A FRAMEWORK TO MITIGATE IMPACTS OF CONTRACT TERMINATION ON CONSTRUCTION PROJECTS IN UGANDA

BY

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A RESEARCH DISSERTATION SUBMITTED TO KYAMBOGO UNIVERSITY DIRECTORATE OF RESEARCH AND GRADUATE TRAINING IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN CONSTRUCTION TECHNOLOGY AND MANAGEMENT DEGREE OF KYAMBOGO UNIVERSITY

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CERTIFICATION

We the undersigned, certify that we have read and hereby recommend for submission to the Directorate of Research and Graduate Training of Kyambogo University, a research dissertation titled: “A framework to mitigate impacts of construction contract termination on construction projects in Uganda”, in fulfilment of the requirements for the award of Master of Science in Construction Technology and Management Degree of Kyambogo University.

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DECLARATION

I, Micheal Mafabi, hereby declare that this submission is my own and that, to the best of my knowledge and belief, it does not contain any material that has been published or written by anyone else before or that has been accepted for the award of any other degree from a university or other higher education institution, with the exception of where appropriate acknowledgement has been made in the text and reference list.

Sign…….

Micheal Mafabi

Date: **……...**

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I give glory to the Almighty God for the gift of life and wisdom that He has showered upon me throughout this study, may all that read this dissertation be blessed.

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DEDICATION

I dedicate this research to my parents Mr Mafabi Samson and Mrs Tibyonza Beatrice, my brothers, sisters and friends that have supported me during my study.

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LIST OF ACRONYMS

ADB	African Development Bank
ADR	Alternative Dispute Resolution
DAB	Dispute Adjudication Boards
EPC	Engineering, Procurement, and Construction Contract
FIDIC	Federation Internationale des Ingenieurs-Counseils (International Federation of Consulting Engineers)
GDP	Gross Domestic Product
JCT	Joint Contract Tribunal
NDP	National Development Plan
NGO	Non-Government Organization
NWSC	National Water and Sewerage Cooperation
RII	Relative Importance Index
SBDW	Standard Bidding Documents for Procurement of Works
UNCITRAL	United Nations Commission on International Trade Law
UNRA	Uganda National Roads Authority
UNABCEC	Uganda National Association of Building and Civil Engineering Contractors
USD	United States Dollar
VAT	Value Added Tax
WB	World Bank

ABSTRACT

Construction projects in Uganda are faced with a challenge of resorting to termination of contract as a remedy for contract breach by either party to contract. The study aimed at developing a frame work to mitigate impacts of construction contract termination on projects. Fifty-eight causes and twenty impacts of construction contract termination were identified through detailed literature review, questionnaire surveys and interviews administered to all key stakeholder categories in the industry who included: project beneficiaries, clients, contractors and consultants. The study categorized the causes of contract termination into five: contractor-related; client-related; financial and business environment-related; project-related; and, political-related causes. Thereafter, the impacts of contract termination on stake holder were analyzed using relative importance index (RII). The computed RII for each of the causes and impacts was used to rank them. Findings from the study revealed that contractor- related causes with RII=0.760 ranked the most critical among the five categories. The most significant causes of contract termination were revealed to be abandonment of work, client's bankruptcy, delays in completion of works, contractor bankruptcy or insolvency, and, lack of resources. The most significant impacts of contract termination were identified as loss of income to the contractor, loss of reputation, delays in project completion, abandonment of project, cost overruns. The study concluded that contract termination is inevitable in the construction industry but can be prevented when the causes are properly identified, analyzed and managed during the project life cycle. A framework to mitigate contract termination in the construction industry was developed as a solution otherwise the adverse effects would continue occurring. The study recommended proper planning and provision of affordable credit facilities as mitigation measures.

Key words: Contract termination, causes, impacts and relative importance index.

CHAPTER ONE: INTRODUCTION

1.1 Background to the study

Globally, the construction industry creates thousands of jobs across a variety of sectors to accommodate people according to its capabilities, contributing significantly to a nation's financial development and playing an important role in growth strategies (Shaikh et al., 2020). Additionally, the construction industry has a pivotal role in the nation's economic expansion due to its fundamental role in the construction of roads and other forms of infrastructure that boost economic. The government of Uganda through its National Development Plan (NDP) II and III (NDP, 2020) has clearly highlighted the contribution of the construction industry towards stimulating the economic growth as evidenced through amounts allocated to construction in national budget estimated at 22% in 2021-22 financial year in addition to private sector works (Deloitte, 2021).

According to the Ministry of Finance, Planning and Economic Development (MFPED), the construction industry contributed 16% of the Gross Domestic Product in 2019 (MFPED, 2019). Despite the contributions and success of the construction industry, construction projects in Uganda are faced with a risk of contract termination, and the study aimed to address the effects of construction contract termination on stakeholders in Uganda.

Construction contracts differ from some other business contracts such as lease agreements, loan agreements and tenancy agreements because there is so much

uncertainty where the contract document entails the definition of scope of work to be executed. Furthermore, some construction contracts have a high level of project complexity that require paying attention to detail during execution which make the administration of the contract a crucial step in the overall process of managing uncertainties (Klee, 2018).

Some construction projects are extremely complex undertakings governed by highly detailed contract documentation and binding conditions. One of the top ten most important clauses in a construction contract is the termination clause, which is prominent among the contract conditions (Fisher et al., 2010). Being a remedy for breaching construction contract terms and conditions was the reason this work sought to examine the impact of construction contract termination before completion of a project.

Construction contract termination has been one of the major challenges and cause of project failure in Uganda and this has been evident with some prominent projects whose contracts were terminated have given examples of impacts that arise from termination of contract. These were characterised by public disappointment, strikes, delays in project completion, increase in the project cost, accidents and loss of lives from these accidents, increased cost of doing business due to the poor road condition, and health hazards from dust in project areas (Kajubu, 2012, Otto, 2014 and Kangereha, 2017). Many studies have been done relating to contract termination, however, little has been reported on the impacts of construction contract termination on stakeholders which this

research sought to assess impacts of contract termination (Awang, 2011, Karriri, 2011 and Adeojo et al, 2017).

1.2 Problem statement

As stated earlier, many construction projects, especially high value projects, are complex undertakings that are governed by detailed forms of contracts with several terms and conditions. In such contracts, the 'termination of contract' clause is regarded as one of the most important terms of the contract in practice. Contract termination serves as a remedy for a breach of contract by one of the parties. Termination of contract is also governed by laws of Uganda in the Uganda Contracts Act, 2010.

Construction contracts are high-risk because of the industry's unique characteristics such as prolonged project durations, complicated processes with stage approvals of works, unpredictable weather, physical and economic environments, huge financial investments and structures of dynamic organization. One of the challenges facing Uganda's construction industry is contract termination due to all of these factors.

Contract termination is a crucial challenge in the building industry causing delays in completion of projects as a result of law suites and sourcing of a new contractor, increase in cost of project, and sometimes abandonment of the project. Consequently, termination of construction contract results in economic, social, health and environmental impacts which affects project stakeholders such as beneficiaries, client and contractor.

Some studies have been carried out globally on contract termination in the context of building projects. However, not much has been researched on impacts of construction contract termination on stakeholders. This has been the case of the Ugandan construction industry that has continued to face challenges whenever contracts are terminated. As a result, the study sought to determine how stakeholders in Uganda were affected by the termination of a construction contract. This study envisaged developing a framework as a mitigation measure for contract termination in order to contribute towards alleviating the adverse impacts of termination within the industry. The study also involved developing a framework to be applied prior to contract termination. The framework is envisaged to support decision making from an informed point of view.

1.3 Objective of the study

1.3.1 Main objective

The main objective of the study was to develop a framework to mitigate the impacts of contract termination on construction projects in Uganda.

1.3.2 Specific Objectives

i. To identify the causes of construction contract termination in Uganda construction industry;
ii. To determine the major effects of construction contract termination on stakeholders of construction project in Uganda;
iii. To develop a framework to mitigate impacts of contract termination on construction projects for a better construction industry;

1.4 Research questions

i. What are the causes of construction contract termination in Uganda construction industry?

ii. What are the effects of contract termination on stake holders of construction projects in Uganda?

iii. What can be done to mitigate the impacts of construction contract termination for a better construction industry?

1.5 Justification

Globally some studies have been done around contract termination with some on construction contracts for example (Khalil et al., 2012, Soon, 2017, Adeojo et al., 2017 and Faris, 2018,). However, little research has been done on impacts/aftereffects which ensue whenever construction contracts are terminated. With regards to Uganda, this has not been any different yet the construction industry continues to face challenges as a result of contract termination. Thus, this research aimed to explore the impacts of construction contract termination to the stakeholders as well as develop a framework to guide on decision making regarding the termination of construction contracts. If this study was not conducted, the recurrence of negative effects of termination would continue, which would in turn retard our industry as well as economic growth and development in Uganda since one of the largest economic contributors is the construction industry.

1.6 Significance

Through its National Development Plan (NDP III) and in line with Vision 2040, infrastructure projects prioritized by the Ugandan government have received significant

financial support, particularly for road and building projects. Additionally, large capital sums have been invested in infrastructure construction by civil society organisations and private players in the construction industry. Given the public outcry regarding delays in the completion of construction projects, abandonment of works, and an increase in project costs, as well as litigations between the client and the contractor that have an impact on stakeholders as a result of contract termination, this study was crucial and timely.

This research identified the major impacts of contract termination and recommended possible solutions to mitigate these impacts in the Uganda construction industry. In addition, a framework was developed as a tool to support decision making in order to mitigate contract termination and its impacts.

Furthermore, this study has helped bridge the knowledge gap by contributing to the existing knowledge base on construction contract termination impacts. My partial completion of my Master of Science in Construction Technology and Management was further aided by the study.

1.7 Scope of the study

1.7.1 Content Scope

The study considered both public and private sector construction projects. The study mainly focused on high value projects for roads and building construction contracts of

more than one billion Uganda shillings that have been awarded, partly executed and terminated.

1.7.2 Geographical Scope

The study was conducted in eastern and central region of Uganda. Public Procurement and Disposal of Public Assets (PPDA) was consulted for the two regions in Uganda that have been heavily affected by contract termination and the research focused on those two regions. The eastern region was selected for having two major road projects terminated. These projects affected a number of districts in the eastern part of the country including: Iganga, Bugweri, Namutumba, Budaka, Mbale, Soroti and Katakwi. The central region in districts of Buikwe, Mukono, Mpigi, Wakiso and Kampala, the central business district of the country was selected for it has a greater number of construction projects compared to the other regions of Uganda.

1.7.3 Time scope

Study was limited to projects executed in the duration of twelve years, ranging from 2009 to 2021. This was the period that has had a lot of construction as evident in the NDP I, II and III towards achieving vision 2040; and, the national budgetary allocation to infrastructure development especially roads indicated a good number of projects within this time period. Relatedly, the same period reflected a number of construction projects that have been terminated in Uganda. The study was meant to be conducted for a period of nine months but due to the challenges presented by COVID-19, it took longer to complete.

1.8 Conceptual framework

The conceptual framework clearly shows the relationship between the independent, intervening/moderating and dependent variables. The independent variables are the variables that were controlled in the study in order to find the dependent variables. Guided by the existing literature, causes of construction contract termination were categorised as: project-related causes; political-related causes; administrative-related causes; contractor-related causes; and, financial-related causes such as delays in completion of project, lack of resources and force majeure. These were thus identified as the independent variables. The dependent variable were the impacts of contract termination on the stakeholders which include: contractors, clients, consultants and beneficiaries/end-users.

An intervening/mediating variable is something that influences the connection between an independent and a dependent variable. In most cases, the independent variable is responsible for the intervening variable, which in turn is responsible for the dependent variable (Crossman, 2019). The intervening variable of the study were identified as intervening factors such as penalties and time extension. The outcomes of the relationship between the different variables were identified as impacts of construction contract termination which this research sought to determine such as cost overruns, disputes and litigations, loss of reputation and abandonment of project and a framework to mitigate the impacts.

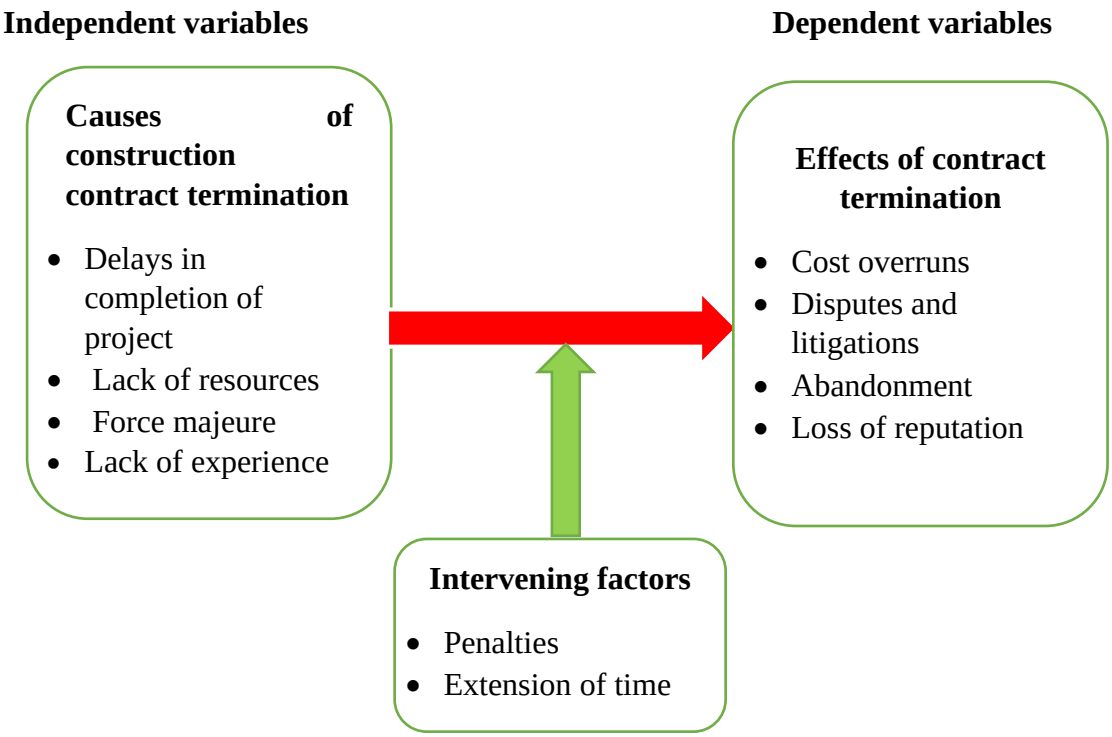

Figure 1. 1: Conceptual framework of the study

1.9 Chapter Summary

This chapter provided background information on construction contract termination and the impacts of termination from global, continental and local perspectives. The information provided insights into the impacts of construction contract termination on stakeholders in Uganda that warranted the research. The research questions, objectives, study scope, significance, study justification are also defined as well as the conceptual framework for demonstrating study variables. Literature related to the construction contracts, causes and impacts of construction contracts termination is reviewed comprehensively in the next chapter.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Based on the goals of the study, the reviewed literature is presented in this chapter. The focus of this review was on the impacts of construction contract termination on stake holders. It systematically addresses concepts related to the topic of study in order to establish the research gap. The literature is organized under the following themes: theoretical review, conceptual review and summary of literature review of works related to the study. Literature sources include books, reports, research papers, government legislations, online publications and journals.

This section of the review explores definitions, concepts and theories that are relevant to this study. It gives clear understanding of the definitions of the concepts that are related and important in this study of the impacts of construction contract termination.

2.2 Definitions and concepts of a construction contract

A contract is an agreement to be legally bound that is made with the free consent of parties who have the capacity to contract, for a legal consideration and with a legal goal (Uganda Contracts Act, 2010). In addition, the Act states that a contract can be verbal, written, or partially written, or it can be implied by the actions of the parties. However, for purpose of this study written contracts were considered.

A legally binding agreement is a contract. The parties to a contract are obligated by law as a result of the contract. Chong (2011), defined a contract is a promise or set of promises that the law gives a remedy for or that the law recognizes in some way

as a duty to perform. According to Elsayed and El Bakey (2018), a construction contract is by nature binding in a way that parties to the contract usually agree on specific conditions to assign the risks, responsibilities, and liabilities associated with carrying out such a contract.

A construction contract is an agreement between two or more parties to carry out the construction works in accordance with predetermined terms. It details the construction project's work in detail, their specifications, deadlines, payments, and penalties for delivery delays, among other things and guarantees the rights and responsibilities of each party. A construction contract is a legal document that can be enforced under certain laws and authority (Constructor, 2016).

Contracts for the erection, refurbishment, repair, maintenance, or demolition of buildings and other structures are known as construction contracts entered into between the client and contractor to execute work. These agreements are made between an employer and a contractor to carry out various types of work in various quantities or to supply materials. The general rule is that once a party enters into a contract, they are obligated to strictly adhere to the terms of the contract. There are only two parties to a building contract; there are the employer and the contractor but due to the customary divisions of duties within the building process, several other parties are named. This corresponds with the various contract types that are used in the Uganda which involve mainly two parties, the employer and contractor, and the other parties named in the contract could be the beneficiaries of the contract or supervising agencies or authorities.

Elsayed and El Bakey (2018), noted that the decision to terminate construction contracts is never an easy one because they are complicated and necessitate a lengthy tendering and negotiation process. Even if there is a clear breach on the contractor's part, employers are hesitant to take such action because it is too difficult to restart the entire tendering process for a new contractor.

Traditionally, the contractor is responsible for ensuring that construction projects are finished on time. This is because the contractor is in charge of scheduling the work, managing subcontractors, and developing the construction tools and techniques (Lynch, 2003). This is in agreement with the kind of contracts used in Uganda construction industry that are awarded to the contractors. Lynch (2003), further notes that in a construction contract the contractor is responsible for all risks and obligations of delivering works awarded while the client awaits the completed projects at the agreed contract amount. This is augmented by Hassan (2011), who noted that builders who sign a contract to build something or a building are known as contractors. He is obligated as a contractor to carry out and complete the work in accordance with the contract and to provide the materials and workmanship as specified by the architects and engineers.

According to Smirti (2017), a contract binds the parties and establishes a relationship. Discharge of Contract refers to the termination of these contractual relationships. There are a variety of ways to terminate a contract which include: by performance, contract violation, impossibility, law's operation, time lapse, and frustration. Section 66 of the Uganda contract Acts (2010), states that discharge by frustration is when a contract

becomes impossible to perform or is frustrated and one party cannot demonstrate that the other party assumed the risk of impossibility and the parties to the contract are released from further performance.

Discharge of contract by breach happens when one party to the contract fails to carry out its contractual obligations or when the performance is defective. The breach may grant the aggrieved party the right to terminate the contract, but the non-breaching party has the final say over whether or not to do so. In the following instances, a contract may be discharged by operation of law: unauthorized material alteration of a written document, which allows one party to treat a contract as discharged if the other party alters a term, such as the quantity or price of the contract, without first obtaining the consent of the other party; statutes of limitations, which allow a contract to be discharged if it is not enforced within a predetermined time frame known as the "period of limitation; and insolvency, which typically prevents the enforcement of the majority of a debtor'.

Discharge due to the impossibility to perform refers to an event that occurs after a contract is established but is not the fault of either party and can render the contract unenforceable, illegal, or fundamentally different from what was originally agreed upon. A contract is considered to be discharged by lapse of time if it is not enforced within the period of limitation. The term "discharge of the contract by performance" refers to situations in which both parties have fulfilled or offered to fulfill their obligations under the contract.

It is argued that uniqueness is one of the characteristics of construction projects, that every project has unique circumstances, and that it is essential to select a contract that is appropriate for the project from the numerous options available. The owner chooses a contract type based on three factors: the project's goals, the constraints of the project, and the method of delivery (Constructor, 2016).

2.2.1 Essential components of a valid contract

For a contract to be valid there are several elements that required. These include: agreement, offer and acceptance, consideration, legal capacity, consent of parties and the intention to be legally bound.

a) Offer and Acceptance

An offer is a promise put by one individual to another made with the expectation that it will turn out to be lawfully bidding when the other individual acknowledges it (Young, 2010). An offer is a verbal or nonverbal indication of a willingness to enter into a legally binding contract that, in its terms, expressly or implicitly indicates that the offer will become binding as soon as it is accepted by the person to whom it is addressed through an act, forbearance, or return promise (Beatson et al., 2016).

