 1

PART C: LUKULI ROAD PROJECT SUCCESS
The statements below are on success of Lukuli road construction project. Kindly indicate the extent to which you agree or disagree with each, by ticking your preferred option; 5= strongly agree (SA), 4=Agree (A), 3=Not sure (NS), 2=Disagree (D), 1=Strongly disagree (SD).

<table>
<thead>
<tr>
<th>Project Success</th>
<th>SA</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors always complete the projects within the budget estimates</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The cost of constructing Lukuli roads is averagely low</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Road users are relatively satisfied with construction standard of Lukuli roads.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The road project was completed in the set time frame.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The road project meets the expected quality standards</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The road is always safe for the road users</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Dear respondent,

My name is Nnassuuna Ruth, pursuing a master degree of Arts in Project Planning and Management (MPP) at Kampala International University. You have been selected as one of the respondents in this research as I am assessing the contract management practice and success of road construction projects in Uganda with a case study of Lukuli Road Makindye Division, all responses given are for educational purposes thus are considered confidential.

1. How effective is monitoring intensity and how is it important in performance of road construction projects in Lukuli Road Makindye Division?
2. Do the contract managers of Lukuli Road construction project have risk management plans in place? If yes, have they helped in success of this road?
3. Do stakeholders in road construction of Lukuli Road participate in the project evaluation? How effective is the evaluation?

Thanks
### APPENDIX VI: RESULTS OF PEARSON CORRELATIONS

#### Correlations

<table>
<thead>
<tr>
<th></th>
<th>MONITORING</th>
<th>SUCCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MONITORING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.255*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.006</td>
</tr>
<tr>
<td>N</td>
<td>115</td>
<td>115</td>
</tr>
<tr>
<td><strong>SUCCESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.255*</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.006</td>
</tr>
<tr>
<td>N</td>
<td>115</td>
<td>115</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).**

#### Correlations

<table>
<thead>
<tr>
<th></th>
<th>RISK</th>
<th>SUCCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RISK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.294*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>115</td>
<td>115</td>
</tr>
<tr>
<td><strong>SUCCESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.294*</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>115</td>
<td>115</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).**

#### Correlations

<table>
<thead>
<tr>
<th></th>
<th>EVALUATION</th>
<th>SUCCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EVALUATION</strong></td>
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<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
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<td>-.029</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.758</td>
</tr>
<tr>
<td>N</td>
<td>115</td>
<td>115</td>
</tr>
<tr>
<td><strong>SUCCESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.029</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.758</td>
</tr>
<tr>
<td>N</td>
<td>115</td>
<td>115</td>
</tr>
</tbody>
</table>