FACTORS AFFECTING THE PERFORMANCE OF CONSTRUCTION PROJECTS IN MAYUGE TOWN COUNCIL, MAYUGE DISTRICT, UGANDA

BY

DANIEL KASALA

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A DISSERTATION SUBMITTED TO THE HIGHER DEGREES DEPARTMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTERS DEGREE IN MANAGEMENT STUDIES (URBAN GOVERNANCE AND MANAGEMENT) OF UGANDA MANAGEMENT INSTITUTE

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DECLARATION

I, Daniel Kasala, hereby declare that this is my original work and it has never been presented to any institution for any award.

Signed: …….

Date: …….

APPROVAL

We hereby certify that the dissertation entitled *"Factors affecting the performance of construction projects in Mayuge Town Council, Mayuge District"* was done under our supervision and is now ready for submission for the Award of Master's Degree in Management Studies (Urban Governance and Management) of Uganda Management Institute (UMI).

Signed: ……..…… Signed: ……

DR. BENON BASHEKA

SUPERVISOR

MR. FRED NTAMBI

SUPERVISOR

Date: ……..…… Date: ……..

DEDICATION

This dissertation is dedicated to my parents, Mr. & Mrs Kasala for their tireless effort to see me rising to great heights. To my brothers, sisters, my wife and my children, Mulungi Ethel, Muwendo Cynthia and Mirembe Kay for their patience during the time I was always away from home.

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LIST OF ACRONYMS

AGR	-	Audit General Report
CAO	-	Chief Administration Officer
COQ	-	Cost of Quantities
ILO	-	International Labour Organization
LGDP	-	Local Government Development Programme
PAF	-	Poverty Alleviation Fund
PERF	-	Performance
PNG	-	Papua New Guinea
SAQ	-	Self Administered Questionnaire
SOW	-	Scope of Works
TF	-	Time Factors
QF	-	Quality Factors

ABSTRACT

This study examined the factors affecting the performance of construction projects in Mayuge Town Council, Mayuge District. The study was guided by three objectives namely, to establish whether (i) time factors (ii) cost factors (iii) quality factors, respectively affect the performance of construction projects in Mayuge Town Council. The study took a descriptive cross-sectional research design where both qualitative and quantitative approaches were employed involving a sample of 140 respondents selected using the stratified method from the category of employees selected in Mayuge Town Council that participated in the study by answering the designed questionnaires. Frequencies and percentages were used to represent the distribution of the respondents on the different questions. Pearson's Linear-Correlation Co-efficient (r) was used to test the level of co-relation between the variables. Regression analysis was also used to ascertain factors that are significant in predicting the performance of construction projects. The study findings showed that there was a positive relationship between the variable; time factors, quality factors while on the cost factors' variable there was a negative relationship on the performance on the other side. The researcher therefore concluded that when each of the variables (i) time factors (ii) cost factors and (iii) quality factors are enhanced, the performance of construction projects in the Town Council also improves. The researcher therefore recommended that Government through the Ministry of Local Government, district administration and stake holders in the Town Council should ensure that contractors are always availed with motivational costs, resources in time, and be provided with quality equipments to enhance their job performance in Mayuge Town Council, Mayuge District.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Contractor performance is critical to the success of any construction project as it is contractors who convert designs into practical reality. Improved contractor performance leads to increased client satisfaction, improved reputation of contractors and hence their competitiveness in the market. While contractor performance has been a subject of much research, evidence suggests that there remains much need for further improvement (Egan, 1998). Therefore this study was an investigation into the factors affecting the performance of construction projects, a case study of Mayuge Town Council. Factors that include; cost factors, time factors and quality factors in this study are the independent variable. While performance is the dependent variable. This chapter presented the background to the study, the statement of the problem, the purpose of the study, objectives, research questions, hypotheses, significance, justification and scope of the study.