Acceptance is the unconditional agreement to the offer’s terms. Because it is not an unconditional consent to the terms of the offer, an acceptance will be considered conditional if it contains any reservations or modifications to the terms of the offer until it is communicated to the offeror, an acceptance has no effect (Young, 2010).

b) Consideration

Something of value to the promisee or beneficial to the promisor is considered consideration (Young, 2010). Consideration is basically what each party to the contract puts into and gets out of the contract. It is what each party contributes to the contract even though the law doesn't care if the consideration doesn't have enough value, it must have an economic value (Seid, 2008).

c) Agreement

According to Young (2010) if the agreement was made without the intention of forming legal relationships, it is not legally binding as a contract and is not a bidding contract if there is no certainty. Additionally, an agreement will not be considered a legally binding contract unless it is reasonable to assume that it was made with legal consequences in mind (Beatson et al., 2016).

d) Legal capacity

In contract law, in order for a contract to be valid, both parties must be of legal age. Persons such as minors, Insane or demented person do not legal capacity to enter into a valid contract because they cannot give consent (Juris, 2019). Seid, (2008) noted that corporate entities for example companies and government agencies can only enter into contracts which are inside their memorandum of associations signed by individuals with power of attorney in other wards authorized persons on behalf of these entities and any other person should not do so.

e) Consent of parties

Consent must be freely given by a person with the capacity to act, and the party should freely give it. It must also be an intelligent consent, in which the party must be aware of what he is consenting to (Juris, 2019). Additionally, the contract is null and void, and consent is referred to as vitiated, if one party's consent was obtained through undue influence, violence, intimidation, or fraud rather than freely (Juris, 2019).

f) Intention to be bound legally

An agreement will not be enforceable by law on its own unless the parties to it fully intend to be legally bound by the terms and conditions spelled out in the agreement. However, a legal contract requires that the agreements between the parties to the contract have rights and obligations that they create. Subsequently, gatherings of the agreement need to frame an agreement enforceable by regulation assuming they plan that the agreement will lawfully tie (Seid, 2008).

2.2.2 Construction contract stakeholders

Stakeholders are Individuals, groups, or organizations with an interest in the project and the ability to mobilize resources to influence its outcome (Smith, 2000). According to the Project Management Institute (2013), stakeholders are individuals and organizations who are actively involved in the project or whose interests may be impacted in a positive or negative way by how the project is carried out or completed successfully.

The study focused on four construction project stakeholders i.e., client, contractor, consultant and beneficiaries'/end users of the project. However, project stakeholders are classified into two broad groups: secondary and primary stakeholders. Secondary stakeholders are those who have a strong interest in the project despite not having a formal contractual relationship with it. Primary stakeholder are individuals or groups who are bound by the contract and the law and are in charge of managing and allocating resources in accordance with the agreed-upon cost, schedule, and technical performance goals (Seid, 2008).

2.2.3 Types of Contracts

There are a number of different kinds of construction contracts, including: non-traditional contracts, traditional contracts and design and build contracts.

2.2.3.1 Traditional Contracts

Traditional contracts separate the design and construction phases, with the consultant in charge of the design and the contractor in charge of the construction (Mesfin, 2014). In a traditional contract majority of risks are delegated to subcontractors and contractors in these contracts, which typically appoint an architect or other consultant on behalf of the client or employer. The "sort it out later" mentality of traditional contracts saw time, cost, and other project-related issues delayed until the end, frequently resulting in disputes (Keown, 2010).

According to Keown, (2010) the overlapping of the design and construction phases in the traditional contracts is discouraged, and it is widely criticized that traditional contracts polarize the parties, leading to extreme inefficiencies and encouraging

conflict. However, the primary requirements of the client are design control, time, and cost certainty. The standard contract is used in the majority of the JCT, ICE, and General Conditions/work contract forms adopt traditional contract. In Uganda the traditional contracts are the most widely used type of contract for both government and private works as most of the construction projects are designed and executed by different entities. The traditional contracts are used in local governments, agencies, organisations and private individuals.

2.2.3.2. Non-Traditional (Management) Contracts

Non-traditional contracts are specialized contracts in which a project manager or management contractor oversees the construction process on behalf of the client or employer. High-rise buildings, for example, are a good example of a large, complex, and fast-track project suitable for traditional contract (McMillan, 2019). By working together and attempting to unite the various project participants to avoid polarization, a management form of contract typically seeks to address the issues with traditional contracts. It asserts that it will eliminate inefficiencies in conventional contracts and increase cost and time certainty. Employer and contractor must exercise extreme caution and sophistication when procuring construction materials through management contracts (Keown, 2010).

2.2.3.3. Design and Build Contracts

A type of contract known as a "Design and Build" contract stipulates that the contractor is accountable for both the design and the construction of the works. The design-build method assigns a single contractor both the design and construction of the project. As

a result, the contractor bears most of the project's risk because it is in charge of both the design and construction (Riveros et al., 2022).

The design and build contract is a type of contract in which the customer assigns a single contractor the entire construction project, and the contractor is obligated to complete all necessary design and construction work (Upcounsel, 2019). In addition, Design and Build contracts require the contractor to tender for the construction of the works described in the principal design brief as well as the completion of the detailed design in accordance with that brief (Mcmullan, 2019).

Construction contracts are categorized as per method of payment and delivery such as: target cost contracts, cost plus contracts, unit price contracts and lump sum contracts (Mesfin, 2014). This is augmented by Upcounsel (2019), who noted that a wide variety of construction contracts are available to suit the requirements and goals of various construction projects. There are many ways construction projects can differ, from the kind of construction work to be done to how money will be paid. Construction contracts come in a variety of forms and can be tailored to the requirements of each project. The following are examples of how construction contract types can be defined: the manner in which compensation will be paid, the project's duration, quality expectations, and the project specification. Lump sum contracts, unit price contracts, cost plus contracts, time and material contracts, and guaranteed maximum price contracts are all common types of construction contracts (Finity, 2020).

2.2.3.4. Lump sum contracts

According to Godwin (2013), a contract known as a "lump sum contract" has a price that is set upfront and stated as a single amount, despite the fact that it may be paid in instalments as the work progresses. Although fixed-price contracts are not restricted to EPC/turnkey projects, they are typically included in the construction contract for an EPC/turnkey project. This corresponds with Finity, (2020) observation that the most fundamental type of construction contract stipulates a fixed price for all to be performed work, and the client in this type of contract requires the builder to agree to provide specified construction services at a fixed price.

2.2.4 Construction contracts forms

Standard types of contracts for the execution of work and the engagement or nomination of consultants are basically utilized in the building, engineering and manufacturing industries. These contracts are drafted by one body in segregation or jointly drafted by bodies acting for: clients, contractors and consultant.

The following are some common contract types that are utilized worldwide in the construction industry: the Design and Build Contract of the Joint Contracts Tribunal (JCT); the contract terms of the World Bank (WB Contract); Standard Bidding Documents for Procurement of Work (SBDW); the Contract Conditions of the Federation of Consulting Engineers (FIDIC) and the Contract Conditions of the American Institute of Architects (AIA) for Construction (Fawzy et al., 2018). Additionally, these organizations frequently execute contracts in the following formats:

According to Keown (2010), there are contract forms for the Association of Consultant Engineers (ACE), Engineering Contract (NEC 3) forms, Institute of Civil Engineers (ICE) forms, Association of Consultant Architects (ACA) forms, and General Condition Works forms.

In a study by Ndlovu, (2017) on the factors affecting client's choice of standard form of construction contract, it was concluded that the choice of contract is based upon: balance of risk, consultant influence, acquaintance, appropriateness, ease of use, industry-standard, and organization recommendation.

According to Mukasa (2016), a number of suites have generally come into existence for historical reasons. These suites typically provide contract forms that are meant to be used on a specific kind of construction work or reflect a particular way of working. In order to meet the changing requirements of Uganda's construction industry, contract forms are regularly revised. In Uganda, the most common contract forms are as follows: Association of Consultant Architects (ACA), the International Federation of Consulting Engineers (FIDIC), the New Engineering Contract (NEC), and the Joint Contracts Tribunal (JCT).

In South Africa, the two most common types of building contracts are: Joint Building Contracts Committee (JBCC), Principal Building Agreement (PBA) edition 6.2, which was released in 2018 by the Joint Building Contracts Committee, and the General Conditions of Contract (GCC) for Construction Works, which was published in its third edition in 2015 (South African Institution of Civil Engineering,

2015).According to du Plessis (2019), the GCC 2015 has a strong engineering background, whereas the JBCC and PBA have developed from strong architectural or building backgrounds. However, this is not the case in Uganda where no specific standard form of construction contract is mainly used, the choice of contract form used is based upon the funding agency such as World bank (WB), African development Bank (ADB), KFW, JICA for the donor funded projects and those that are not donor funded use a blend of standard forms of contracts such FIDIC, ADB and WB to meet the clients' conditions of contract.

Additionally, Fawzy et al., (2018) noted that in 1999, the FIDIC conditions of contract for construction were issued, dividing the first four editions of contracts (the 1957, 1969, 1977, and 1987 editions) into the following four books: yellow book for plant and design-build contract conditions, red book for construction contract conditions, silver book for EPC turnkey contract conditions, and green book for short form contract conditions.

EPC Contracts, or engineering procurement and construction contracts, are construction contracts that are included in all project finance documents. As a result, they have emerged as the preferred construction contract for financing major international development projects. According to Schaefer, (2018), the transfer of all design, engineering, and construction risk from the project company that owns the project to the EPC contractor that builds it is the primary reason for their overwhelming acceptance.

Under various standard forms of contracts published by organizations like FIDIC, ADB, and WB, there are a number of additional types of general conditions of contract. The following is stated in the general terms of contracts: the obligations, entitlements, and liabilities of the parties to the contract, as well as the engineer's authority, responsibilities, and authority to the contract; the distribution of risks among the parties most suited to bear them; and specifies the procedures to be followed at various stages of the contract, including the beginning, execution, completion, and handing over of the works, the defect notification period, contract termination, changes, claims, suspension, and resolution of disputes (Ministry of Finance, 2017).

2.3 Alternative dispute resolution (ADR) and adjudication in construction contracts

This section explored the origin, application, provision of clauses on dispute resolution and adjudication in standard contract as a means of resolving disputes rather than litigations and termination of contract. In a study by Bahemuka, (2021) 98.2% of entities involved in the construction industry experience disputes at differing rates in their projects so disputes are common in Uganda construction projects and 98.8% of these entities prefer ADR to litigation in resolving disputes. Internationally, arbitration has been the most favoured method of resolving and settling disputes of commercial nature in the world for hundreds of years (Kakooza, 2010). This echoes the commercial nature of construction contracts.

According to Kakooza, (2010.) arbitration is the process by which parties to a contract resolve a dispute by referring it to a third party for resolution and agreeing to be bound

by the decision instead of going to a court. According to Akao and Ekemu, (2021) alternative dispute resolution (ADR) means methods of resolving disputes that don't involve courts of law. The use of arbitration has advantages such as: neutrality, proficiency, technical flexibility, completeness, confidentiality and high-level cross-border implementation as opposed to the use of court proceeding (Neil, 2018).

Furthermore Chappell, (2018) noted that the benefit of arbitration over courts cases included: confidentiality where only the parties involved in dispute know the details of the decision taken by the arbitrator, faster than litigation, ability for parties to appoint an arbitrator with more technical expertise than a judge and hearing are arranged to suit both parties however arbitration has a disadvantage in a way the chosen arbitrator has limited powers compared to the judge to move the process in case one of the parties decides to go slow which can in turn make arbitration very expensive.

The court systems in Uganda have appreciated global commercial development in the administration of justice in which alternative dispute resolution (ADR) has been established which are faster, cheaper, accessible and efficient for parties involved (kakooza, 2010). There are three ADR mechanisms that are used in settling of disputes which include: arbitration, mediation and conciliation (Akao and Ekemu, 2021).

In Uganda, previously before the ADR methods were introduced in the judicial system, local communities among several cultures had their own mechanisms of resolving disputes with the aim to keep peace and unity among members thus whenever there was

conflict among people, they sought the help of a third party who helped to settle the dispute amongst them. The third party was often a respected person in the community. Over the years ADR was introduced in Uganda and first enacted in the Arbitration act in 1930. With the growing preference of ADR, the investment code Act 1991 was enacted and the Justice Platt report on reform in 1994 suggested that ADR be used often together with legal proceedings and this was the basis upon which a high court commercial division was created. Parties were encouraged to use conciliation in criminal or civil cases and in the constitution drafted in 1995 ADR was enacted. This was amended in 1998 to allow the courts assess issues through pre-trial before going for trial and through this courts could determine whether arbitration or mediation could resolve the issue because trail would be considered as last option for the parties (Akao and Ekemu, 2021). According to Namatovu, (2019) the common forms of ADR that are used in Uganda in negotiation, conciliation, mediation, rent a judge and arbitration although the most prevalent are conciliation and mediation.

Negotiation is a straightforward, informal, and voluntary process in which disputing parties speak directly to one another and reach an agreement through a process known as caucusing, in which a neutral party holds a number of meetings with the disputing parties or on their own. In addition, Bahemuka, (2021) noted that negotiation is regarded as the most efficient alternative dispute resolution (ADR) strategy in the construction industry in Uganda.

Mediation is an ADR technique in which a neutral third-party act as a facilitator of dialogue through a structured process in order to assist disputing parties in reaching a

final and mutually satisfying agreement. The neutral mediator collaborates with the parties and has the responsibility of facilitating the parties' own discussions and presentations of their interests as well as assisting them in finding a fair, long-lasting, and practical compromise. In addition, unlike conciliators and arbitrators, a mediator cannot force a solution on the parties (Namatovu, 2019).

Conciliation is frequently used when there is room for the disputing parties to reach a resolution and keep their relationship intact. The parties choose an impartial third-party conciliator who helps them negotiate and drafts a solution based on what they consider to be a fair compromise. In contrast to mediation, where the parties are simply guided to make their own decision, the conciliator looks for the rights that have been violated or breached and seeks a solution to the breach. As a result, the conciliator is regarded as the designer of the solution (Namatovu, 2019).

Standard forms of contracts (e.g., JCT, FIDIC, WB, AFD) provide clauses that allow the use of adjudication, Dispute Adjudication Boards (DAB) and ADR in resolving disputes, this corresponds with Chappell, (2018) who noted that all contracts have clauses furnish to the parties to allow to use of ADR such as mediation to resolve any disputes. The dispute resolution is dealt with by clauses provided in the standard forms contracts as a step before considering litigation and termination of construction contracts. In a study by Bahemuka, (2021, pp 84) it was deduced that 32.7% of construction practitioners in Uganda included ADR clauses in all their contracts implying that construction contracts don’t regularly provide for ADR unlike the standard form of contracts.

The use of DAB and the procedure for arbitration are outlined in clause 20 of the *Orange Book Conditions of Contract* for Plant and Design-Build published by the FIDIC in 1999.Any dispute that cannot be resolved amicably can be resolved through international arbitration, as stipulated in sub clause 20.6. International arbitration has many advantages over litigation in national courts in international construction contracts and is more acceptable to the parties. However, the parties should carefully consider whether the chosen international arbitration rules are compatible with clause 20 of the contract and the tender's elements. The parties are encouraged to settle the dispute without resorting to arbitration by the amicable settlement provision of clause 20.5 (FIDIC, 1999).

According to Chapell, (2018) any party to a building contract in JCT contract form has a right to present their issues to an impartial adjudicator considering that the system is widely used and it’s presumed that majority of the issues are settled by means of adjudication. This implies that adjudication provides an avenue for resolving disputes rather termination of contract or litigation in case of breach contract. The following must be included in the construction contract for adjudication to be enforceable: permit the adjudicator to extend duration by 14 days as agreed by both parties; impose a duty on the adjudicator to act impartially; permit the adjudicator to investigate the facts of the disputes and laws that are relevant; enable any party to give notice of adjudication at any time; furnish timetable, an appointment and referral to the adjudicator within seven days of the notice; compel the adjudicator to make a decision within 28 days from the date of referral unless the parties to the dispute agree otherwise or the dispute is referred to arbitration or litigation and lastly the adjudicator's decision is final. The

adjudication notice given by parties with a dispute should state out the following: ‘names and address of the parties involved in the dispute; explanation of the dispute and parties involved; where and when did the dispute occur ‘and ‘remedy being sought’ (Chapell, ibid).

2.3.1 United Nations Commission on International Trade Law (UNCITRAL)

According to Biribawa (2018), the traditional perceptions of ADR have changed, and ADR is now becoming a credible means of resolving disputes, even in countries with common law. International trade, which sought to establish a universal dispute resolution mechanism governed by national courts and biased against foreign business concerns, was one of the primary drivers of the shift in conventional perceptions of ADR. It’s against this background that UNCITRAL formulated the two legal codes in light of this context which included: UNCITRAL arbitration guidelines and the UNCITRAL Model Law.

In order to fulfil its mandate of advancing the harmonization and modernization of international trade law, the UNCITRAL model Law plays a significant role in the creation of frameworks. This is accomplished by developing globally accepted, fair, up-to-date, and uniform rules for commercial transactions, as well as by encouraging the use and adaptation of non-legislative and legislative instructions in commercial law (UNCITRAL, 2021). Furthermore, the UNCITRAL model law on international commercial arbitration is directed towards governments thus was prepared and adopted to add more detailed provisions on interim measures which provides pattern that national legislators can use in their arbitration-related domestic legislation. Parties

select the UNCITRAL Arbitration rules as part of their contract or to govern the arbitration's conduct after a dispute has arisen, and this was directed at potential parties to a dispute.

Standard types of contracts especially international contract for construction like FIDIC encourage the use of international arbitration in which case UNCITRAL Arbitration Rules are adopted because of their international use and acceptance thus parties choose from some of these rules to govern their arbitration process which are compatible to contract, tender and commercial laws of the country where the dispute is being resolved. Additionally, governments are adopting the UNCITRAL model law in domestic legislation to allow the legal use of arbitration rules that parties to international and local contracts can choose before proceeding with arbitration to resolve any dispute.

In addition, donors and development banks such as World Bank and African Development Bank supporting donor-funded projects in Uganda insist on having UNICITRAL as the ADR mechanism included in the Special Conditions of Contract (SCC). Public entities and agencies in Uganda such as UNRA, KCCA and ministries through which donor funded projects are implemented have appreciated the use of UNICITRAL and some these have incorporated the arbitration rules in their forms of contracts especially for contracts involving international bidding and contractors to be used as ADR to resolve any arising disputes.

2.4 Construction Contract Termination

This section discusses the definitions and concepts of construction contract termination, common grounds for contract termination under some standard types of contracts often used in Uganda.

2.4.1 Definition and concepts of termination

According to Cambridge Dictionary, (2022) termination means ending something. This corresponds with Chong (2011, pp 9), who stated that “Termination of contract means to end the contract.” Any contract that is terminated is considered to have come to an end, and neither party to the contract is obligated to carry out the terms of the agreement. However, the parties will still be entitled to damages based on that termination; however, the nature and amount of these damages will depend on a number of factors, one of which is the method of termination (Wittbrodt, 2009).

Understanding the legal issues that led to the termination and how to respond to termination threats are critical (Brumback, 2006). The term "termination of a contract for breach" is used when one party's misconduct is so severe that the law allows the other party to terminate the contract (Hughes et al., 2015). Termination of any construction contract is permitted by: mutual agreement, law or contract and each type of such termination comes own with its own set of repercussions and monetary penalties (Elsayed and El Bakey, 2018). This agrees with the Uganda contract Act (2010), which is followed in Uganda that allows for the termination of contract in accordance with the contract terms for breach of the contract.

According to Hughes et al., (2015), two scenarios can result in the common law right to "repudiate" or terminate a contract. First, one party might make it clear that it won't carry out its end of the bargain. Second, that party might have breached the contract in such a significant way that it will be regarded as not intending to do so. A “repudiatory breach" is this kind of breach.

The standard contract form contains numerous clauses regarding contract termination. When one party fails to fulfil their obligation or breaches the terms of the contract, the aggrieved party can seek termination of the contract. However, only if one of the parties to the contract violates the contract fundamentally can the contract be terminated (Hassan, 2011).

According to Group, (2008) termination of construction contracts occurs when an employer instructs a contractor to permanently stop the performance of work and leave the site. A valid and enforceable contract is said to have ended when one or both of the parties' actions, or unforeseeable circumstances at the time the contract was made, rendered it impossible to perform.

In construction contracts, the owner is allowed to end the contract before the project is finished without breaching the contract. An owner can terminate a business in two ways: termination for convenience and termination for default. There are background issues associated with each termination scenario and grounds for owner termination for each type of termination; practical considerations when receiving a notice of termination; risks and liabilities for contractors; and rights of appeal, recovery, and

contractor remedies. Without regard to the contractor's performance, the owner has the unilateral right to terminate a contract prior to completion under the termination for convenience clause. Local and state government contracts, as well as private contracts, now frequently employ variations on the federal model that were once exclusive to federal contracts, the government is granted the sole authority to terminate a contract for default or convenience under federal contracts (Terrell, 2016).

According to Wittbrodt, (2009), a construction contract's termination clause can take one of two forms: a termination for convenience clause or a cause clause. The most significant distinction between these two types of termination is that the contractor must have materially violated the contract for an owner to terminate the contract "for cause." Claims between the owner and the contractor who was terminated almost always follow a termination for cause. On the other hand, termination for convenience clauses permit the owner to terminate the contract for any reason. In most cases, these clauses require the owner to pay the contractor for the work done before the termination and any costs incurred as a result.

According to Intan, (2015), the biggest risk associated with any kind of termination is that it might be illegal or not done correctly. The party terminating the contract will not only be held accountable for failing to deliver and complete the project on time if the termination is found to be unlawful, but they will also be held responsible for repaying the wrongfully terminated party for all payments made under the terms of the contract up until the date of termination as well as any potential loss of profit resulting from the work that was not completed.

Employers and contractors are frequently referred to as "terminating" a construction contract, which clearly indicates that they are terminating their responsibilities under the agreement. However, the majority of construction contracts still contain remedies for the consequences of contract termination. The JCT minor works contract's termination clauses refer to the contractor's termination of employment under the contract (Chappell, 2018).

2.4.2 Termination of contract by Employer in standard forms of contract

According to FIDIC, (2017), the most common termination clause in these types of contracts (Red, Yellow, and Silver books) allows the employer to terminate the agreement in any of the following situations: where without sensible reason contractor neglects to continue with the works as per commencement expressed in section 8; worker for hire neglects to conform to execution security or notice to address; leave or exhibits no goal of completing works; doing or showing favor or disgrace in connection with the agreement either by contractor or his staff'; postponements and suspension of work', 'inability to follow a notification gave on dismissal under sub-section 7.5 and corrective work under sub section 7.6 in something like 28 days in the wake of getting the notification; subcontracting the entire works without the necessary arrangement; becomes bankrupt, compounds with leasers; gets an organization request made against him, bribe, gift, gratuity' and 'commission'.

Under the above-mentioned circumstances, the employer is to give 14 days' notice and terminate and expel the contractor from site. The contractor is obligated to leave the site, deliver any goods, documents created by him or her for the engineer, and comply

with any reasonable instructions in the order for assignment of subcontract and protection of life and works, as well as promptly clear any equipment and temporary works at his expense and risk (FIDIC, ibid).

The employer under JCT contract provides for termination of contract by five separate grounds which include: ‘wholly or partially suspends work before practical completion without reasonable cause; failure to advance with work consistently prior to practical completion; not adhering with CDM regulations prior to practical completion; contractor insolvency and engage in a corrupt act. The contract further gives details on the first three grounds of terminating a contract which are described as specified default (Chappell, 2018).

Chappell, (2018) noted that if an architect advises an employer to terminate a contractor's employment, the architect must make sure the termination procedures are followed exactly by first giving a preliminary notice before the right to terminate is used. A notice must be given to the contractor stating the default that needs to be stopped.

The employer has the right to terminate the contract with a "notice" after 14 days if the contractor: fails to provide performance security, abandons the work, or fails to proceed with the work without a reasonable excuse or notice if the contractor commits bribery or becomes bankrupt. According to FIDIC, (2017) the employer has the right to terminate the contract at any time for the employer's convenience by giving notice to the contractor.

2.4.3 Termination of contract by Contractor in standard forms of contract

According to the JCT forms of contract, the contractors have the right to terminate the contract for six different reasons, the most common of which are as follows: owing the contractor money including VAT, obstructing any payment certificate, not adhering to the contract's CDM regulations, employer bankruptcy or suspending work entirely or partially for a constant duration of one month before practical completion (Chappell, 2018).

The contractor may, after giving the employer at least 21 days' notice suspend work until the contractor receives the payment certificate in the event that the engineer fails to issue interim payment certificates or the employer fails to comply with the financial arrangements made by the employer. the contractor has the right to end the contract if the employer fails substantially to perform his obligations under the contract or goes bankrupt (FIDIC, 2017).

2.4.4 Termination of contract by Force Majeure in standard forms of contract

A force majeure clause is a furnishing in a construction contract that gives a party the right to terminate performance of its contractual obligations if some circumstances beyond its control arise and performance becomes impossible, illegal and unenforceable (Hansen, 2020). According to Jana, (2020), under common law, an event, act, or circumstance beyond the parties' control is known as force majeure. Additionally, "any exceptional event or circumstance which is beyond the control of a party, and such party could not reasonably avoid its occurrence" is the definition of force majeure.

A force majeure clause in commercial contracts allows the parties to suspend their obligations under the contract without breaking the contract due to circumstances or acts beyond their control. Force majeure cases include: natural disasters, nuclear radiation, riots, a military coup, and war (Jana, 2020). Under the FIDIC forms of contract a clause titled "optional termination, payment, and release from performance" states that either party may give the other party notice of termination of the contract if the execution of substantially all of the works is prevented for a continuous period of 84 days or for multiple periods totaling more than 140 days due to the same notified force majeure (FIDIC, 2017).

2.5 Causes and impacts of construction contract termination

This section of literature presents results of the reviewed works that are similar to the causes and implication of construction contract termination.

2.5.1 Causes of construction contract termination

The causes of construction contract termination are grouped into five wide categories that include: project-related, administrative-related, political-related, contractor-related and financial-related causes. These categories are further broken in several causes of contract termination such as: design error, project management problems; end-user considerations, lack of adequate planning; weather conditions, failure of prompt payments; bureaucracy in the system; worker strikes and disruptions (Adeojo et al., 2017).

In addition, Adeojo et al., (2017) stated other causes that included: transfer of officer in charge; lack of continuity; change of executive leadership; declaration of state of

emergency; change in government policies; political interference, material breach, death or physical disability of contractor in sole proprietorship; disregard of laws and ordinances of law authorities; failure to pay subcontractors; lack of adequate qualified personnel; lack of funds, delay in payment, financial capability of contractor; interest and embezzlement.

A) Contractor-related causes

Termination of construction contracts is caused by a number of underlying causes that are responsible for driving contract termination to occur in the construction industry and these included: political-related, client-related, business environment-related, project-related, and contractor-related causes. Client and political -related causes were ranked highest factors causing contract termination is the construction industry. The contractor-related causes for contract termination included: contractor bankruptcy or insolvency, negligence, lack of financial capabilities; superficial study of tender documents; fraud in material quality and lack of work experience (El Karriri et al., 2011).

Furthermore, El karriri et al. (2011), stated other contractor-related causes which included: increase in capital expenditure for the company; Client staff lacking technical and managerial skills for contractor staff; dealing with variation orders, lack of labor productivity, lack of project risk control, delay or refusal to do some activities requested by client; contractor has no objective to the project or limited to making profits; bad relationship between contractor and sub-contractor; low margin of profit; relying on

bank loans and making high-interest payments on those loans; contractor overload with projects and lack of adapting new technology and computer applications.

B) Client-related causes

Sixteen factors related to the client were identified to cause construction contract termination and these included: client becomes bankrupt or insolvent; lack of financial capabilities; client's policy of compensation especially under force majeure conditions; award to lowest price; lack of cash flow management; wrong cost estimation for the total cost of project; delays in contractor payments and wrong estimation of total project time (El Karriri et al., 2011).

In addition, El Karriri et al., (2011) stated more causes of termination that included: great number of variations done by client; staff members' Client staff lacking technical and managerial skills; weak project management, lack of using qualified consultants; client's policy in resolving disputes; claims and litigations, lack of response to observation of the contractor during work; lack of use of efficient documentation of work and health and 'safety measures are not followed.

C) Political and Business environment-related causes

Factors related to the political situation that led to termination of construction contracts were found to be: wars and invasions, political uncertainty and interruptions; location of some projects at hot regions; internal political troubles such as rebellions and civil wars; limitation to importation; cost increases for materials as a result of the ongoing closure and lapse in collecting debt from donors (El Karriri et al., 2011).

Some factors for termination of construction contracts were attributed to the business environment of the construction projects and these include: monopoly of some important materials for the construction industry; national slump in economy, poor economic condition such as inflation rate and currency; difference in local currency exchange and contract currency; absence of construction industry regulations; bank policy, lack of specialized courts to deal with disputes of construction industry; accounting and taxes practices (El Karriri et al., 2011).

Furthermore, El Karriri et al., (2011) stated some factors related to the project were also found causes termination of contract and these included: adverse climate condition, type of project, problems with neighbors and repetition of suspension of work.

D) Financial-related causes

The main causes of termination of construction contracts were identified as: closure, delays in completion; lack of resources, contractor's bankruptcy, rise of material costs; lack of knowledge/experience; inaccurate cost estimates, lack of funds; working at hot dangerous areas; low profit as a result of competition; and difference between contract's currency and the local currency. Furthermore, financial concerns account for 40% of construction contracts while political concerns account for 30% of the most significant factors (Nabil et al., 2012).

According to Amade and Akpan, (2014), the inherent complexity of construction projects coupled with projects' inherent financial uncertainty, cost control, and schedule monitoring produce precise budgets needs impossible to forecast accurately resulting

in wrong/low-cost estimation by contractors. This is one of the causes of contractors in Uganda to delay completion of works and also deliver the projects according to the agreed specification as a way to obtain profits from the project and they sometimes abandon the projects thus amounting to breach of contract leading to termination. Cost estimation is affected by a variety of factors, including: project kind and location, estimator's experience, market conditions, Number of bidders, method of taxation and contractor's workload (Amade and Akpan, 2014).

It is argued that Contracting parties, particularly contractors who have not accurately estimated costs throughout a project's lifecycle, frequently consider termination as their top concern in the current climate, where the construction industry is facing an unprecedented rise in the cost of construction materials (Awang, 2011). This agrees with the fact that under cost estimation by the contractors at the time of tendering is one of the causes of contract termination.

2.5.1.1 Delay as a cause of construction contract termination

One of the biggest issues facing the construction industry is delays. Numerous negative outcomes can result from delays, including contract termination, arbitration between owners and contractors, increased costs, decreased productivity, and revenue (Khahro and Memon, 2018). In the construction sector, time is of the utmost significance. The contractor must complete the work within the allotted time, and the employer should not prevent the contractor from carrying out its contractual responsibilities (Fawzy et al. 2018).

A breach of the construction contract typically occurs when a construction project is delayed. Delays are categorised into two: excusable and inexcusable. Furthermore, excusable delays are grouped as: non- compensable and compensable delays. In delays that are compensable and excusable, the owner is still responsible, and the contractor is given an extension of time and extra money. On the other hand, delays that are not compensable and are caused by things neither the contractor nor the contractor can control, like heavy rains, the contractor is only given an extension of time (Khahro and Memon, 2018).

The contractor is responsible for any inexcusable delays that occur; inexcusable delays do not entitle the contractor to an extension of time or additional compensation. Examples include: equipment failure, project scheduling errors, and inadequate staffing. The contractor becomes liable for the owner's actual or liquidated damages in the event of an inexcusable delay (Wittbrodt, 2009).

Table 2. 1: Summary table of causes of contract termination

Category	**Causes identified**	**Citations**
Contractor related causes	Abandonment; Delays in completion; Contractor's bankruptcy, Lack of knowledge/experience; inaccurate cost estimates, Lack of funds, Low profit as a result of competition; and; Superficial study of tender documents; Fraud in material quality; Lack of work experience, Lack of adequate planning; Worker strikes and disruptions, Negligence, Lack of project risk control, Failure to report to site, Failure to comply with instructions from client; contractor overload with projects, failure to pay subcontractor	Wittbrodt, 2009, Nabil et al., 2012, Amade and Akpan, 2014, Awang, 2011, Khahro and Memon, 2018 El Karriri et al., 2011

Financial related causes	Monopoly of some important materials for the construction industry; National slump in economy, poor economic condition such as inflation rate; Difference in local currency exchange and contract currency; Bank policy; Lack of financial capabilities, rise of material costs, Failure of prompt payments; bureaucracy in the system	Wittbrodt, 2009, Nabil et al., 2012, Amade and Akpan, 2014, El Karriri et al., 2011
Political related causes	Absence of construction industry regulations, working at hot dangerous areas; Increase in materials prices due to continuous closure of borders; political interference; Declaration of state of emergency, Change in governance, Limitation to importation	Adeojo et al., 2017
Client related causes	Contractor bankruptcy or insolvency, Adverse climate condition, problems with neighbors and repetition of suspension of work client becomes bankrupt or insolvent; client's policy of compensation especially under force majeure conditions; award to lowest price; lack of cash flow management; wrong cost estimation for the total cost of project; delays in contractor payments, project management problems;	Wittbrodt, 2009, Nabil et al., 2012, Amade and Akpan, 2014 Adeojo et al., 2017, El Karriri et al., 2011
Project related causes	Design error, Type of project end-user considerations, Lack of continuity; Variation in project scope; Repetitive suspension of work, Weather conditions, Force majeure; Problems with neighbors,	Adeojo et al., 2017, FIDIC, 2017, El Karriri et al., 2011

2.5.2. Impacts of construction contract termination

Construction contract stakeholders can be impacted both positively and negatively as a result of termination of contract although it has a lot of uncertainties are associated with

termination some positive impacts can be realised which include: completion of stalled work; end user satisfaction, timely use of donor funds for donor funded projects; parties are relieved of their obligations in case of impossibility to perform; and gives other contractors opportunity to work.

According to Intan, (2015), one of the most significant issues in the construction industry is contract termination, particularly with regard to public sector projects because of their connection to the public and the nation's socioeconomic development. Cost and time overruns, owner losses, and even the project could be abandoned are all possible outcomes for project after termination.

This is augmented by Kangereha (2017), who noted the termination of contract for the construction of the Mbale-Tirinyi-Nakalama road was characterised with public disappointment and up rise, delays in project completion, project cost overruns, accidents and loss of lives from these accidents and increased cost of doing business due to the poor state of the road, health hazards from the dust in those areas of the projects.

This corroborates with what Otto (2014) and Kajubu (2012) stated regarding the loss of funds and delays of the works due to termination of these construction contract. it also portrays what the clients in Uganda face whenever the construction contracts are terminated. Furthermore, in a study made by Intan (ibid.) 50% of construction projects are finished behind schedule, and some of these delays may be caused by projects that haven't been finished because contracts have been terminated.

Construction contract termination has the following implications: delayed completion, project abandonment, cost overrun and final cost variance, quality of the project changes when completed because climatic effect (Adeojo et al., 2017). This corresponds with the situation in Uganda where projects were abandoned, delayed completion as stated in (Kajubu, 2012) in construction of municipal offices in Fort Portal and cost overruns as stated in (Otto, 2014) in the construction of the Gulu city roads have been some of the dominant impacts whenever contracts were terminated.

Abandonment of construction projects results into: project beneficiaries get disappointed; standard of living are lowered; resources underutilization and wastage; employment opportunities are reduced; decline in tempo of economic activities; revenue collection to government declines; and hardship is accessing loans from foreign sources (Olusegun, 2011).

The PPDA annual report, (2018) indicated that a contractor was suspended for three years as a result of abandonment of work which constituted non-performance of contractual obligations. The suspension meant that the contractor could not participate in bidding nor be awarded any works for the next three years; implying loss of business and reputation loss on the side of the contractor.

The termination of contract was characterized with public disappointment, strikes, delayed project completion, rise in cost project, accidents and loss of lives from these accidents, increased cost of doing business due to the poor state of the road, health hazards from the dust in those areas of the projects (Kangereha, 2017).

In another example, according to the New Vision dated 3rd December (2014), the Attorney General of Uganda was sued over the termination of the Karamoja roads contract. Zzimwe Enterprises Hardwares and Construction Ltd. had filed a lawsuit against the government over the four-year-old termination of its contract in Karamoja, which had allegedly resulted in vandalism of business and construction equipment and machinery as well as loss of income on the Kalapata-Piire road in Karamoja. The company was suing for billions of shillings in damages for the terminated contract. When bad weather and an insurgence outbreak caused by cattle rustlers halted work progress, the company complained that it had completed only 30% of the work. The government then terminated the contract and retained its equipment, citing the road's delayed completion.

Furthermore, according to UNRA (2018), a contract worth 135 billion Uganda shillings (37m USD) was signed to reinstate the company after its contract was terminated in 2017 that had been previously signed in 2015 at 79 billion. This illustrated increase in project cost as a result of contract termination. This corresponds with Adeojo et al. (2017) pg.37, who noted that construction contract termination results in cost over runs.

Table 2. 2: Summary of impacts of contract termination

Summary of impacts of termination	**citations**
cost over runs, standard of living is lowered; resources underutilization and wastage; employment opportunities are reduced; loss of income; decline in tempo of economic activities; revenue collection to government declines; and hardship is accessing loans	Adeojo et al., 2017, New Vision, 2014, PPDA annual report, 2018, Intan, 2015

from foreign sources, delayed completion, project abandonment, cost overrun and final cost variance, quality of the project changes when completed because climatic effect	
abandoned, delayed completion, public disappointment, strikes, accidents and loss of lives from these accidents, increased cost of doing business due to the poor state of the road, health hazards from the dust in those areas of the projects	Otto, 2014, Olusegun, 2011, Kajubu, 2012, Kangereha, 2017

2.6 Research Gaps Analysis and Synthesis of the Literature

According to the preceding literature review, numerous studies on contract termination in the construction industry have been conducted worldwide. However, the reviewed literature reveals a number of omissions that this study bridged. The majority of studies on the topic focus on developed nations with well-developed private and public sectors; however, the proposed study concentrated on Uganda.

For the studies conducted in Uganda, the scholars (Banyenzaki, 2016, Basheka, 2012, Muhwezi et al., 2014 and Otim et al., 2008) were more interested in the construction project performance, causes and effects of uncompleted buildings, abandonment, delays and construction contract management and not in the specified areas of the dependent variable, omitting aspects of the effects of construction contract termination on stakeholder. In a study by Muhwezi et al., (2014) where effects of delays on building construction projects were assessed in Uganda, using Kampala as a case study where effects of contractor-related, client-related, consultant-related and external factor

related delays on construction projects were discussed which included: work stoppage due to cash flow constraints, corruption tendencies, delayed payments, adverse climate conditions, disputes between parties involved in the construction and materials shortage, a lack of financial discipline or honesty, inadequate contractor experience and incompetent project team, delays in evaluating changes in the work's scope , errors in design and inadequate investigations of the site.

Investigation regarding the problems affecting the construction sector had been carried out by many scholars (e.g., Banyenzaki, 2016 and Otim et al., 2008). However, they left out the causes and effects of uncompleted projects with very little attention on the uncompleted buildings by Otim et al., (2008). The study found the causes of uncompleted buildings to be: misuse of funds, lack of experience, poor planning/management, improper feasibility studies, corruption, source of funds, death of a party, sickness and under cost estimates. Uncompleted buildings deteriorate without utilization and interest accrues on money sunk on the project which results into frustration, embarrassment and poverty as money invested cannot be divested. This leads to loss of business, property, employment, revenue, market for suppliers, cases of theft and vandalism and degradation of quality (Otim et al., 2008).

Additionally, some studies were qualitative and did not provide any guidance regarding the relationship that exists between the study variables. The authors used descriptive, exploratory, and cross-sectional survey designs as the primary research methods, so the study variables were not thoroughly investigated. Because of this, there is a knowledge gap, and it is essential to investigate the two variables: reasons for the termination of a

construction contract, as well as its effects on stakeholders and the Ugandan construction industry; and, after that, find a way to address the problems in the construction industry.

2.7 Chapter Summary

The reviewed literature demonstrated that there was a substantial relationship between the causes of construction contract termination and the impacts of contract termination. The review indicated termination of construction contracts significantly impacts the construction stakeholders. However, most of the studies cited were not from Uganda hence leaving out the contextual gap. Furthermore, some the studies reviewed took a qualitative approach which left a flaw in the methodology that was spanned by the research using both quantitative and qualitative approaches.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The methods and approaches the researcher employed to gather data and investigate the research problem are presented and described in this chapter. Data collection methods and instruments, achievement of specific objectives, data quality control (validity and reliability), data analysis, ethical consideration, and summary of the chapter were all included. They also included the research design, research approach, description of the study population, sample size and strategy, and description of the study area.

3.2 Research Design

Study design is a plan for gathering, measurement and analysis of the data created for solving a research problem (Creswell and Clark, 2018). The descriptive and correlational survey design were taken up for the research because it gave a systematic explanation and approaches accurate to the research approaches stated by (Leavy, 2022). The researcher was able to determine the relationship between the study's variables using a correlational survey. The descriptive design was chosen because it explained and described the variables (contract termination and stakeholders) of the study and uses questionnaires and surveys which the study used for data collection.

This research design indicates the efforts to investigate the connections between the variables and factors at play in the study (Sekaran and Bougie, 2016), The study sought to find the connection between the variables of the study such as: independent, dependent and intervening. These variables included: the causes of contract

termination, impacts of contract termination, stakeholders, extension of time, penalties in the construction industry in Uganda.

Predictions are then based on these observations. A casual comparative research design is another name for these observations. This basically looks for the causes in a situation in which effects are already established and cannot be altered. To put it another way, these are a backwards-working method of research design because they begin with a fixed outcome and focus on the possibilities. The research adopted a comparative research design to compare effects of contract termination on stakeholder with construction contract termination because the causes, impacts and construction contract termination exist and cannot be changed thus the study sought to deal with the issue of construction contract termination in the construction sector in Uganda by developing a framework to mitigate contract termination thus working backwards.

3.3 Research Approach

The research approach is a plan and the research procedure that outline the sequential steps from broad assumptions to specific methods of data collection, analysis, and presentation (Creswell and Creswell, 2018). The study employed a mixed design that combined qualitative and quantitative approaches.

According to Creswell and Creswell, (2018), the difference between qualitative and quantitative research is that qualitative research employs words rather than figures, additionally quantitative research employs closed-ended questions while qualitative

employs open-ended questions. The mixed approach as described fitted well with the data collection methods of closed ended questionnaire and an open-ended interview.