1.1 Background to study

1.1.1 Historical background

Throughout the world, the business environments within which construction organizations operate continue to change rapidly. Organizations failing to adopt and respond to the complexity of the new environment tend to experience survival problems (Lee et al, 2001). With increasing higher users' requirements, environmental awareness and limited resources on one side and high competition for construction business market place on the other side,

contractors have to be capable of continuously improving their performance (Samson and Lema 2005).

In developing countries, attempts to improve on the performance of construction projects have failed to yield significant results (Cantell, 1994). In particular, dedicated contractor-support agencies have not succeeded (UNCHS, 2000) and almost all of them have collapsed (Takukhaba, 2008). Faridi and El- Sayegh (2006) reported that shortage of skills, man power, poor supervision and poor site management, unsuitable leadership, shortage and breakdown of equipment contribute to construction delays in the United Arab Emirates. Local governments in rural areas deal mostly with resource-poor contractors. Most of them are involved in agriculture and related sectors, often having an informal character. In addition, the performance of contractors in Zambia is apparently below expectation. It is not uncommon to learn of local projects that have not been completed or significantly delayed (Ugwu and Haupt, 2007).

Mbachu and Nkando (2007) established that quality and attitude to service is one of the key factors constraining successful project delivery in South Africa. The poor performance of many local contractors has huge implications in terms of their competitiveness (Zulu and Chileshe, 2008). In Local Governments in Uganda, there has been a significant decline in public sector contractor activity (Kiyaga-Nsubuga, 2002). This has been coupled with the lack of transparency and even corruption in the procurement system. Further more, such contractors are usually characterized with lack of knowledge on regulations and right, relatively high taxes, limited access to financial services, insufficient access to markets, high

costs of inputs or price fixing and poor service delivery by the public sector. In this regard, there could be several factors contributing to this phenomenon. Thus, there was need to examine the factors affecting the performance of construction projects in Mayuge Town Council, Mayuge District.

1.1.2 Theoretical Background

In this particular study, two theories namely: Agency theory and Contract theory were adopted. For instance, the Agency theory was chosen because it focuses on the issues that arise when one party (agent) carries out work on behalf of another (the principal). The agency theory assumes that the interests of the principal and those of the agent do not necessarily coincide. But where, there is perfect, free information then there is little difficulty. This is because the principal is able to monitor the agent's performance and to design an effective set of sanctions and incentives. Therefore, failures are instantly and accurately observed. In this case, if the time factors such as site preparations, availability of resources, planned time for construction are not adhered to then we might see delays in the accomplishment of a given project. Macneil (1980) observes that, the problems in the relationships between the principal and agent would match if the relationship hierarchies are made longer because there would be many relationships to involve hence limit flexibility. If the incentives of the agent are aligned with those of the principals then it is assumed that they would act in accordance with the principle's interest so monitoring costs would reduce.

The Agency Theory was considered relevant in guiding the study with an assumption that time factors could be significantly affecting the performance of construction projects in urban

local governments. On the other hand, the Agency Theory would venture further into the identification of variables in regards to this study. For instance; when one party (agent) carries out work on behalf of another (the principal) the issue of time factor does arise based on the principle of cost effectiveness.

The second theory in this study was the Contracts Theory in the sense that in utility provision between public and private sector in the sense that laws developed from contracts theory exhibit direct exchanges of rights and duties to which parties to the contract don't have a continuing relationship. Contracts set standards that must be met and impose remedies should the parties not stick to their bargain. In addition, the benefits and risk sharing mechanisms between partners are clarified, the term of contract period is established and performance standards are set (Crasswell, 1988). In this case, the cost factors such as; costs of materials, equipments and the escalation of material prices. Quality factors such as; availability of incompetent staff and quality of equipment and raw materials are important in the success of any construction project.