Mixed design involves gathering, evaluating, and occasionally combining qualitative and quantitative data simultaneously. The study's phases were arranged in such a way that the phase of qualitative has an effect on the phase of quantitative and the reverse (Leavy, 2022). Qualitative research is an approach which looks to explore and understand that individuals or a group of people ascribe to the research problem while quantitative research is a method for testing research goals and theories by examining the connection between variables which can also be measured with instruments such that numerical data are statistical analysed (Creswell and Creswell, 2018).

In data collection, sampling, quality control, and analysis, quantitative methods were used. According to Creswell and Clark, (2018), the method was chosen because the qualitative data, derived from the in-depth opinions and attitudes of purposefully selected participants, refined and explained the quantitative statistical results while the quantitative data provided insights into addressing the research problem. Furthermore, Leavy, (2022) noted that in explanatory studies that look into casual relationships, correlations, and associations, quantitative approaches are frequently used. This study, which is designed to be correlational, therefore employs a quantitative approach.

By deciphering the meanings that people assign to situations, circumstances, and objects, qualitative methods place a value on depth of meaning and people's experiences with the subject. This helps to build a solid understanding of the subject. Explanatory

and descriptive research frequently employ qualitative methods (Leavy, 2022). The qualitative approaches used for the study best fit within the descriptive research design that was chosen by the study.

3.4 Description of the research population

The term "study population" refers to the entire category of people; things or occurrences the researcher intends to investigate and draw conclusions from (Sekaran and Bougie, 2016). There are numerous key players involved in the construction industry including clients (individuals and professional from agencies, authorities and organisations), Contractors (businessmen, construction professionals) consultants and beneficiaries of the projects who are the project beneficiaries.

The total population for the study was 1,361 respondents which included members registered with professional bodies in Uganda such as: Architects Registration Board, Uganda National Association of Building and Civil Engineering Contractors (UNABCEC), Engineer's Registration Board (ERB), Institute of Surveyors of Uganda (ISU) and project beneficiaries. The researcher focused on roads and buildings where contracts were terminated (***Appendix 4***) from 2009 to 2021. The respondents of the study were drawn from individuals working with the Ministries, city authorities, district local government, municipalities, town councils, UNRA and Non-Government Organisations (NGO) such as: World Vision, Oxfam, Save the Children and Plan international in construction professions (Engineers, Architects, Quantity surveyors), contractors working with in the construction industry and project beneficiaries in the project affected areas that were benefiting from the projects whose contracts were

terminated were sampled from in Uganda. The following was the population breakdown for the research.

Table 3. 1: Research groups of the population

Research Group	**Research Population**
Land Surveyors	177
Architects	187
Quantity Surveyors	69
Civil Engineers	727
Contractors	111
Project Beneficiaries	100
Total	**1,361**

3.5 Determination of the sample size

The sample size was determined by the size of the population of the study and it was neither too small nor too big but optimum. According to Shajahan (2004), the required efficiency, representativeness, dependability, and adaptability were satisfied by the sample size. The study's statistical results and data were of higher quality thanks to the larger sample size. Yin, (2018) asserts that compared to complete coverage, sampling offers the potential for superior testing, more in-depth investigation of missing, incorrect, or suspicious information, superior supervision, and superior processing. Limitations on the cost of sampling, the need for precise results, and time constraints dictated the speed with which data needed to be gathered led to this. The Kish and Hess (1965) formula was used to determine the sample size that allowed the researcher to

collect the necessary data for this study because it has been utilized by other researchers like (Adesi et al.,2019) and (Ashmawi et al.,2018). The Kish and Hess formula is stated as:

$$\mathbf{n_o = \frac{pq}{S^2}} \quad \text{---------- (Equation 3.1)}$$

$$\mathbf{n = \frac{n_o}{1+\frac{n_o}{N}}} \quad \text{---------- (Equation 3.2)}$$

Where:

no is the initial estimate of the size of the sample.

p is the fraction of the characteristics that are being evaluated.

q is 1- p.

S is maximum percentage for standards error allowed for sample mean.

N represents target population size.

n represents final estimate for the sample size.

With a confidence interval of 95% and a standard error of distribution of 10%, the first estimate of the sample (no) is 25 when 0.5 is substituted for p, q becomes 0.5, and 0.1 is substituted for S.

P = 0.5

Q = 1-P = 0.5

$$\mathbf{n_o = \frac{0.5 \text{ x } 0.5}{0.1^2} = 25}$$

Applying 25 to equation (3.2) while replacing the target population size (N) for the different groups, gives the final estimate size of the sample (n) as indicated below in Table 3.2.

Table 3. 2: Sample size of the study

Study Groups	**Target Population**	**Sample Size**	**Percentage**
Surveyor	177	21	17
Architects	187	22	18
Quantity Surveyors	69	17	14
Civil Engineers	727	24	20
Contractors	111	19	15
Project Beneficiaries	100	20	16
Total	**1,361**	**123**	**100**

3.6 Sampling strategy

Simple random sampling was the sampling strategy that was adopted for the research in selection of the respondents. Chance sampling or probability sampling is another name for this kind of sampling, in which each item in the population has the same chance of being included in the sample and each sample has the same chance of being selected during the process of sampling (Shanti, 2010).

Simple random sampling best suited this research because of the intended population had the same opportunity to be selected thus giving un biased data from the respondents selected during the data collection and hence had an all-round view of the entire population for the research.

3.7 Description of study area

According to Nyongensa, (2021), Uganda consists of four regions (eastern, central, northern and western region) and 135 districts. These are governed by 23 ministries, 125 local governments, 11 cities with 25 divisions, 31 municipalities, 580 Town councils, 2184 Sub Counties (Ministry of local government, 2022). Parastatal bodies like UNRA, and NWSC and NGOs such as World Vision, Oxfam, Save the Children and Plan international. However, the study focused on the central and eastern region of Uganda in districts of Buikwe, Mukono, Mpigi, Wakiso and Kampala in central region and Iganga, Bugweri, Namutumba, Budaka, Mbale, Soroti and katakwi in eastern region. The study was conducted in four cities, 6 municipalities, 12 local governments and four ministries, all these are major construction industry players. The majority of formal building activities are sanctioned by these entities, notwithstanding the contribution of the private individuals engaged in construction. In the recent past years, the country has experienced exponential increase in the population leading to increase in the demand for infrastructure like housing, water, and sanitation, as well as roads thus the increase in construction activities in the region.

3.8 Data Sources

Data was obtained from both primary and secondary sources in the study.

3.8.1 Primary data source

The following were the primary data sources utilized: interviews and questionnaires.

3.8.2 Secondary data source

The secondary data sources that the researcher used were obtained from reports that have been published to the public such as PPDA annual reports, World Bank and UBOS reports.

Documentary review was used to supplement other information about causes and impacts of contract termination. Official primary documents and secondary documents which included: PPDA annual procurement audit reports, national budget framework papers, newspapers, contracts, UNRA annual reports, UBOS reports, termination letters, Uganda Contract Act 2010, law books were reviewed during the study to explore the research problem (Kothari, 2004).

3.9 Instruments and tools for gathering data

The decision of technique was impacted by the data gathering procedure, variable type, the accuracy needed, the gathering point and the expertise of the enumerator. Choosing the right methods was made easier by the connection between the study variables, their sources, and the practical methods for gathering them. The primary methods for gathering data were: questionnaire, interviews, and a review of the documents.

3.9.1 Interviews

An interview is defined as a qualitative research approach of collecting data that depends on asking questions to get information. An interview involves two or more individuals, one of whom is the interviewer, asking for the necessary data. Additionally, the researcher conducted structured interviews with participants to gather information through direct verbal interaction. Interviews were used in gathering information for

achieving both objective one and two of identifying causes and impacts of contract termination respectively. A selected number of respondents' perspectives on the independent and dependent variables were gathered in the interview guide (***Appendix 2***) from experts in the construction industry with experience on contract termination from the project affected areas. In order to reaffirm the quantitative analysis's findings, the qualitative analysis made use of the interview data. In addition, the researcher was able to revisit some of the issues that were overlooked in other instruments during the interviews, which were nonetheless deemed essential for the study.

As part of the adductive process, an interview guide ***(Appendix 2)*** was created, piloted, refined, and updated throughout the empirical work. The questions were intended to prompt specific responses from respondents regarding the study. Seventy percent (70%) of the interviews were conducted in person and 30% were conducted online. The interviews typically lasted half an hour online and one hour in person. The purpose was explained, and confidentiality of the interview data was guaranteed. The interview guide was also used to help the researcher compare the responses that were obtained by analysing the responses that were provided by the interviewee to each question in order to guarantee the validity of the data.

3.9.2 Survey questionnaire

According to Sekaran and Bougie, (2016), a questionnaire is a type of research instrument that consists of a preformulated set of prompts and other questions to which respondents record their responses in order to gather information. The questionnaire survey was used by the researcher because it is practical, can collect a lot of information

from a lot of people in a short amount of time, and is relatively inexpensive compared to other methods of data collection. Additionally, the questionnaire's numerous items increase its level of reliability, increasing the likelihood of obtaining valid data (Amin, 2005).

According to Sekaran, (2013), a questionnaire was suggested because it permits in-depth research, first-hand information, and more experience in a short amount of time. Questions regarding the study's independent and dependent variables were collected using a closed-ended structured questionnaire ***(Appendix 1).*** The researcher made sure that all of the people who participated in the study got the questionnaires in time so that they could have enough time to answer the questions.

The instrument utilized was created in accordance with suggested guidelines by different researchers (for example Kothari, 2004, Sekaran and Bougie, 2016). Section A had profile of the respondents and concept of contract termination were asked which included the respondents' category in the industry, profession, education levels, experience and understanding of concept of termination, likely of termination occurring. Some of the survey's questions were open-ended, while others required respondents to provide a single correct response for each subject for the study's independent and dependent variables. Section B asked questions related to the causes of construction contract termination on projects in Uganda. Section B and Section C included the causes of contract termination and impacts of termination questions. The latter was measured using a Likert-type scale with five points starting with "*Highly*

insignificant" up to "*Highly significant*" and provided information about what causes termination of construction contracts.

The survey was utilized for gathering information from respondents on identified causes and impacts of contract termination obtained through document review of works done by other scholars which will then be ranked.

3.9.3 Review of documents

Reviewing of documents was utilized to gather information regarding the causes as well as impacts of construction contract termination. Both secondary and primary documents were reviewed to gain more information about the research problem. According to Sekaran, (2003), secondary documents are produced by individuals who were not present at the scene but acquired high witness accounts, whereas primary documents apply to eye witness accounts to make a specific experience regarding a particular event.

Researcher used written official papers to gather qualitative information about the study problem with the help of a document review guide (***Appendix 3)***. Written documents that are public which were reviewed included: annual PPDA reports, PPDA annual procurement audit reports, national budget framework papers, contracts, UNRA annual reports, UBOS reports, termination letters, Uganda Contract Act 2010, law books that provided important information for the study. The researcher reviewed documents where information that related to construction contracts termination was found in order to thoroughly comprehend the study which supported building literature review and

achieving specific objective one and two of the study. Furthermore, the list of terminated contracts was generated from document review and data obtained from entities such as local governments, NGO and from records of projects that were terminated during researcher's work experience.

3.10 Methods of data collection

The research gathered both secondary and primary data using the methods listed below.

3.10.1 Primary Data

The primary data was collected with the aid of a questionnaire and interviews

3.10.2 Secondary Data

Secondary data was gathered using document review of related work by other scholars, report and publications. The researcher gathered both causes and impacts from the review of documents that were compiled with those obtained from the interviews to develop a questionnaire with a good structure that the study used to collect data.

In the study, the researcher used written documents to provide information on the research problem. The following documents were examined from the list: Uganda Contract Act 2010, construction law books, conference papers, and journals on construction contract termination, as well as the annual PPDA procurement audit reports, national budget framework papers, contracts, UNRA annual reports, UBOS reports, and termination letters, served as important sources of information for the study

3.11: Reliability and Validity

3.11.1 Data validity

According to Sekaran, (2003), validity is the capacity to produce findings that are consistent with the theoretical or conceptual values. This study ensured a high level of construct validity by conducting a pilot study with experts in the construction industry to refine and contextualize the tool before it was sent out for data collection. When the research measures what it is supposed to measure, it is said to be valid. The instruments were given to two experts to use as pilots for the study in order to verify their validity. This allowed them to evaluate and validate the relevance of each item in the instrument to the goals and decide whether or not to use the instrument for data collection.

A researcher should consider the content validity, construct validity, and criterion validity of a study. For this study, the researcher focused on the content validity. A non-statistical type of validity known as content validity involves systematically examining the test content to see if it covers a representative sample of the behaviour domain that will be measured.

The researcher must not only provide a theoretical definition (of the concept) that is approved by his or her peers but also choose indicators that rigorously cover the domain in order to maintain content validity. The following equation was used to calculate the content validity index (CVI) (Odiya, 2009).

$$CVI = \frac{Number\ of\ questions\ judged\ relevant}{Total\ Number\ of\ questions\ judged} \quad \text{..... Equation (3.3)}$$

Odiya (2009), noted that the closer the CVI value to 1 the more valid the second of the research instrument or the entire instrument. The results in Table 3.3 were obtained for the research instrument.

Table 3. 3: Validity of the questionnaire data

Variables	**Number of items**	**Number of valid items**	**CVI**
Causes of contract termination	59	58	0.9830
Impacts of contract termination	23	20	0.9091
General profile, Concept of termination and Mitigation measures	9	8	0.8889
Average			**0.927**

The average CVI =**0.927** which was close to 1 implied that the questionnaire items were valid and gave quality data for the study.

3.11.2 Data Reliability

According to Tavakol and Dennick, (2011), reliability is the resemblance of the test with itself. The degree to which the research instruments produce consistent results or data after repeated trials is known as reliability (Mugenda and Mugenda, 2003). According to Amin, (2005), the researcher gave the experts the instruments to ensure that responses are appropriate in comparison to previous responses and to identify questions that are likely to elicit inadmissible responses for qualitative data.

Amin, (2005) noted that pre-test reliability is used to see how well an instrument can produce consistent scores when the same group of people are tested multiple times under the same conditions. Before the actual data collection for the study began, both

instruments underwent a pre-test to ensure that the responses were consistent. The instruments' items were altered based on the pre-test results.

The *Cronbach's Alpha test* ($\propto$) was used, according to Taber (2017), to demonstrate reliability and the impact of measurement error on the observed scores of all respondents. Using the standard error of measurement, it was used to calculate the effect of measurement error on an individual respondent's observed score. Additionally, Cronbach's alpha demonstrates the correlation between similar concept-testing items. The Cronbach's alpha tests were used to determine the reliability of multiple-question Likert scale surveys because the questionnaire designed to address objectives one and two on the causes and effects of construction contract termination was structured on a Likert scale. As a result, the Cronbach's alpha test ensured the reliability of the data collected by determining how closely related a group of data sets were.

The overall evaluation of the reliability measure is provided by the coefficient of reliability, which ranges from 0 to 1. The more items have shared covariance and probably measure the same fundamental idea, the higher the coefficient. The minimum coefficient that is acceptable is 0.5 or higher, but the recommended range is 0.65 to 0.8 (or higher in many cases). The Cronbach's alpha equation was used to calculate the survey instrument's internal consistency and reliability in this study.

Cronbach's alpha ($\propto$) = $\frac{n}{n-1}\left(1-\frac{\sum_{i=1}^{i=n} V_i}{V_T}\right)$.....Equation (3.4)

Where: number of questions is represented by n, V_T represents variance of the question total score, V_i represents variance of the score on each question therefore, $\sum_{i=1}^{i=n} V_i$ stands for sum of the variance of score on each question.

Study findings are presented in the Table 3.4, showed the average Cronbach's alpha coefficient ($\propto$) of 0.887 indicated a good strength of internal consistency of the questionnaire instrument and therefore the data from the questionnaire were consistent and reliable.

Table 3. 4: Content validity applying Cronbach's alpha

Category	n			Cronbach's alpha (α)
Causes of contract termination	58	75.317	813.488	0.923
Impacts of contract termination	20	20.931	109.05	0.851
Average alpha				**0.887**

3.12 Ethical issues

Ethics originate from a Greek word ethos that means character, ethics involve trustworthiness, morality, fairness and integrity. Morality in ethics means knowing what is right while integrity is acting upon that knowledge (Leavy, 2022). Ethics are a personal matter of integrity, but their implications extend beyond the individual (Plooy-Cilliers et al., 2014). Additionally, Mantzorou, (2011) noted that the protection of the

respondents' dignity during the research period and the publication of the data are two of the requirements of research ethics.

There are ethical substructures of ethics at every phase of the study process that impacts the study right from topic selection (Leavy, 2022). Issues of ethical consideration in this study were worthiness, confidentiality and consent. For purposes of consent in this study all the respondents and all those that participated in the research, proper examination and provision of all necessary information about the study was done. Integrity in research means adhering to ethical principles and professional standards that are necessary for responsible research practice.

A letter of introduction was obtained by the researcher from Kyambogo University that provided appropriate identification in addition to outlining the purpose of the research. To ensure that respondents do not suffer the effects of the research activities, the researcher ensured confidentiality by encouraging them to participate willingly. The respondents were informed of the study's purpose before their choice of taking part. Additionally, all the academic and scholarly work of other scholars that were used in the course of the study were fully acknowledged and reference were made thereof in order to avoid plagiarism.

3.13 Data analysis

Descriptive statistics and the Relative Importance Index (RII) were used to analyze the data in which software like Microsoft Excel was used and the data presented graphically using tables. Qualitative data is analysed in three steps which include: data reduction,

data display, and data-derived conclusions (Leavy, 2022). The data that were gathered from the interviews from the study's key informants were first cleaned to make it smaller, then displayed for review and analysis of the causes, impact and mitigation measures, and then a comparison to the results of the questionnaire survey ***Appendix 1*** was made. The responses gathered from the interviews were first grouped in a word document and reviewed in order to clean out errors and repeated responses so as to pick out the most relevant information to the study related to questions on causes, impacts and mitigation measures. The relevant data picked were further displayed in another word document and analysed to reaffirm the findings from the questionnaire and acquire more data to achieve the study objectives then the final findings were presented to augment the causes and impacts as well as mitigation measures to achieve objective three.

On a five-point scale on which RII is based:1-highly insignificant; 2-insignificant; 3-none; 4-significant; and 5-highly significant. The researcher used RII for the study to empirically determine the factors that lead to construction contract termination in Uganda and to comprehend the effects of contract termination in Uganda.

According to Johnson and Lebreton, (2004), RII aids in determining a particular variable's contribution to the prediction of a criterion variable both on its own and in conjunction with other predictor variables. The following formula was used to determine the Relative Importance Index (RII):

$$RII = \frac{\sum W}{A*N} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{ Equation (3.5)}$$

$* \sum$ where, W—weighting accorded to each statement by the respondents which ranges from 1 to 5; A representing higher response integer (5); and N for the total number of respondents.

3.14 Achievement of specific objectives

In this section the researcher clearly details the plan and clear step through which each of the three specific objectives of the study was achieved to solve the research problem and main goal of the study.

3.14.1 Specific objective 1: Identifying causes of construction contract termination

The causes of construction contract termination that occur at the various stages during project life cycle of a construction project such as inception, planning, execution, monitoring and closure were obtained using both primary and secondary data sources. Methods of data collection such as document review for secondary data while interviews and questionnaires for primary data were used. The causes were identified from review of documents such as reports, publications, journals, books. Furthermore, a mini survey from a group of experts was conducted using an open-ended questionnaire in form of an interview guide that gave the causes of contract termination from their experience on some of the projects that had been terminated in the construction industry.

The data on the causes obtained were reviewed by the researcher for validity which had been condensed in the literature review of the study and was also be put in the questionnaire in a Likert scale for the respondent to give more primary data from their

experience in the construction industry. RII was used to analyse information gathered from questionnaires to rank the causes of the construction contract termination and helped in the developing the framework to mitigate impacts of contract termination by linking the identified causes to the project life cycle stage in which they arose.

3.14.2 Specific objective 2: Determine impacts of construction contract termination on stakeholders

The impacts of construction contract termination on stakeholders in Uganda were obtained using both primary and secondary data sources using methods of data collection such as document review of related literature for secondary data as well as questionnaires and interviews for the primary data. The impacts that were identified from documents review of related literature such as reports, publications, journals, books. Furthermore, a mini survey for a group of experts was be conducted where an open-ended questionnaire in form of an interview guide was given to the experts to give the impacts of contract termination on some of the projects that had been terminated from their construction industry experience.

Information on the impacts obtained were reviewed by the experts for validity that had been condensed under literature review of the study and was also be put in the questionnaire in a Likert scale for the respondents to give more primary data from their experience in the construction industry. Relative importance index was used to analyse information gathered by the questionnaires to rank the impacts of the construction contract termination and helped in the development of the frame work to mitigate impacts of contract termination.

3.14.3 Specific objective 3: Develop a framework that may mitigate construction contract termination impacts and contribute to the construction industry

A framework to mitigate the impacts of construction contract and contribute to the construction industry was developed following the data collected and analyzed. The framework aimed at solving the problem of contract termination that leads to impacts by giving workable solutions to the possible causes of contract termination at different phases of the project lifecycle as well as how contract management processes can be used in the construction industry.

To achieve objective 3, the interview guide had an open-ended question for the selected experts among the target population of the study who gave possible mitigation measures to construction contract termination and the impacts. The collected data were analyzed and discussed with the experts on the best combination of the results obtained that can form a framework to mitigate construction contract termination.

Results from specific objective 1 and 2 were also used to develop the frame where causes and impacts with the greatest impact were used in solving the problem. Additionally, document review was done on related works on framework to support in validating and correlation the developed frameworks.

3.15 Chapter Summary

The methodology which guided the entire study is described in this chapter that include section on: selected research design, study philosophy, research approach, description of research population, targeted population, size of sample selected, data collection

methods and instruments, document review, achievement of specific objective, data quality control in which validity and reliability, ethical considerations were ascertained, and data analysis plan, among others are all described and contextualized to the study.

CHAPTER FOUR: ANALYSIS DISCUSSION AND PRESETATION OF FINDINGS

4.1 Introduction

The study's questionnaire, interview, and document review data are presented in this chapter, along with findings and conclusions.

4.2 Study response rate

There were 107 respondents to the study, which targeted a sample size of 123 individuals. A questionnaire was used to collect quantitative data from 93 respondents, and an interview guide was used to collect qualitative data from 14 respondents. The overall rate of responses was 86.9%.

Table 4. 1: Response rate of the research

Sample size	**Actual Reponses**	**Percentage**
123	107	86.9%

According to Creswell (2018), the required response lies between 60 to 80 percentage therefore the total response rate of 86.9% in Table 4.1 exceeds the required survey response for the mixed quantitative and qualitative methods that were applied.

4.3 Profile of the study respondents

Questions were posed to the respondents about their: category in the construction industry, profession, years in the industry. The background information was needed to ascertain whether the participants in the study had a similar distribution of characteristics with the population where they were drawn from. The Tables: 4:2, 4:3

4:4 and 4.5 show the results for the category, profession, number of years in the construction sector and experience respectively.

4.3.1 Category of the respondent in the construction sector

Table 4. 2: Study respondents' categories

Category in the construction industry		**Frequency**	**Percentage**
	Consultant	22	24%
	Client	13	14%
	Contractor	41	44%
	Project beneficiary/End user	17	18%
	Total	**93**	**100%**

The study sought for representation of the stakeholders to a construction contract in the construction industry. 44% respondents were contractors or worked for construction companies, 24% were consultants, 12% were clients, and 18% were project beneficiaries in the construction industry, as shown in Table 4.2 above. The findings showed that the research can be concluded in accordance with all the stakeholders involved in the construction industry.

4.3.2 Profession of the respondents

Further analysis was done by the research to determine the respondent's profession to ensure representation of all the professions in the industry as per the study targeted population. The findings in the Table 4:3 indicated that 34% were engineers, 13% Businessmen, 8% Architects, 19% Quantity surveyors, 13% surveyors and 13% others which included construction managers, accountants, lawyers and project managers. The

results show that there was a good apportionment of the responses from the construction industry professions hence data collected represents a comprehensive population coverage. The various professions indicate that they are well versed with construction contracts and thus provided reliable data that could result in reliable findings.

Table 4. 3: Research respondents' professions

Profession in the construction industry		**Number**	**Percentage**
	Architects	7	8%
	Quantity Surveyor	18	19%
	Surveyor	12	13%
	Engineer	32	34%
	Businessman	12	13%
	Others (if any specify)	12	13%
	Total	**93**	**100%**

4.3.3. Respondents' education level

The education levels of respondents of the study were investigated so as to ascertain the ability of the respondents to comprehend the questions and base upon their understanding to answer the questions in the questionnaire that was administered for quality and reliable findings. The majority of respondents, as shown in Table 4:4 had attained their 1st degree with 66%, 14% with Masters, 1% with PhD, 11% with diplomas, 5% with certificates and others had 2%. Among others. these included Post graduate diploma and higher diploma. The distribution of the respondents' educational

levels of the showed all respondents could interpret and understand the questions thus reliable results were obtained. Table 4.4 presents the results.

Table 4. 4: Study respondents' education level

Level of education		**Number**	**Percentage**
	Certificate	5	5%
	Diploma	10	11%
	1st Degree	61	66%
	Masters	14	15%
	PHD	1	1%
	Others (if any specify)	2	2%
	Total	**93**	**100%**

4.3.4 Number of years in the construction sector

Analysis of number of years in the construction industry was conducted to ascertain whether the respondents were knowledgeable enough on contract termination from their experience working in the construction industry. The results in Table 4:5 indicate that a number of respondents had worked for 6 years in the industry with 39% lying in 6-10 years, 18% in the range of 11-15 years, 12% with above 16 years while 31% accounted for respondent within the range of 0-5 years hence the distribution of the level of experience of respondent show that information was gathered from experienced individuals with a wealth knowledge and understanding of construction contract termination and provided reliable data that could lead to reliable and dependable results.

Table 4. 5: Experience of the study respondents

	0 -5 years	**29**	**31%**
	6- 10 years	36	39%
	11- 15 years	17	18%
	16 and above years	11	12%
	Total	93	100%

4.4. Concept of termination of construction contract

The research further analysed the concept of termination of construction contract to establish how the respondents became aware of the contract termination, knowledge on the subject matter and possibility of a construction contract being terminated in Uganda.

4.4.1 Awareness of the concept of construction contract termination

Study findings presented in the Table 4.6 emphasized that the respondents were aware of construction contract termination with majority of respondents being aware of the concept through study with 53%, 27% from experience, 17% from word of mouth and 1% from other means. Further analysis was made on the respondent who got aware of the concept of contract termination through experience to understand their involvement

in the construction contract termination and it was indicated that these were; supervising engineers, contractors, project managers, land surveyor and project beneficiary. This implied that accurate and quality first hand data were collected from the actual respondent who had understanding from their experience on projects that had been terminated.

Table 4. 6: Source of awareness of contract termination

	Study	**49**	**53%**
	Experience	27	29%
	Through other means	1	1%
	Total	93	100%

Evaluate your knowledge of contract termination		Number	Percentage

4.4.2 Evaluation of respondent knowledge of contract termination

Analysis in connection to the knowledge level and understanding of the construction contract terminated was conducted to guarantee that information was gathered from respondents with proper understanding of the of the subject matter and could freely give their view on the research question. Table 4.7 revealed that 57% had moderate, 26% High and 16% with Low. The results show that data was collected from people with understanding of construction contract termination and the knowledge level of construction contract termination is correlated with education level and experience.

Table 4. 7: Respondents evaluation of their knowledge on contract termination

	Low	**16**	**17%**
	Total	93	100%
Possibility of construction contract termination in Uganda construction industry		**Number**	**Percentage**
	Often	14	15%

4.4.3 Possibility of construction contract termination in Uganda

The research further desired to establish the likelihood of a construction contract being terminated to ascertain the extent of the problem of construction contract termination in Uganda's construction industry. The results in Table 4.8 indicate that construction contracts are terminated sometimes with 55%, followed by rarely with 29%, often with 15% and never with 1%. The results showed that construction contract termination is a common occurrence in the industry with majority totalling to 70% lying with often and sometimes, 27% with rarely and only 1% stating that termination never happens. This clearly highlighted the problem of construction contract termination in the Uganda construction industry.

Table 4. 8: Possibility of construction contract termination in Uganda

	Sometimes	**51**	**55%**
	Total	93	100%

4.5. Causes of construction contract termination

The study identified 58 causes of construction contract termination in Uganda's construction industry. These were categorized into five which included; contractor related causes, client related causes, financial and business environment causes, political and project related causes. Contractor-related were the majority with 29%, client related causes 28 %, financial-related causes 19%, political-related causes 12% and project-related 12%.

4.5.1 Contractor related causes of construction contract termination

The finding of the research established and ranked 17 contractor related causes of termination in the industry using relative importance index ***Appendix 5*** as presented in Table 4.9.

Table 4. 9: Contractor related causes of contract termination

Contractor related causes	**RII**	**RANK**
Abandonment of work	0.860	1
Delays in completion of work	0.837	2
Contractor bankrupt or insolvency	0.822	3
Increase in capital expenditure for the company leading to cash flow problems	0.815	4
Poor workmanship	0.815	4
Non-conformity to specifications	0.800	6
Lack of work experience	0.798	7
Failure to comply with instructions from the client	0.789	8
Failure to report to site to commence work	0.772	9
Client staff lacking technical and managerial skills for contractor staff	0.759	10

Death of contractor in sole proprietorship	0.740	11
Failure to pay subcontractors and workers leading to strikes	0.725	12
Contractor overload with projects	0.716	13
Lack of project risk control	0.690	14
Relying on bank loans and making high-interest payments on those loans	0.662	15
Negligence leading to safety issues and accident on site	0.660	16
Noncompliance to obligations of insurance and guarantees due to superficial study of tender documents	0.660	16
Average RII	**0.760**	

The researcher computed the average relative importance index (RII) = 0.760 ***Appendix 5*** of the contractor related causes and decided that causes with RII above average RII=0.760 were significant while those below were considered insignificant.

The results indicated that the most significant contractor related causes that lead to construction contract termination were: 'Abandonment of work' with RII = 0.86, this was followed by 'Delays in completion of work' with RII=0.837, 'Contractor bankrupt or insolvency' with RII=0.822, 'Increase in capital expenditure for the company leading to cash flow problems' with RII=0.815, 'Poor workmanship' with RII=0.815, 'Non conformity to specifications' with RII=0.800, 'Lack of work experience with RII=0.798, 'Failure to comply with instructions from the client' with RII=0.789 and 'Failure to report to site to commence work' with RII=0.772. Others that were below the average RII that were considered insignificant included: 'Client staff lacking

technical and managerial skills for contractor staff' with RII=0.759, 'Death of contractor in sole proprietorship' with RII=0.740, 'Failure to pay subcontractors and workers leading to strikes' with RII=0.725, 'Contractor overload with projects' with RII=0.716, 'Lack of project risk control' with RII=0.690, 'Relying on bank loans and making high interest payments on those loans with RII=0.662, 'Negligence leading to safety issues and accident on site' with RII=0.660 and 'Noncompliance to obligations of insurance and guarantees due to superficial study of tender documents' with RII=0.660.

The study further explored the differences in the responses based upon the respondent's profession between architects and surveys (Table 4.3) to justify aggregation of results presented above. The findings showed that surveyors with an average RII= 0.72 ranked 'Abandonment' in first position with RII= 0.86, 'contractor bankruptcy' second with RII= 0.84 and 'Delays in completion of work' third with RII= 0.79 while as architects with an average RII= 0.73 ranked 'Abandonment of work' in first position with RII= 0.86, 'lack of project risk control' second with RII= 0.83, 'Poor workmanship' in third with RII= 0.80 thus there was correlation of the findings by surveyors and aggregated finding's ranking by all the professions although the architects had a slight difference in ranking position two to four, causes such as 'Delays', 'contractor bankruptcy' and 'lack of experience' ranked among the most significant causes. Therefore, the analysis of results based on respondent's profession in Table 4.3 from surveyors and architect justify the aggregation of the results on contractor-related causes of termination.

The study respondents ranked ‘Abandonment of work’ with RII= 0.860 as number one among the contractor related causes. The result showed ‘contractor abandonment of work’ is one of the major challenges in the industry that has led to contract termination and this can be attributed to ‘lack of resources’ and ‘delays in payment’ ranked first with 0.822 and fourth with RII=0.763 among the financial and client related causes respectively. This result agrees with the findings in PPDA annual report, (2018), Kajubu, (2012) and Karriri et al., (2011).

‘Delays’ were ranked second by the respondents which illustrates that majority of projects in the industry are not completed on time and this agrees with Ullah et al., (2018) in the research of effect of construction delays who noted that delays lead to contract termination which was ranked in first position. The study revealed that ‘delays’ by contractor are mainly caused due to mismanagement of project funds and lack of financial discipline to manage cash flow. The finding corresponded with the results in Muhwezi et al., (2014) where it was observed that financial problems are the major cause of delays on construction project.

‘Negligence leading to safety issues and accident on site’ and ‘Noncompliance to obligations of insurance and guarantees due to superficial study of tender documents’ with RII=0.660 were ranked last in position 16 because of their insignificance to cause termination of contract.

Furthermore findings from of the questionnaire were augmented by the interview findings where the study key informants noted the following to be causes of contract

termination by the contractors: delays in completion; failure to pay workers; failure to commence work at site; bankruptcy of contractor; having multiple contracts in different places and failing to balance financial resources in event of delay in payment for some work; disagreement with workers leading to workers abandoning work and running away with materials and tools; breach of specification of work; employment of non-technical staff; poor workmanship/defective work; failure to abide by instructions given to rectify defective works; worker strikes; lack of adequate planning; failure to pay subcontractors; material breach and abandonment of site.

4.5.2 Client-related causes of construction contract termination

Table 4.10 presents the ranking of 16 client related causes of construction contract termination. Average RII=0.695 was calculated ***Appendix 6*** and the researcher decided that client related causes with RII greater than the average RII=0.695 be considered significant while those below be insignificant.

Table 4. 10: Client-related causes of contract termination

Client related causes of termination	**RII**	**RANK**
Client's bankruptcy	0.845	1
Wrong cost estimation for the total cost of project	0.791	2
Lack of cash flow management	0.785	3
Delays in contractor payments	0.763	4
Weak project management	0.746	5
Disregard of laws and ordinances of local authorities	0.712	6

Clients' policy in resolving disputes, Claims and litigations	0.710	7
Wrong estimation of total project time	0.708	8
Client's policy of compensation under force majeure conditions	0.703	9
Award to lowest price	0.701	10
Use of inexperienced consultants	0.684	11
Client staff lacking technical and managerial skills	0.680	12
Bureaucracy in the system	0.645	13
Great number of variations done by client	0.641	14
Transfer of officer in charge	0.508	15
Change in executive leadership	0.505	16
Average RII	**0.695**	

The most significant client-related causes of termination of construction contract with RII above the average RII=0.695 as indicated by the results were: 'client's bankruptcy' with RII=0.845, 'wrong cost estimation for the total cost of project' with RII=0.791, 'lack of cash flow management' with RII=0.785, 'delays in contractor payments' RII=0.763, 'weak project management' RII= 0.746, 'disregard of laws and ordinances of local authorities' with RII=0.712, 'clients policy in resolving disputes, 'claims and litigations' with RII=0.710, 'wrong estimation of total project time' with RII=0.708, 'client's policy of compensation under force majeure conditions' with RII=0.703 and 'award to lowest price' with RII=0.701. The other causes with RII below the average RII=0.695 that were considered insignificant included: 'use of inexperienced consultants' with RII=0.684, 'Client staff lacking technical and managerial skills of

client staff' with RII=0.680, 'bureaucracy in the system' with RII=0.645, 'great number of variations done by client' with RII=0.641, 'transfer of officer in charge' with RII=0.508 and 'change in executive leadership' with RII=0.505.

The study further explored the differences in the responses based upon the respondent's categories between engineers and quantity surveyors in Table 4.3 to justify aggregation of results presented in Table 4.10. The engineers with an average RII= 0.66, ranked 'Client's bankruptcy' with RII= 0.79 in first position, 'Delays in contractor payments' with RII= 0.78 in second, 'Wrong cost estimation for the total cost of project' with RII= 0.76 in third and 'Lack of cash flow management' with RII= 0.73 in fourth. 'Quantity surveyors' with an average RII= 0.69 ranked 'Client's bankruptcy' with RII= 0.92 in first position, 'Lack of cash flow management' with RII= 0.86 in second, 'Wrong cost estimation for the total cost of project' with RII= 0.83 in third, 'Delays in contractor payments' with RII= 0.80 in fourth position. The analysis of results based on the different categories showed that the most significant financial related causes were similar to the findings of the aggregated results with 'client's bankruptcy' ranked first by both engineers and quantity hence justification for the aggregation of the results in Table 4.10

Table 4:10 demonstrates how respondents ranked 'client bankruptcy RII=0.845' in position one where client can no longer pay for his bills, this showed that capital is a factor of production and in an industry that is capital intensive and the lack of money and resources ranked number one in the financial related causes hampers execution of work hence leading to delays and abandonment because of the inability by the client to

pay for work done. This result matches the findings in Nabil et al., (2012) where 'bankruptcy' was ranked first.

The respondents ranked 'Wrong cost estimation for the total cost of project' second with RII=0.791. Estimation is affected by a number of factors such as location, experience of estimator, market conditions (Amade and Akpan, 2014). This makes estimation of accurate cost difficult because of the uniqueness of each construction project. Change in executive leadership was rank last in position 16 with RII=0.505 because it was unlikely that a contract would be terminated in Uganda as contracts binding to the parties as provided for by the Uganda Contract Act (2010).

The interview findings augmented the findings of the questionnaire where the study key informant noted the following client related causes of contract termination: insolvency of employer; client runs bankrupt and can no longer facilitate construction activities; failure to pay contractor; when the client does not accept contractor's variations submitted and many variations from the original scope.

4.5.3 Financial-related causes of construction contract termination

Table 4.11 presents the ranking of 11 financial and business-related causes of construction contract termination. Average RII=0.718 was calculated ***Appendix 8*** and the researcher decided that financial and business-related causes with RII greater than the average RII=0.718 be considered significant while those below be insignificant.

Table 4. 11: Financial and business environment related causes

Financial and business environment-related causes	RII	Rank
Lack of capital and resources	0.822	1
Under estimation by contractors due to high competition	0.783	2
Inflation leading to rise of material prices	0.774	3
Corruption	0.774	3
Accounting and taxes practices	0.718	5
Bank policy such as interest rates on loans	0.716	6
National slump in economy	0.699	7
Low profit due to competition	0.675	8
Monopoly of some important materials for the construction industry	0.654	9
Difference between contract's currency and the local currency	0.645	10
Lack of specialized courts to deal with disputes of construction industry	0.641	11
Average RII	**0.718**	

Study findings showed that the most significant financial and business-related causes with RII above the average RII=0.718 were: 'lack of capital and resources' with RII=0.822, 'under estimation by contractors due to high competition' with RII=0.783, 'inflation leading to rise of material prices' with RII=0.774, 'corruption' with RII=0.774 and 'accounting and taxes practices' with RII=0.718. Causes with RII below the average RII=0.718 considered insignificant were: 'bank policy such as interest rates on loans' with RII=0.716, 'national slump in economy' with RII=0.699, 'low profit due to competition' with RII=0.675, 'monopoly of some important materials for the construction industry' with 0.654, 'difference between contract's currency and the local currency' with RII=0.645, 'lack of specialized courts to deal with disputes of construction industry' with RII=0.641.

The study further explored the differences in the responses based upon the respondent's categories between architects and surveyors in Table 4.3 to justify aggregation of results presented in Table 4.11. The surveyors with an average RII= 0.71 ranked Lack of capital and resources with RII= 0.88 in first position, Under estimation by contractors due to high competition with RII= 0.80, Low profit due to competition with RII= 0.72 while architects with Lack of capital and resources with RII= 0.91 in first position, Under estimation by contractors due to high competition with RII= 0.86 in second, Corruption and Accounting and taxes practices with RII= 0.80 in third position. The analysis of results based on the different categories showed that the most significant financial related causes were similar to the findings of the aggregated results hence justification for the aggregation of the results in Table 4.11

Respondents ranked 'Lack of capital and resources' with RII=0.822 in the first position and this gave an honest evaluation of the contractor capacity in Uganda's construction sector who are faced with lack of capital and resource as one of their major hindrances to bidding and being awarded large project such as those considered for international bidding. Lack of resources and capital further hampers contractor's ability to start and complete works in time leading to 'abandonment of project' and 'delays' which were ranked first and second with RII=0.860 and RII=837 among the contractor related cause of construction contract termination. The findings match the findings in Muhwezi et al., (2014) where financial problems were the most significant cause of construction projects delays.

The findings of the questionnaire survey were augmented by the interview findings where the study key informants noted the following financial related causes of termination: Lack of capital and resources, contractor's financial instability and under quoting for works

Respondents ranked 'Under estimation by contractors due to high competition' with RII=0.783 second and the finding corresponded with Nabil et al., (2012) who rank it first among the nine factors. Due to stiff competition for construction projects in the industry coupled with procurement tendencies to award to the lowest bidder ranked 10th with RII=0.701 considered by the study as significant among the client related causes, contractor have been forced to quote very low in order to win the project but are later faced with reality during execution leading to abandonment of projects. Respondents ranked 'lack of specialized courts to deal with disputes of construction industry' last with RII=0.641 because of majority of the contracts terminated in Uganda are not wrongful termination but rather breach of contract.

4.5.4 Political related causes of construction contract termination

The results of the ranking of 7 political related causes of construction contract termination sought by the study are presented in Table 4.12, Furthermore, the average relative importance (RII) = 0.732 ***Appendix*** 9 was computed for the results. The researcher decided that causes with RII greater than average be deem significant while those below the average RII were insignificant.

Table 4. 12: Political related causes of contract termination

Political related causes	**RII**	**RANK**
Location of project in insecure regions	0.783	1
Political interference and disruptions	0.783	1
Internal political troubles such as rebellions and civil wars	0.770	3
Declaration of state of emergency	0.755	4
Incensement in material prices due to continuous closure of borders.	0.720	5
Limitation to importation	0.684	6
Change in governance	0.628	7
Average RII	**0.732**	

The most significant political related causes with RII above the average RII=0.732 were: 'location of project in insecure regions' with RII=0.783, 'political interference and disruptions' with RII=0.783, 'internal political troubles such as rebellions and civil wars' with RII=0.770 and 'declaration of state of emergency' with RII=0.755. The other political related that were consider insignificant by the researcher included: 'incensement in materials prices due to continuous closure of borders' with RII=0.720, 'limitation to importation' with RII=0.684 and 'change in governance' with RII=0.628.

The study further explored the differences in the responses based upon the respondent's categories between engineers and surveyors in Table 4.3 to justify aggregation of results presented in Table 4.12. The engineers with an average RII= 0.75 ranked Location of project in insecure regions with RII= 0.82 in first position, Political interference and disruptions with RII= 0.81 in second, Declaration of state of emergency and Internal political troubles such as rebellions and civil wars with RII= 0.78 in third position while

surveyors with an average RII= 0.71 ranked Incensement in material prices due to continuous closure of borders and Declaration of state of emergency with RII= 0.78 in first position, Location of project in insecure regions with RII= 0.77 in third position and Political interference and disruptions with RII= 0.73 in fourth position. The analysis of results based on the different categories showed that the most significant political related causes were the same as those of the aggregated results despite the difference in the ranking of position hence justification for aggregation of results for all the 6 categories in Table 4.3

Respondents ranked 'location of project in insecure regions' in first position with RII=0.783 clearly shows that without security development and investment cannot happen as a result of fear of losing the investment and in Uganda areas with insecurity are less developed compared to secure areas/regions. The result matches the finding in Nabil et al., (2012) where 'working in dangerous places' was ranked first.

'Change in governance' was ranked in last position with RII=0.628 by the study respondents, this is mainly because Uganda as a country has had a stable governance in the last three decades therefore the industry has not been disrupted by change in government.

Furthermore, the findings of the questionnaire were augmented by the interview findings where the study key informant the following: political interference; political insecurity in the country which can no longer allow continuity of construction activities in the country as political related causes of contract termination.

4.5.5 Project related causes of construction contract termination

Table 4.13 presents the ranking of 7 project-related causes of construction contract termination that were sought by the study. The average RII=0.690 ***Appendix 7*** was computed by the researcher and it was decided that those with RII above the average be considered as most significant while those below be considered insignificant according to the results from the study.

Table 4. 13: Project related causes of contract termination

Project related causes	**RII**	**Rank**
Force majeure	0.772	1
Design errors	0.742	2
Lack of continuity	0.727	3
Repetition of suspension of work	0.703	4
Variation in project scope	0.684	5
Type of project	0.637	6
Problems with neighbors	0.566	7
Average RII	**0.690**	

The most significant project-related causes as per the table 4.13 included: ‘force majeure’ with RII=0772, ‘design errors’ with RII=0.742, ‘lack of continuity’ with RII=0.727 and ‘repetition of suspension of work’ with RII=0.703 while those considered insignificant were: ‘variation in project scope’ with RII=0.684, ‘type of project’ with RII=0.637 and ‘problems with neighbours’ with RII=0.566.

The study further explored the differences in the responses based upon the respondent’s categories between engineers, quantity surveyors and businessmen in Table 4.3 to justify aggregation of results presented in Table 4.13. The engineers with an average RII= 0.69 ranked Force majeure with RII= 0.744 in first position, Design errors with RII= 0.738 in second, Lack of continuity with RII= 0.71 in third position. The quantity surveyors with an average RII= 0.67 ranked Force majeure with RII= 0.79 in first position, Repetition of suspension of work with RII= 0.78 in second, Lack of continuity with RII= 0.71 in third while businessman with an average RII= 0.75 ranked Variation in project scope with RII= 0.83 in first position, Design errors with RII= 0.82 in second, Force majeure with RII= 0.78 in third. The ranking of the most significant project related causes was similar to the aggregated results for the three categories with a slight difference in ranking hence justifying the aggregation of the results.

‘Force majeure RII=0.772’ was ranked in position one by the study respondent which is evident that extreme weather conditions and natural occurrence such as earth quakes are above the control of neither the contractor nor the client and these greatly affect execution of work and lead to termination. The results match the findings Adeojo et al., (2017) and Nabil et al., (2012) where ‘force majeure’ was ranked fifth and fourth

respectively. ‘Design errors’ was ranked second with RII=0.742. Errors in design lead to delays in completion of works and a lot of variations on the projects which result in contract termination. The result agrees with Adeojo et al., (2017) who ranked ‘design error’ in first position.

The interview findings augmented the questionnaire finding where the study key informants noted the following project related causes of termination: change in scope of works and force majeure such as extreme weather.

The findings from the interviews on the causes of construction contract termination corresponded with those of the questionnaire surveyor within the five categories of contract termination causes however new causes were revealed by the interviewee which included: lack of adequate planning; understaffing the project; failure to communicate and when the client does not accept to consider the variations submitted by the contractor. Thus, the results of the interviews presented above corroborate or confirm the findings of the questionnaire survey and in the studies Adeojo et al., (2017) and Nabil et al., (2012) regarding causes and impacts of construction contract termination.

4.5.6 Comparison of categories of causes of contract termination

The study further made an analysis to compare each of the category of causes of construction contract termination to determine the category that was the most severe and caused majority of contract termination in Uganda’s construction sector. Table 4.14 below illustrates the ranking of each of the five categories of causes which included:

Contractor-related causes, Project-related causes, financial-related causes, political-related causes and client-related causes.

Table 4. 14: Comparison of categories of causes of termination

Category of causes of contract termination	Average RII	Rank
Contractor-related causes	0.760	1
Political-related causes	0.732	2
Financial-related causes	0.718	3
Client-related causes	0.695	4
Project-related causes	0.690	5

From Table 4.14 above the contractor-related causes were ranked as the most severe with RII= 0.760 followed by 'political-related causes' with RII= 0.732, 'financial-related causes' with RII= 0.718, 'client-related causes' with RII= 0.695 and 'project-related causes with RII= 0.690. The results show that contractor-related causes (e.g., abandonment, delays and contractor bankruptcy) should be closely monitored by the construction sector stakeholders in Uganda as they are the most severe causes of contract termination, the political and financial related causes with RII= 0.732 and RII= 0.718 respectively were too found to be very significant causes of termination that require keen monitoring to ensure successful projects.

The results above slightly differ from the finding in Nabil et al., (2012) where political causes were ranked first compared to the study where contractor-related causes have been ranked first followed by political causes because Uganda has had a stable government in the last three decades and political causes such border closure, change

in governance, declaration of state emergency have not disrupted construction work in the recent years. This further explains why the contractor related causes ranked in first position.

4.5.7 Ranking of the top ten causes of contract termination in Uganda

The study made an analysis to establish the top ten causes of construction contract termination in Uganda basing upon their computed RII in their different groups such as financial-related, contractor-related, client-related, political-related and project-related. The findings are shown in the Table 4:15.

Table 4. 15: Ranking of top ten causes of contract termination

Causes of construction contract termination	***Category***	***RII***	***RANK***
Abandonment of work	Contractor	0.860	1
Client's bankruptcy	Client	0.845	2
Delays in completion of work	Contractor	0.837	3
Contractor bankrupt or insolvency	Contractor	0.822	4
Lack of capital and resources	Financial	0.822	4
Increase in capital expenditure for the company leading to cash flow problems	Contractor	0.815	6

Poor workmanship	Contractor	0.815	6
Non-conformity to specifications	Contractor	0.800	8
Lack of work experience	Contractor	0.798	9
Wrong cost estimation for the total cost of project	Client	0.791	10

Table 4.15 above showed that 70% of the top ten causes of construction contract termination in Uganda are caused by contractor with only 20% client related, 10% financial while project and political causes did not have any factor amongst the top ten, therefore there is need to put more emphasis on the contractor causes to mitigate termination of the construction projects.

Four of the top six causes of termination are related to finance representing 40% of the most significant top ten causes of termination in industry. This clearly shows that finance is backbone of the construction industry considering its capital-intensive nature therefore there is need to create avenues of financing construction projects in Uganda to mitigate termination and for successful execution of projects. The results were in agreement with Nabil et al., (2012) who highlighted that 40% of the most important causes of terminations were related to finance.

Abandonment ranked in first position with R=0.860 which was the biggest of all the 58 causes of construction contract termination from the category of contractor related causes. Projects in Uganda have been faced with abandonment and from the results it

has been the highest cause of termination of contract in the industry. The practice of contractors abandoning work due to several reasons most which are financial as earlier discussed lead to profound effects such as delay in completion. This agrees with Ayodele, (2011) and Tijani and Ajagbe, (2016) who ranked inadequate finance and lack of adequate fund allocation in second and first position respectively among the causes of abandonment of projects.

4.6 Impacts of construction contract termination

Table 4.16 presents the ranking of 20 impacts of construction contract termination on stakeholders in Uganda. The researcher computed the average RII=0.777 *Error! R eference source not found.* and the researcher decided that impacts with RII above the average RII be considered most significant while those below insignificant.

Table 4. 16: Impacts of contract termination on stakeholders

Impacts of construction contract termination	RII	Rank
Loss of income to the contractor	0.880	1
Reputation Loss	0.865	2
Delays in completion of the project	0.845	3
Abandonment of the project	0.841	4
Cost overrun	0.832	5
Loss of business due to black listing	0.822	6
Reduction in employment opportunities	0.809	7

Litigations and disputes	0.809	7
Increased cost of doing business due to incomplete roads	0.804	9
Insolvency of the contractor	0.802	10
Public disappointment	0.778	11
Tempo of economic activities reduces in the project area	0.757	12
Accidents due to incomplete works	0.746	13
Health hazards	0.738	14
quality of the project changes when completed because climatic effect	0.723	15
Revenue collection to government declines	0.718	16
People's standard of living lowered	0.712	17
Strikes from project beneficiaries	0.692	18
Delays in Implementation of Environmental and social management plan	0.688	19
Difficulties in accessing both local and foreign loans	0.671	20
Average RII	**0.777**	

The most significant impacts of construction contract termination that affect stakeholder in Uganda were found by the study to be: loss of income to the contractor with RII=0.880; reputation loss with RII=0.865; relays in completion of the project with RII=0.845; 'project abandonment' with RII= 0.841; 'cost overruns' with RII=0.832; 'loss of business due to black listing' with RII=0.822; 'reduction in employment opportunities' with RII=0.809; 'litigations and disputes' with RII=0.809; 'increased cost of doing business due to incomplete roads' with RII=0.804; 'insolvency of the contractor' with RII=0.802; public disappointment with RII=0.778.

Impacts that were below the average RII=0.777 and considered insignificant included: 'tempo of economic activities reduces in the project area' with RII=0.757; 'Accidents

due to incomplete works' with RII=0.746; 'health hazards' with RII=0.738; quality of the project changes when completed due to climatic effects with RII=0.723; 'Revenue collection to government declines' with RII=0.718; 'People's standard of living lowered' with RII=0.712; 'Strikes from project beneficiaries' with RII=0.692; 'Delays in implementation of environmental and social management plan' with RII=0.688; 'Difficulties in accessing both local and foreign loans' with RII=0.671.

The study further explored the differences in the responses based upon the respondent's categories between contractors and clients (Table 4.2) to justify aggregation of results presented above. The findings showed that contractors with an average RII= 0.78 ranked 'Loss of income to the contractor' with RII= 0.89 in first position, 'Reputation Loss' with RII= 0.87 in second, 'Abandonment of the project' with RII= 0.84 in third, 'Cost overruns' and 'Loss of business due to blacklisting' with RII= 0.83 in fourth position. The analysis showed that clients with an average RII= 0.75 ranked 'Loss of income to the contractor' with RII= 0.89 in first position, 'Abandonment of the project' with RII= 0.88 in second, 'Cost overruns' with RII= 0.86 in third, 'Reputation Loss' with RII= 0.85 and 'Delays in completion of the project' with RII= 0.83. Although contractors and clients ranked 'loss of income to the contractor' in first position and the most significant impacts in the top five impacts were similar for both categories and there was a slight difference in ranking hence the results can be aggregated for all the categories.

'Loss of income' to the contractor and reputation loss were ranked first and second among the most significant impacts of contract termination which implied that a

company's reputation in terms of past experience among the clients is of great essence while awarding projects and contractors lose income whenever a contract is terminated due to commitments such as bank loans.

Delays in completion of projects, abandonment and cost overrun were ranked third, fourth and fifth among top five impacts of contract termination in the industry. The result matched the findings in Adeojo et al., (2017) where 'abandonment', 'delays' and 'cost overrun' where ranked first, second and fifth respectively among the impacts of termination.

The study further revealed that abandonment led to: 'wastage of resources', 'public disappointment', 'Accidents', 'reduction in business and economic activities. This finding is tandem to the findings in Otim et al., (2008) who citied 'misuse of funds' and further occur with the findings in Ayodele, (2011) where underutilization/wastage of resources, disappointment of the populace; decrease in employment and economic activities were found to be the effect of abandonment of projects.

'Delays in completion of the project' has been one of big challenge in Uganda with a lot of projects passed the completion time. Finding in studies by Kikwasi, (2012) and Ullah et al (2018) in their studies on effects of delays noted that delays led to: 'cost overrun', 'litigation', 'time overrun', negative social impacts which matched the finding of the study.

Cost overruns are caused as a consequence of sourcing a new contractor that will complete work who is usually the second highest bidder as per the evaluation report, furthermore this could be a result of recharging of mobilization cost had already been paid to the terminated contractor. The finding matched with the findings Thong et al. (2020) where contract suspension or cancellation was ranked in position 3 among the 31 factors that influence cost overruns.

The findings in the study showed that three of the five top ranked impacts of construction contract termination (Delays in completion, Abandonment and cost overrun) matched the findings in Adeojo et al., (2017). The results thus revealed that the industry of construction is confronted with impacts of contract termination.

The findings of the interviews on the impacts of construction contract termination matched the results from the questionnaire survey. Interviewee of the research noted the following to be the impacts of contract termination on stake holders in Uganda included: blacklisting of the contractor; loss of jobs, loss of business for the contractor; difficulty in getting donor funding; abandonment of work due to lack of enough funds to complete the project; accidents, vandalism when site is abandoned; loss of funding for client; and the contractor loses his source of business.

In addition the interviewee noted more impacts of contract termination which included: loss of employment; the origin of the termination loses credibility due the damages resulting; loss of money by contractor; reputation loss, the stake holders and the beneficiaries will long wait for project since the sometimes termination may lead to

change in the contract completion period; poor quality of the works; delayed completion of work; loss of repute, demonstration from beneficiaries; additional money required due to compensation claims; servicing of loans acquired by contractors in bank affected; and suspension of the contractors if found in breach by authorities like PPDA and UNABCEC which bars them from getting more work.

Furthermore the interviewee noted more impacts such as: works left incomplete may lead to accidents; strikes from the public; loss of business; abandonment of the project; court cases from unfair termination; wastage of resources; cost overruns, health hazards from the incomplete works; end user disappointment; difficulty in managing defects as a result of termination of contract at different stages; quality of the project affected; creates a bad working relationship between the contract parties in case of future projects; and loss of income for the suppliers of the construction materials.

The results of the interviews presented above corroborate or confirm the findings of the questionnaire survey and in the studies (Adeojo et al., 2017 and Nabil et al., 2012) on the causes and impacts of construction contract termination.

4.7 Findings from the interview

The summary of the interview findings from the selected 14 study key informants conducted by the study to ascertain and supplement on the findings of the questionnaire and contribute to the mitigation measure are presented in Table 4.17.

Table 4. 17: Summary of interview findings

		Number	**Percentage**

Had experience with a terminated construction project	Yes	13	93%
	No	1	7%
	Total	**14**	**100%**
Were there any measures within the contract to mitigate the termination of the contract	Yes	10	77%
	No	3	23%
	Total	**13**	**100%**

The study results showed that 93% of individuals interviewed had experienced contract termination in their years of working. The study further probed to find out their involvement in the terminated construction contracts and it was found that majority were: Client's engineer, Site engineer, supervising engineer of the project, Project manager, Project engineer, Mediator between the main contractor and sub-contractor whose subcontract got terminated, Contract manager and due to fundamental breach of contract recommended for the termination. Prepared certificate on termination for the conclusion of the termination.

The study further revealed that 77% of the contracts terminated had remedial measures with the contract to mitigate termination of the contract and only 23% did not have remedial measures. The result showed the standard forms of contracts use of in the industry for building work. However, there is still need to sensitize the utilization of standard form of contracts for construction works in Uganda’s construction industry as a way to mitigate termination.

4.7.1 Mitigation measures of contract termination provided in the contracts

The study probed the respondents to establish the measures that had been provided for in the contracts to mitigate the contract termination and it revealed that: notice was sent to contractor with all delays itemized for his explanation; mutual discussion; warnings to contractor in the event of issues leading to breach; extension of time to allow for works be done within contract period; a clause was put in contract requiring training of contractor on gender and sexual exploitation; attempted to persuade the defaulting contractor to perform; supplementing the original contractor's workforce to avoid delay; letter of caution was given to the contractor; meeting was held with the contractor to understand his challenges for the delays; contractor was given time extension; proper investigation of breach of policy allegations was conducted to attain fair ground and contractor too was heard; dispute resolution board (DAB); and notices among others.

4.7.2 Mitigation measures of construction contract termination from interviews

The interview survey revealed remedial measures to mitigate construction contract termination in the construction industry in Uganda during sourcing and awarding contracts which included: proper due diligence on contractors; use standard forms of contracts; awarding enough time to the contractor, create affordable credit facilities for contractor to fill the gap of lack of resources, financial management training of the industry's contractors. having detailed designs before commencement of work to avoid design changes: providing for ADR mechanisms in the contract and studying conditions and terms of contract before signing.

The study respondents additionally suggested remedial measures during execution of construction contracts such as: understanding the scope of work, timely payment of contractors; proper documentation of instructions; training of contractors' workers; proper cash flow management and payment schedules to ensure cash flow; proper planning; employing of experienced and skilled workers.

Furthermore, the interview key informants suggested that use of proper contract management processes as remedial measures to mitigate construction termination which included: proper communication and dialogue between the client and contractor to resolve issues; appointing experienced arbitrator and seek for arbitration before termination of the contractor; using experienced consultants and contract management teams; ensuring Dispute Arbitration Boards are functional; extension of time; evoking some other contract penalties such as fines rather than termination.

The key informants highly recommended: dialogue, alternative dispute resolution, proper contract management processes, proper planning, use of standard form of contracts, cash flow planning and management, proper due diligence as remedial measures to mitigate termination of contract in the construction industry in Uganda.

4.8 Framework to mitigate termination of construction contract

The research analysed the causes of termination of construction contract in the five categories and it was revealed that the causes originated from all stages of the project lifecycle (initiation, planning, executing, monitoring and closure). The stakeholders of

the construction contract (Client, consultant, contractor and beneficiary) had a position to fill in contribution to successful completion of the construction project.

According to Takim and Akintoye, (2002) a building project is considered successful if finished timely, within cost, with quality and meet end user satisfaction. The performance of a project is measured upon the following: adherence to budget and schedule goals, adherence to process, meeting design goals and expectations and stakeholder satisfaction level (Khan, 2012). Furthermore, for a project to be successful there are stakeholder attributes that play part in its success which include: project attributes, end user attributes, client attributes and contractor performance.

The study undertook consideration of each of the stakeholder attributes to analyse the causes of construction contract termination at the different phases in the project life cycle and used the recommendations from the respondents to prevent the causes of termination from manifesting hence mitigating contract terminations and its impacts. The study recommended regular meeting with stakeholders in form of monthly site meeting to monitor the progress of work and address any arising issues as a remedial measure to mitigate termination of contract.

Client attributes that impact on project success include: client type, client size, client attitude, experience, organisational structure, client's financial stability and client's duty (Takim and Akintoye, 2002). Client attributes are the source of the client related causes of termination that needed to be dealt with by the study to mitigate contract termination.

Additionally, the study respondents recommended the following to be adopted by clients as attributes to mitigate termination of construction contracts which included: engaging experienced consultants and professional contracts management teams; proper selection of contractors; proper estimation of contract period; ensuring proper cash flow management; proper contract management processes; having detailed designs before commencement of work; proper payment schedules to ensure cash flow; proper communication and planning.

The performance of a contractor is measured upon these parameters such as: quality control, cost control, meeting specifications and standards, completion within schedule or timeline, cooperative behaviour, providing service to end user, emphasizing customer satisfaction and satisfactory business. The failure to perform to the expected standard of performance is what gives rise to the contractor related causes of termination. Furthermore, to ensure performance of contractors in order to mitigate termination of contract, the study respondents recommended the following measures: proper studying of all the contract terms and conditions before agreeing to sign contract; understanding the scope of work; proper planning, employing of experienced and skilled workers.

The attributes of a project that affect its success include: duration of the project, technical complexity or scope of work, uncertainty, location, life cycle phase, culture, contract form, outcomes of the project, ownership/funding, grouped or standalone, strategic importance (Khan, 2012). These project attributes such as duration and scope if not attained lead to causes of contract termination because of delays in completion of

work and non-conformity to specification which are the some of the leading causes of contract termination. The study recommended remedial measures such as: client should have detailed design and scope before commencement of the project; extension of time and proper estimating of project duration.

4.9 Description of the frame work

The framework was designed to be fail-proof to help solve the problem of construction contract termination with its resulting impacts such as: ‘loss of income’, ‘delays and ‘abandonment’ in the industry by addressing the root causes of contract termination at each stage during the project lifecycle. Projects follow the project life cycle with five phases which are: inception, planning, execution, monitoring and closure (Roseke, 2021

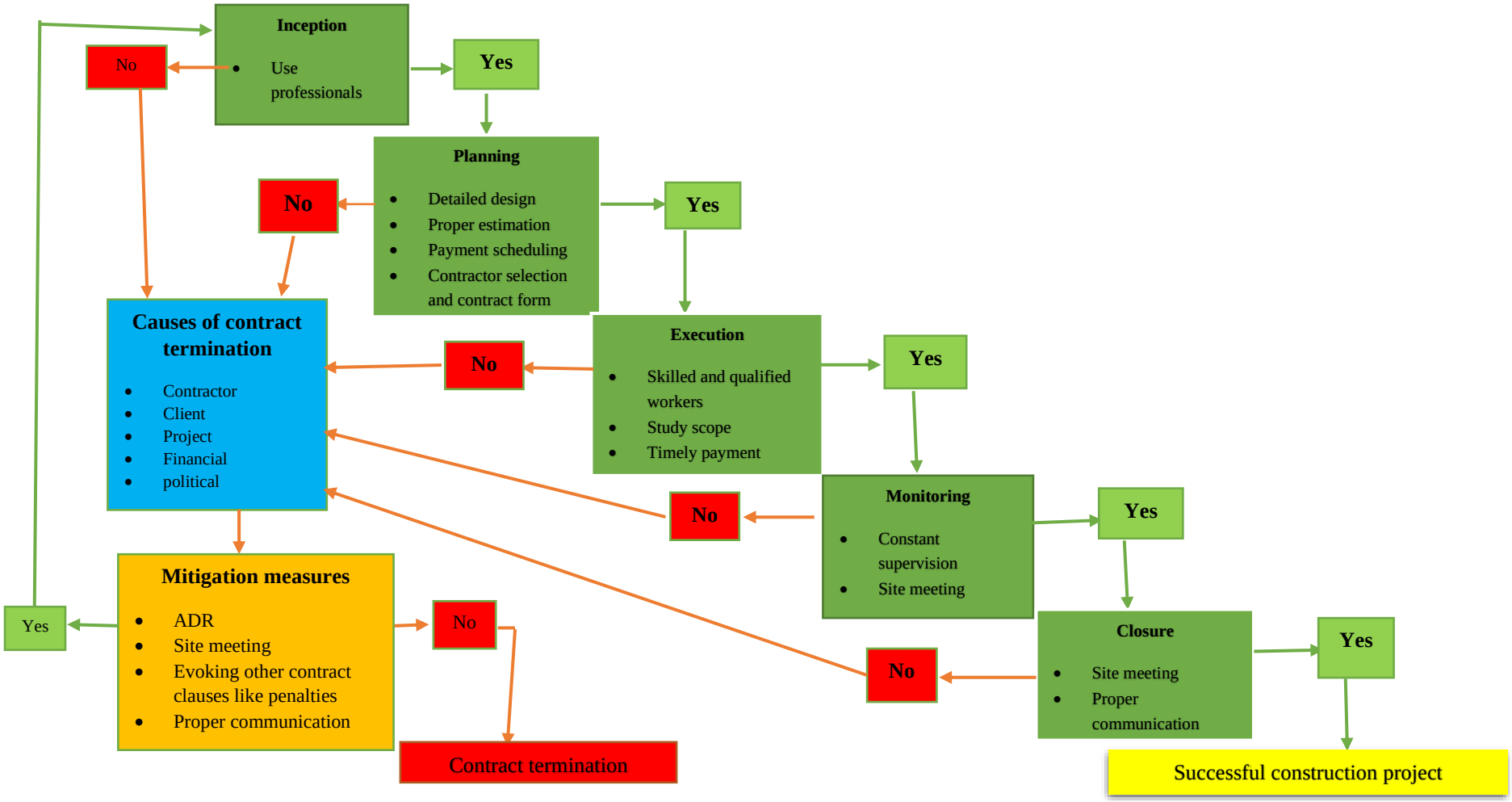

Figure 4. 1: Framework to mitigate construction contract termination

The five phases of the project life cycle were adopted in this research because the construction project under contract which is the focus of this research follow all the five phases. Each stage within the project cycle is key in achieving project success thus this framework was designed for projects that undergo the complete project lifecycle. This section describes each element of the framework, how they are interrelated and their role in mitigating construction contract termination. The elements in green boxes represent the project lifecycle stages and intervening measures in an event the causes occur while the dotted line and boxes are the causes and contract termination the framework is mitigating.

4.9.1 Inception

The framework suggests a clear understanding and profiling of client and end user attributes and use of professionals at the Inception Stage. Failure to profile these attributes may lead to client and project related causes of contract termination such as type of project, design errors, lack of continuity and cash flow problems. The framework suggests use of professionals as a strategy while developing the perceived idea and carrying out feasibility studies which supports the client's decision-making process from an informed point of view based on the guidance given by the professionals to prevent occurrence of causes such as 'location of project in insecure areas', 'client bankruptcy' originate from this stage when proper feasibility studies are not conducted on the client's idea of the project.

The clients in the framework are thus recommended to use professionals such as architects, engineers and surveyors to support the client in developing and evaluating their ideas into a project plan that is within the client's financial capabilities and meets the end user attributes.

4.9.2 Planning

The study undertook in-depth analysis of the causes of contract termination that arise from the planning stage of the project lifecycles such as 'design errors', 'wrong estimate of project period', 'delays in payments' as originating at the planning stage as a result of improper planning. The framework recommended strategies such as detailed designing, proper estimation of cost and time, payment schedule planning and proper contractor sourcing as recommended by the study key informants as means to mitigate causes that arise from the planning stage which impact the outcomes of the execution, monitoring and closure stage of the construction project thereby minimising the occurrence of contract termination when these strategies are used.

4.9.3 Execution

The study analysed causes of contract termination likely to happen at this phase which included a number of contractor-related causes while executing the project such as 'delays in completion', 'abandonment of work', 'non-conformity to specification', client's policy on compensation under force majeure' and, 'Poor workmanship'. The framework recommended strategies such as: proper documentation, employing skilled and qualified worker, proper study of scope and specification to ensure work is done as per specifications, timely payment and financial discipline to ensure constant cash flow

to the contractor so that work does not stall or abandonment due to lack of resources. These when applied during execution of the construction project would help mitigate the causes and occurrence of impacts of construction contract termination.

4.9.4 Monitoring

The study analysed the possible causes of contract termination that arise from this stage with the study key informant recommendations and concluded that strategies such as: constant supervision to check progress and conformity to specification so as to address issues at the earliest, managing scope, site meetings to monitor progress and address issues at site, managing changes should be applied during the monitoring phase to resolve causes of termination arising during the execution and monitoring stage to mitigate construction contract termination and its impacts.

The contractor progress needs to be frequently monitored by the client or their representatives to ensure adherence to quality therefore a number of causes of termination arise during monitoring. Such as: ‘client use of inexperienced consultant’, “weak project management’ and, ‘failure to implement instructions given by the client’ originates from this stage. Monitoring plays a critical role in ensuring proper project closure and achieving project goal of constructing within time, cost and meeting end user quality expectations.

4.9.5 Closure

The framework suggested strategies such as site meeting with stakeholders and proper communication such as sharing of snag lists with the contractor in time during the defects liability period to ensure the defects are corrected and supervised in time for handle and closure of the project Applying these strategies would prevent causes such non-compliance to client's instruction, delays and unsatisfactory repair works which would in turn affect the project closure and its eventual success because this is a crucial stage in the construction project's lifecycle where the client receives the finished product, stakeholders are informed of the project's completion, and the contractor is released from the contract. This stage allows for evaluation of the project and document success and areas of improvement for coming projects. This stage evaluates attributes of project success such completed in time, cost and meeting end user satisfaction and although causes of termination rarely originate at this stage, this stage is very key in ensuring success of the project and future projects.

4.9.6 Mitigation measures

This section of the framework outlines the strategies that clients and contractors can take in the event that the causes of a construction contract termination occur in order to resolve issues and mitigate contract termination and restore project lifecycle compliance. Considering that causes of construction termination occur during project execution, the study revealed that using mitigation measures such as: Cash flow planning and management, evoking other penalty clauses, proper due diligence, extension of time, proper communication, site meeting and ADR as intervening

measures for mitigating termination in an event cause have occurred during the project life cycle most especially during execution of the project.

The study analysed the recommendation from the interviewee in section 4.7 and concluded that the following: arbitration, site meeting, evoking other contract clauses like penalties, extension of time, proper communication seek for arbitration before termination of the contractor; using experienced consultants and contract management teams can be used to mitigate construction contract termination and its impact when construction projects are faced with the identified causes of construction contract termination in the industry.

4.9.7 Causes of contract termination and contract termination

This element of the framework linked with dotted lines to the mitigation measures that the framework works to prevent their occurrence throughout the project lifecycle stages. The causes of contract termination are being prevented from manifesting by application of the recommendations/strategies of the framework at each stage to minimise the possibility of construction contract being terminated and the resulting impacts on stakeholder.

Additionally, the framework has suggested mitigation measures such as ADR as backstop and an intervening measure to provide an alternative to terminating a construction contract in the event causes of contract termination occur during the execution phase of the contract. The study therefore analysed the various attributes of the stakeholders and how they can result into causes of construction contract

termination and based upon the mitigation measures suggested by the respondents to develop a framework in Figure (4.1) will assist to mitigate impacts of contract termination in Uganda's construction industry.

4.9.8 Application of the framework

The developed framework should be adopted and used on construction projects following the five stages of the lifecycle and applied during the project lifecycle right from inception to closure to mitigate causes of contract termination that arise at the various stages of construction project lifecycle. Furthermore, the framework is designed to be used by construction professional with focus on the consultants, clients and contractors who are the main parties to the construction contracts for guidance and decision making at the various stages of the project and in an events issues arise during the project lifecycle.

The completion of the project is affected by the inception stage as a result of choice of project location, design errors and lack of continuity however the framework recommended strategies such as use of professions to support in developing designs to meet the intended use and evaluation of client's idea for an informed decision before commencement to ensure the project runs smoothly through other stages of the lifecycle and completed successfully.

The framework highlighted that completion of the project is hampered at the planning whenever there is no proper planning leading to wrong estimates of time and cost, delays in payment and thus recommended strategies such as proper estimations of cost and time, planning payment schedules, contract form selection as ways of mitigating causes of termination and ensure the project is executed to completion.

During execution completion is affected by causes of contract termination such as abandonment of work, delays, poor workmanship and non-conformity to specifications which amount to breach of contract and results into termination of contract. The framework recommended strategies such as using skilled personnel, study of scope of work, following payment schedule in terms of timely payments, proper documentation and evoking other contract penalties to ensure the project is back into execution and completed.

Completion of the project is affected during monitoring by causes such as client's use of inexperienced consultant, failure to implement instructions, weak project management which impact on the project progress resulting from delays in issuing instructions to proceed with work. The framework recommended strategies such as constant supervision, managing changes and scope and site meeting to resolve issues at the site and restore the project into running and completion is achieved.

During close out the contractor is expected to correct the defects during the defects liability period before project can be handed over to the end-users however completion is affected by delays in implementation of instructions to correct defects which delays handover and project closure. The framework recommended strategies such as proper communication and site meeting to ensure the closure processes are done satisfactory to meet end-user satisfaction and project is completed successfully

4.10 Chapter summary

The chapter presented the results from the interview and questionnaire surveys of the research and all the three objectives of the study were achieved as per the data presented. The opening sections covered background information of the study respondents, causes of contract termination in all the five categories, impacts of contract termination on stakeholders, mitigation measures as recommended by the study respondents and the developed framework that will contribute to alleviating the impacts of contract termination in Uganda.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The recommendations for the study's findings, which were derived from the study's conclusions, are presented in this chapter, along with a summary of the findings, conclusions, and recommendations for future research.

5.2 Summary of the results

5.2.1 Specific objectives 1: Causes of construction contract termination

Contractor related causes were ranked the most severe among the five categories of causes of termination with an average RII=0.760 and having 70% of the top ten ranked causes of termination with abandonment ranking in first position with RII=0.860 from the 58 causes identified by the study. Some of the causes in the top ten included: client's bankruptcy with RII=0.845, Delays in completion of work with RII=0.837, Contractor bankrupt or insolvency with RII=0.822, Lack of capital and resources with RII=0.822. Ranking of the top ten causes of termination basing on the RII showed that contractor related causes are the major causes of termination in Uganda

5.2.2 Specific objective 2: Impacts of construction contract termination

The study revealed 20 impacts of construction contract termination in Uganda's construction sector and the most significant impacts: Loss of income to the contractor with RII=0.880, Reputation Loss with RII=0.865; Delays in completion of the project with RII=0.845; project abandonment with RII= 0.841; Cost overrun with RII= 0.832; Loss of business due to black listing with RII=0.822; Reduction in employment

opportunities with RII=0.809; Litigations and disputes with RII=0.809; Increased cost of doing business due to incomplete roads with RII=0.804; Insolvency of the contractor with RII=0.802; Public disappointment with RII=0.778.

Although some of the impacts of contract termination in the Uganda follow the same trend as some of those by other scholars, one key impact ranked in position one arose as a new addition in this area of research was "Loss of income by the contractor" not only in Uganda but across the world.

5.2.3 Specific objective 3: Framework to mitigate construction contract termination

A framework to mitigate construction contract termination in the construction industry was developed as part of this research from the recommendation of the interviewee which included: dialogue, alternative dispute resolution, proper planning, use of standard form of contracts, cash flow planning and management proper due diligence as remedial measures to mitigate termination of contract in the construction industry in Uganda.

5.3 Conclusions

The purpose of the study was to develop a framework to mitigate impacts of contract termination on construction projects in Uganda with three specific objectives to achieve the major objective and these were: identify the causes of construction contract termination, impacts of termination and develop a framework that may mitigate contract termination and contribute to the construction industry. The study achieved

all its three objectives in which 58 causes and 20 impacts of construction contract termination were revealed by the study in addition to the framework that was designed from the research results. The developed framework can be put to use on all construction project following the five stages of project lifecycle.

This study explored a severe problem in the Ugandan construction sector: impacts of the termination of a construction contract on stakeholders. From the data analysis and discussion, the study concluded that construction contract termination is inevitable in the industry with a 70% likelihood of occurrence; however, contract termination may be minimised and prevented when the causes of termination are properly identified, analysed and managed during the project life cycle. It was concluded that contractor related causes are the prominent causes of construction contract termination among the five categories of causes of contract termination and these occupied 70% of the top ten causes of termination. Abandonment of work as a result of lack of resource by the contractors and client's bankruptcy among other causes were among the top ten causes of contract termination.

The research concluded that the major implications of construction contract termination was: loss of income by the contractor, delays in completion, abandonment and cost overruns. Hence, contract termination has far great risks and impacts to the stakeholders which directly affect the country's economic development being among the great contributors to the economy.

5.4: Recommendations

To reduce the impacts of construction contracts on stakeholders in Uganda the following measures should be undertake.

a) Client

The client should use experienced professionals in planning for the project at inception to avail enough project money based upon the project's initial estimates because of not using professional has contributed to 70% likelihood of contract termination. Services of an experienced architect, engineer and quantity surveyor should be engaged in the planning to reduce on design errors and under cost estimation.

Proper planning of payment schedules to ensure constant cash flow to the contractor in order to avert delays in payments which is one of the leading causes of abandonment which translates to termination of contractor.

Terminated contracts should be quickly rewarded to reduce on the long wait by the beneficiaries to use the facilities. This will to bridge the impact of public disappointment and strikes.

b) Contractor

Study the scope of work and specification for proper understanding before bidding and commencement of work to avoid instances of breach in specification because of cheating to maximise profits by using substandard materials as a result of under estimation which is one of the leading causes of termination in the industry.

Employ skilled and qualified personnel for the work to avoid rework that wastes a lot time leading to delays and breach of contract. Poor workmanship can also be avoided by using skilled personnel, further more training of staff as a way of improving these skills and ability will improve their productivity translating into quality and timely completion of work.

Proper documentation and record keeping to track all the changes in design and instructions given by the client or consultant these would be used during claims and request for extension of time in the event the contract expired.

c) Consultant

Conduct proper feasibility studies before designing to ensure detailed designs for the works averting risks of design errors that lead to delays and termination of contract.

Scheduling site meeting as an avenue for discussing and resolving issues before embarking on contract termination as redress for the contractor's breach of the contract.

Monitoring the work so as to give the contractor guidance to ensure conformity to the work specification as per the contract documents such as the BOQ and design.

5.5 Study limitations

Time limits: The study was faced with a challenge of limited time of nine months to fully achieve all the specific objectives with focus on the specific objective number three of developing the framework where the time allowed for the study could not allow for testing and validating the developed framework on building projects in the construction sector. More time needed to be allocated to the study to allow for the testing of the study framework in real life scenarios.

Limited access to information: The research was hindered by limited access to crucial data needed to achieve its objective and this because construction contracts are confidential documents that are not easily shared out for public scrutiny. Many of the entities approached for information relating to terminated construction contracts were not cooperative. Furthermore, there are limited publications on impacts of construction that the study could draw from its comparisons.

Scope limitation: The research was restricted to building and roads projects because of limited time to focus on all the other sectors of construction for example water projects thus the study findings are from the two sectors of the construction industry.

5.6: Recommendations for further study

As a consequence of this study, the following areas are recommended for further study:

- Investigating the use of dispute resolution clauses in construction contract as an alternative to termination in resolving disputes that arise during execution of the contract.
- Analysing the effectiveness of ADR in the construction contracts in the industry in solving disputes among parties compared to litigation: A contextual investigation of Uganda.

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APPENDICES

Appendix 1:Research questionnaire

KYAMBOGO UNIVERSITY

GRADUATE SCHOOL

Research Questionnaire

I am Mafabi Micheal, a student of Kyambogo University conducting research on the **"Impacts of construction contract termination on stake holders in Uganda"** in partial fulfillment for a Master's degree in Construction Technology and Management.

You have been selected as one of the resourceful respondents in this research and I will be very grateful if you would complete the self-administered questionnaire. The information provided will only be used for academic purposes and treated with strict confidentiality.

Yours faithfully,

MAFABI MICHEAL

michealmfb@gmail.com

0779697412 / 0703396260

SECTION A: GENERAL PROFILE OF THE RESPONDENT

1. In which of the following categories do you belong?

☐ Client ☐ Contractor ☐ Consultant ☐ Project beneficiary/End-user

2. Kindly tick your appropriate profession

☐ Architect.
☐ Engineer.
☐ Quantity surveyor.
☐ Surveyor.
☐ Businessman
☐ If others please specify
……..

3. Level of education

☐ Certificate. ☐ Diploma ☐ 1st Degree. ☐ Masters ☐ PhD

☐ If others, please specify …….

4. Number of years worked in the construction industry

☐ 0 – 5 years ☐ 6- 10 years ☐ 11- 15 years ☐ 16 and above

SECTION B: CONCEPT OF CONTRACT TERMINATION

1. How did you become aware of the concept of construction contract termination, its causes and impacts?

☐ Through study
☐ Word of mouth
☐ From experience

Through other means, please specify
.....

2. If from experience, what was your involvement in the construction contract that was terminated?

Please specify …….

3.On a scale of 1-3 where; 1- low, 2- Moderate and 3- High. How do you evaluate your knowledge of construction contract termination?

☐ Low ☐ Moderate ☐ High

4. On a scale of 1-5, (where: 1-Never, 2-Rarely, 3-sometimes, 4-often and 5- always) how do you rank the possibility of construction contract termination in the Uganda construction industry?

☐ Never. ☐ Rarely. ☐ Sometimes ☐ Often. ☐ Always

SECTION C: Causes of construction contract termination

1. Causes of contract termination are categorized into five categories which are: contractor related causes, client related causes, financial and business environment causes, political and project related causes. Please rate them according to their significance to cause termination. (1-highly insignificant, 2-Insignificant, 3-Neither, 4-Significant and 5-highly significant) and tick accordingly.

Please tick the most appropriate to indicate your opinion on the statements below on contractor related causes of termination.

No	**Contractor related causes**	**Rank**				
		1	**2**	**3**	**4**	**5**
1	Negligence leading to safety issues and accident on site					
2	Noncompliance to obligations of insurance and guarantees due to superficial study of tender documents					
3	Non conformity to specifications					
4	Lack of work experience					
5	Increase in capital expenditure for the company leading to cash flow problems					
6	Client staff lacking technical and managerial skills for contractor staff					
7	Lack of project risk control					
8	Failure to comply with instructions from the client					
9	Contractor overload with projects					

10	Failure to pay subcontractors and workers leading to strikes					
11	Reliance on bank loans and payment of high interest on those loans					
12	Delays in completion of work					
13	Contractor bankrupt or insolvency					
14	Abandonment of work					
15	Poor workmanship					
16	Death of contractor in sole proprietorship					
17	Failure to report to site to commence work					

Please tick the most appropriate to indicate your opinion on the statements below on client related causes of termination.

	Client related causes of termination	**Rank**				
		1	**2**	**3**	**4**	**5**
1	Client's bankruptcy					
2	Clients policy in resolving disputes, Claims and litigations					
3	Use of inexperienced consultants					
4	Weak project management					
5	Client staff lacking technical and managerial skills of client staff					
6	Great number of variations done by client					
7	Wrong estimation of total project time					
8	Delays in contractor payments					
9	Wrong cost estimation for the total cost of project					
10	Lack of cash flow management					
11	Award to lowest price					
12	Client's policy of compensation under force majeure conditions					
13	Bureaucracy in the system					
14	Disregard of laws, ordinances of local authorities					
15	Transfer of officer in charge					
16	Change in executive leadership					

Please tick the most appropriate to indicate your opinion on the statements below on financial and business environment related causes of termination

	Financial and business environment related causes	**Rank**				
		1	**2**	**3**	**4**	**5**
1	Under estimation by contractors due to high competition					

2	Difference between contract's currency and the local currency					
3	Inflation leading to rise of material prices					
4	Lack of capital and resources					
5	Low profit due to competition					
6	Monopoly of some important materials for the construction industry					
7	National slump in economy					
8	Bank policy such as interest rates on loans					
9	Accounting and taxes practices					
10	Lack of specialized courts to deal with disputes of construction industry					
11	Corruption					

Please tick the most appropriate to indicate your opinion on the statements below on political related causes of termination

	Political related causes	**Rank**				
		1	**2**	**3**	**4**	**5**
1	Internal political troubles such as rebellions and civil wars					
2	Limitation to importation					
3	Incensement in material prices due to continuous closure of borders.					
4	Location of project in insecure regions					
5	Political interference and disruptions					
6	Declaration of state of emergency					
7	Change in governance					

Please tick the most appropriate to indicate your opinion on the statements below on project related causes of termination

	Project related causes	**Rank**				
		1	**2**	**3**	**4**	**5**
1	Force majeure					
2	Type of project					
3	Problems with neighbors					
4	Repetition of suspension of work					
5	Variation in project scope					
6	Design errors					
7	Lack of continuity					

2. Specify any other if any …….

……..

SECTION D: Impacts of construction contract termination

4.1. What impacts result from the termination of construction contract on a construction project? Please rate them according to level of Intensity and probability of occurrence of the impact to the client, contractor and beneficiary (1-highly insignificant impact, 2-Insignificant impact, 3-Neither, 4-Significant impact and 5-highly significant impact) and tick accordingly.

No	**Impacts of construction contract termination**	**Rank**				
		1	**2**	**3**	**4**	**5**
1	Cost overrun					
2	Increased cost of doing business due to incomplete roads					
3	Tempo of economic activities reduces in the project area					
4	Revenue collection to government declines					
5	Difficulties in accessing both local and foreign loans					
6	Loss of business due to black listing					
7	Abandonment of the project					
8	Accidents due to incomplete works					
9	Strikes from project beneficiaries					
10	Public disappointment					
11	Reduction in employment opportunities					
12	People's standard of living lowered					
13	Delays in Implementation of Environmental and social management plan					
14	Health hazards					
15	Delays in completion of the project					
16	quality of the project changes when completed because climatic effect					
17	Litigations and disputes					
18	Reputation Loss					
19	Loss of income to the contractor					
20	Insolvency of the contractor					

…...The End……

Thank you again for your time,

Appendix 2: Interview guide

Construction contract termination - Interview Guide

I am Mafabi Micheal, a student of Kyambogo University conducting research on the **"Impacts of construction contract termination on stakeholders in Uganda"** in partial fulfillment for a Master's degree in Construction Technology and Management.

You have been selected as one of the respondents in this research and I will be very grateful if you would complete the interview. The information provided will only be used for academic purposes and treated with strict confidentiality.

Yours faithfully,

MAFABI MICHEAL

Q1. Have you had any experience with a construction project that got terminated due to breach of contract?

Yes	
NO	

Q2. What was your involvement in the construction contract that was terminated?

……

Q3. Were there any measures put in place to mitigate the termination of the contract. If yes what are some of the measures that were put in place.

Yes	

NO	

1. …….
2. ……
3. ……
4. ……

Q4. The initial literature review indicates that causes of construction contract termination can be categorized into project related causes, administrative related causes, political related causes, and contractor related causes and financial related causes. In your experience, what were some of the causes of construction contract termination?

1. …….
2. …….
3. …….
4. ……
5. …….

Q5. Impacts of contract termination can be categorized as economic, social, health, environmental and institutional. What were some of the impacts/effects of construction contract termination on the contract stake holders i.e., contractor, client and beneficiaries?

1.

…….

2.…….

3.…….

4.……..

5.…….

Q. In your opinion, what mitigation measures would you recommend to reduce impacts of construction contract termination?

1. …….

2. …….

3. …….

4. …….

Thank You

Appendix 3: Document review guide

Construction contract termination – Document review guide

Document review guide **Impacts of construction contract termination on stakeholders**		
Title of document:		
Document type:		
Author(s):		
Publisher:		
Reviewer:		
Document Number:		
Date of publication	**Date Accessed**	**Date Reviewed**
Purpose of document:		
List of information attained from the document:		
Sections reviewed		
Page Number		

Appendix 4: List of construction contracts terminated

Project Title	**Reason for termination**
Construction of Two Blocks of Two class rooms, Library and Science Lab. at Aripea Secondary school	Lack of resources and delays
Child Friendly Space construction with 2-classroom block, 2no 3-stance latrines and chain link fence at ofua 6	Delays beyond contract period and abandonment of work
Mukono kyetume-katosi-Nyenga road project	Fraud
construction with 2-classroom block, 2no 3-stance latrines and chain link fence at Ombechi	Abandonment of work and lack of resources to finish work
Upgrading of drainage black spots in Kampala	Delays, failure to make payments
Construction of living world assembly prayer city comprising church building, Sunday school and guest block at kajjansi	None performance
Musita-Mayuge-Lumino-Majanji-Busia Road construction	Incompetence, performance below contractual standards, lack of commitment and failure to mobilise resources

Appendix 5: Analysis tables for contractor related causes of contract terminated

Contractor related causes	Highly significant	Significant	Neither	Insignificant	Highly significant	Total
Negligence leading to safety issues and accident on site	14	43	3	23	10	93
Noncompliance to obligations of insurance and guarantees due to superficial study of tender documents	11	42	9	26	5	93
Non conformity to specifications	34	41	6	8	4	93
Lack of experience in line with work	34	38	9	10	2	93
Increase in capital expenditure for the company leading to cash flow problems	35	41	7	9	1	93
Lack of technical and managerial skills for contractor staff	21	49	6	17	0	93
Lack of project risk control	19	38	8	22	6	93
Failure to comply with instructions from the client	36	41	7	9	0	93
Contractor overload with projects	19	44	7	18	5	93
Failure to pay subcontractors and workers leading to strikes	23	37	12	17	4	93
Reliance on bank loans and payment of high interest on those loans	19	30	13	23	8	93
Delays in completion of work	40	40	4	8	1	93
Contractor bankrupt or insolvency	39	38	6	7	3	93
Abandonment of work	50	30	4	9	0	93
Poor workmanship	39	35	6	13	0	93
Death of contractor in sole proprietorship	28	32	13	17	3	93
Failure to report to site to commence work	30	38	9	14	2	93
Total	**491**	**657**	**129**	**250**	**54**	**1581**

	5	4	3	2	1							
Contractor related causes	**Highly significant**	**Significant**	**Neither**	**Insignificant**	**Highly significant**	**Total**	**Total Response**	**A*N**	**RII**	**RANK**	**Av RII**	SD
Negligence leading to safety issues and accident on site	70	172	9	46	10	307	93	465	0.6602151	16	0.760	30.238756
Noncompliance to obligations of insurance and guarantees due to superficial study of tender documents	55	168	27	52	5	307	93	465	0.6602151	16		
Non conformity to specifications	170	164	18	16	4	372	93	465	0.8	6		
Lack of experience in line with work	170	152	27	20	2	371	93	465	0.7978495	7		
Increase in capital expenditure for the company leading to cash flow problems	175	164	21	18	1	379	93	465	0.8150538	4		
Lack of technical and managerial skills for contractor staff	105	196	18	34	0	353	93	465	0.7591398	10		
Lack of project risk control	95	152	24	44	6	321	93	465	0.6903226	14		
Failure to comply with instructions from the client	180	148	21	18	0	367	93	465	0.7892473	8		
Contractor overload with projects	95	176	21	36	5	333	93	465	0.716129	13		
Failure to pay subcontractors and workers leading to strikes	115	148	36	34	4	337	93	465	0.7247312	12		
Reliance on bank loans and payment of high interest on those loans	95	120	39	46	8	308	93	465	0.6623656	15		
Delays in completion of work	200	160	12	16	1	389	93	465	0.8365591	2		
Contractor bankrupt or insolvency	195	152	18	14	3	382	93	465	0.8215054	3		
Abandonment of work	250	120	12	18	0	400	93	465	0.8602151	1		
Poor workmanship	195	140	18	26	0	379	93	465	0.8150538	4		
Death of contractor in sole proprietorship	140	128	39	34	3	344	93	465	0.7397849	11		
Failure to report to site to commence work	150	152	27	28	2	359	93	465	0.772043	9		
Total	**2455**	**2612**	**387**	**500**	**54**	**6008**			**12.92043**			

Appendix 6: Analysis tables client related causes of contract termination

Client related causes of termination	**Highly significant**	**Significant**	**Neither**	**Insignificant**	**Highly significant**	**Total**
Client's bankruptcy	54	25	1	7	6	93
Clients' policy in resolving disputes, Claims and litigations	16	45	8	22	2	93
Use of inexperienced consultants	12	42	14	23	2	93
Weak project management	24	41	10	15	3	93
Lack of technical and managerial skills of client staff	16	37	10	28	2	93
Great number of variations done by client	18	26	12	31	6	93
Wrong estimation of total project time	19	41	9	19	5	93
Delays in contractor payments	30	38	6	16	3	93
Wrong cost estimation for the total cost of project	**30**	**45**	**4**	**12**	**2**	**93**
Lack of cash flow management	26	51	2	11	3	93
Award to lowest price	22	33	13	20	5	93
Client's policy of compensation under force majeure conditions	23	29	18	19	4	93
Bureaucracy in the system	12	35	15	24	7	93
Disregard of laws, ordinances of local authorities	18	44	6	22	3	93
Transfer of officer in charge	4	19	17	36	17	93
Change in executive leadership	5	19	14	37	18	93
Total	329	570	159	342	88	1488

	5	4	3	2	1						
Client related causes of termination	**Highly significant**	**Significant**	**Neither**	**Insignificant**	**Highly significant**	**Total**	**Total Response**	**A*N**	**RII**	**RANK**	**Av RII**
Client's bankruptcy	270	100	3	14	6	393	93	465	0.84516129	1	0.695430108
Clients policy in resolving disputes, Claims and litigations	80	180	24	44	2	330	93	465	0.709677419	7	
Use of inexperienced consultants	60	168	42	46	2	318	93	465	0.683870968	11	
Weak project management	120	164	30	30	3	347	93	465	0.746236559	5	
Lack of technical and managerial skills of client staff	80	148	30	56	2	316	93	465	0.679569892	12	
Great number of variations done by client	90	104	36	62	6	298	93	465	0.640860215	14	
Wrong estimation of total project time	95	164	27	38	5	329	93	465	0.707526882	8	
Delays in contractor payments	150	152	18	32	3	355	93	465	0.76344086	4	
Wrong cost estimation for the total cost of project	150	180	12	24	2	368	93	465	0.791397849	2	
Lack of cash flow management	130	204	6	22	3	365	93	465	0.784946237	3	
Award to lowest price	110	132	39	40	5	326	93	465	0.701075269	10	
Client's policy of compensation under force majeure conditions	115	116	54	38	4	327	93	465	0.703225806	9	
Bureaucracy in the system	60	140	45	48	7	300	93	465	0.64516129	13	
Disregard of laws, ordinances of local authorities	90	176	18	44	3	331	93	465	0.711827957	6	
Transfer of officer in charge	20	76	51	72	17	236	93	465	0.507526882	15	
Change in executive leadership	25	76	42	74	18	235	93	465	0.505376344	16	
Total	**1645**	**2280**	**477**	**684**	**88**	**5174**			**11.12688172**		

Appendix 7: Analysis tables for project related causes

Project related causes	Highly significant	Significant	Neither	Insignificant	Highly significant	Total
Force majeure	30	39	9	11	4	93
Type of project	11	30	23	23	6	93
Problems with neighbors	5	27	16	37	8	93
Repetition of suspension of work	15	45	10	19	4	93
Variation in project scope	14	43	9	22	5	93
Design errors	27	37	7	19	3	93
Lack of continuity	19	43	10	20	1	93
Total	121	264	84	151	31	651

	5	4	3	2	1						
Project related causes	**Highly significant**	**Significant**	**Neither**	**Insignificant**	**Highly significant**	**Total**	**Total Response**	**A*N**	**RII**	**Rank**	**av RII**
Force majeure	150	156	27	22	4	359	93	465	0.772043	1	0.690015
Type of project	55	120	69	46	6	296	93	465	0.636559	6	
Problems with neighbors	25	108	48	74	8	263	93	465	0.565591	7	
Repetition of suspension of work	75	180	30	38	4	327	93	465	0.703226	4	
Variation in project scope	70	172	27	44	5	318	93	465	0.683871	5	
Design errors	135	148	21	38	3	345	93	465	0.741935	2	
Lack of continuity	95	172	30	40	1	338	93	465	0.726882	3	
Total	**605**	**1056**	**252**	**302**	**31**	**2246**			**4.830108**		

Appendix 8: Analysis tables for financial related causes of contract termination

Financial and business environment related causes	Highly significant	Significant	Neither	Insignificant	Highly significant	Total
Under estimation by contractors due to high competition	33	37	6	16	1	93
Difference of local currency exchange with currency used in contract	19	24	14	31	5	93
Inflation leading to rise of material prices	29	43	4	14	3	93
Lack of capital and resources	31	50	5	5	2	93
Low profit due to competition	12	40	14	25	2	93
Monopoly of some important materials for the construction industry	11	37	15	26	4	93
National slump in economy	16	40	15	18	4	93
Bank policy such as interest rates on loans	15	47	11	17	3	93
Accounting and taxes practices	16	44	13	19	1	93
Lack of specialized courts to deal with disputes of construction industry	10	34	17	29	3	93
Corruption	34	33	8	16	2	93
Total	**226**	**429**	**122**	**216**	**30**	**930**

	5	4	3	2	1						
Financial and business environment related causes	Highly significant	Significant	Neither	Insignificant	Highly significant	Total	Total Response	A*N	RII	Rank	av RII
Under estimation by contractors due to high competition	165	148	18	32	1	364	93	465	0.782795699	2	0.718
Difference of local currency exchange with currency used in contract	95	96	42	62	5	300	93	465	0.64516129	10	
Inflation leading to rise of material prices	145	172	12	28	3	360	93	465	0.774193548	3	
Lack of capital and resources	155	200	15	10	2	382	93	465	0.821505376	1	
Low profit due to competition	60	160	42	50	2	314	93	465	0.675268817	8	
Monopoly of some important materials for the construction industry	55	148	45	52	4	304	93	465	0.653763441	9	
National slump in economy	80	160	45	36	4	325	93	465	0.698924731	7	
Bank policy such as interest rates on loans	75	188	33	34	3	333	93	465	0.716129032	6	
Accounting and taxes practices	80	176	39	38	1	334	93	465	0.71827957	5	
Lack of specialized courts to deal with disputes of construction industry	50	136	51	58	3	298	93	465	0.640860215	11	
Corruption	170	132	24	32	2	360	93	465	0.774193548	3	
Total	1130	1716	366	432	30	3314			7.901075269		

Appendix 9: Analysis tables for political related causes of contract termination

Political related causes	**Highly significant**	**Significant**	**Neither**	**Insignificant**	**Highly significant**	**Total**
Internal political troubles such as rebellions and civil wars	41	25	7	12	8	93
Limitation to importation	17	36	13	23	4	93
Incensement in material prices due to continuous closure of borders.	21	40	10	18	4	93
Location of project in insecure regions	33	37	7	14	2	93
Political interference and disruptions	29	42	9	11	2	93
Declaration of state of emergency	33	30	14	8	8	93
Change in governance	19	27	8	26	13	93
Total	193	237	68	112	41	651

	5	**4**	**3**	**2**	**1**						
Political related causes	Highly significant	Significant	Neither	Insignificant	Highly significant	Total	Total Response	A*N	RII	RANK	av RII
Internal political troubles such as rebellions and civil wars	205	100	21	24	8	358	93	465	0.769892473	3	0.731797235
Limitation to importation	85	144	39	46	4	318	93	465	0.683870968	6	
Incensement in material prices due to continuous closure of borders.	105	160	30	36	4	335	93	465	0.720430108	5	
Location of project in insecure regions	165	148	21	28	2	364	93	465	0.782795699	1	
Political interference and disruptions	145	168	27	22	2	364	93	465	0.782795699	1	
Declaration of state of emergency	165	120	42	16	8	351	93	465	0.75483871	4	
Change in governance	95	108	24	52	13	292	93	465	0.627956989	7	
Total	**965**	**948**	**204**	**224**	**41**	**2382**			**5.122580645**		

Appendix 10: Analysis tables for impacts of contract termination

Impacts of construction contract termination	Highly significant	Significant	Neither	Insignificant	Highly significant	Total
Cost overrun	39	41	4	7	2	93
Increased cost of doing business due to incomplete roads	30	46	6	11	0	93
Tempo of economic activities reduces in the project area	22	46	10	13	2	93
Reduction in revenue accruing to government	23	36	10	21	3	93
Difficulties in accessing both local and foreign loans	14	40	9	25	5	93
Loss of business due to black listing	38	40	3	11	1	93
Abandonment of the project	36	46	7	2	2	93
Accidents due to incomplete works	18	50	10	12	3	93
Strikes from project beneficiaries	16	40	12	21	4	93
Public disappointment	30	40	9	11	3	93
Reduction in employment opportunities	34	41	6	12	0	93
Lowering of the standard of living of the people	16	42	14	20	1	93
Delays in Implementation of Environmental and social management plan	11	50	8	17	7	93
Health hazards	15	51	11	15	1	93
Delays in completion of the project	39	45	2	5	2	93
Change in the quality of the project when completed due to climatic effects	22	35	15	20	1	93
Litigations and disputes	34	38	12	9	0	93
Reputation Loss	48	36	1	7	1	93
Loss of income to the contractor	49	36	5	2	1	93
Insolvency of the contractor	28	49	7	7	2	93
Total	**562**	**848**	**161**	**248**	**41**	**1860**

	5	4	3	2	1						
Impacts of construction contract termination	Highly significant	Significant	Neither	Insignificant	Highly significant	Total	Total response	A*N	RII	Rank	Av RII
Cost overrun	195	164	12	14	2	387	93	465	0.832258065	5	0.777
Increased cost of doing business due to incomplete roads	150	184	18	22	0	374	93	465	0.804301075	9	
Tempo of economic activities reduces in the project area	110	184	30	26	2	352	93	465	0.756989247	12	
Reduction in revenue accruing to government	115	144	30	42	3	334	93	465	0.71827957	16	
Difficulties in accessing both local and foreign loans	70	160	27	50	5	312	93	465	0.670967742	20	
Loss of business due to black listing	190	160	9	22	1	382	93	465	0.821505376	6	
Abandonment of the project	180	184	21	4	2	391	93	465	0.840860215	4	
Accidents due to incomplete works	90	200	30	24	3	347	93	465	0.746236559	13	
Strikes from project beneficiaries	80	160	36	42	4	322	93	465	0.692473118	18	
Public disappointment	150	160	27	22	3	362	93	465	0.778494624	11	
Reduction in employment opportunities	170	164	18	24	0	376	93	465	0.808602151	7	
Lowering of the standard of living of the people	80	168	42	40	1	331	93	465	0.711827957	17	
Delays in Implementation of Environmental and social management plan	55	200	24	34	7	320	93	465	0.688172043	19	
Health hazards	75	204	33	30	1	343	93	465	0.737634409	14	
Delays in completion of the project	195	180	6	10	2	393	93	465	0.84516129	3	
Change in the quality of the project when completed due to climatic effects	110	140	45	40	1	336	93	465	0.722580645	15	
Litigations and disputes	170	152	36	18	0	376	93	465	0.808602151	7	
Reputation Loss	240	144	3	14	1	402	93	465	0.864516129	2	
Loss of income to the contractor	245	144	15	4	1	409	93	465	0.879569892	1	
Insolvency of the contractor	140	196	21	14	2	373	93	465	0.802150538	10	
Total	2810	3392	483	496	41	7222			15.5311828		