However, partners planning have to structure operating relations rather than simply defining what is exchanged come to dominate a lot of modern contracts (Atiyah, 1979).On the other hand, the contract theory would aid the identification of variables in regards to this study. For instance; the contractors set standards which the researcher observed as the quality factors and in any contract the parties spell out the terms in regards to the contract such as; the benefits and risk sharing (which the researcher observed as the cost factors). The contracts theory was considered relevant in this study with an assumption that the researcher would be in position

to relate both quality factor as well as the cost factors to the performance of construction projects in Mayuge Town Council. Besides a contract is at the heart of every relationship.

1.1.3 Conceptual Background

Longman (1978) defines a factor as one of several things that influence or cause a situation. In this study, factors meant: the time factors, cost factors and quality factors. Time according to Johnson (2006) is defined as a one dimensional quantity used to sequence events, quantify and durations of events and intervals between them, and (used together with space) to quantify and measure the motions of objects and other changes. Time according to Webster (1995) is defined as the measured or measurable period during which an action, process or condition exists or continues. In this study, time factors meant; site preparation time, planned time for construction, average delays in claim approval and availability of resources.

Farlex (2010) has two definitions in regards to costs where the first definition states that the expenditure of something such as time or labour is necessary for the attainment of a goal. The second definition states that there is an amount paid or required in payment for the purchase of a given item. Costs according to Leo (2010) is defined as the valuation in terms of money of an effort, materials, resources, time, utilities consumed risks incurred and opportunities foregone in production and delivery of a good or a service. In this study cost factors also meant; material and equipment costs, motivation costs, regular project budget updates and escalation of material prices.

Quality according to Armstrong (2000) is defined as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. Garvin (2010) defines quality as that part which makes something what it is; characteristics elements; basic nature, kind; the degree of excellence of a thing and its superiority. Garvin (2010) also defines quality in terms of cost and prices. In addition, a quality product is one that provides performance at an acceptable price or conformance at an acceptable cost. In this study, quality factors will mean; conformance to specifications, availability of competent staff, quality equipments of raw materials and quality training. Performance according to Fadipe (2001) is the capacity to achieve direct results. In this study, performance was looked at in terms of the delivery of expected quantity of services, delivery of expected quality of services and citizens satisfaction from service delivery.

Other researchers have measured the performance dimensions. For instance, Cheung et. al (2004) found out that the project performance can be measured and evaluated using a large number of performance indicators that could be related to various dimensions such as time, cost, quality client satisfaction, client changes business performance health and safety. Generally, performance dimensions may have one or more indicators and could be influenced by various project factors. For instance, Kumaraswany (1990) found out that the project time and cost performances get influenced by project characteristics, procurement systems, project team performance, client representation characteristics, contractor characteristics, design team characteristics and external conditions. Xiao and proverbs (2002) identified different performance dimensions which included; construction time, construction cost construction quality and sustainable development. Three performance dimensions such as; time factors,

cost factors and quality factors were considered for the study. These factors were extracted from Adan et al, 2009 based on two theories namely; the Agency theory and Contract theory. Under the Agency theory, the researcher identified the time factor as being a correlated to the performance of construction projects while under the contract theory the researcher identified both quality factors and cost factors as among the factors affecting construction projects.

1.1.4 Contextual Perspective

Over the years researchers have paid little attention to the factors affecting the performance of construction projects in local governments. There is still a paucity of research that allows one to better understand the underlying factors that influence the way contractors deliver their services in the local government setting (Egbu, 2007). Much of the research on improvement in construction projects has mainly focused on tendering rules and regulations. In addition, the performance of construction projects is important because any decision made will affect the project success. Failure on the part of the contractors might lead to stress factors causing significant problems in successive stages of the project.

The study took place in Mayuge Town Council in Mayuge district where there is lack of transparency and even corruption in procurement systems. According to the IGG report (2008) the Mayuge Town Council lost UGX 21,288,000 to shoddy contractors that never completed leveling roads of Mayuge Town Council. In the same vein, contractors received all payments before signing and submitting completion papers. In addition, there are several cases in Mayuge Town Council, where contractors do not provide accountability information on roads contracted; the piling of outstanding bills was not fully accounted for and they were

not falsified. Construction materials are overvalued; secured and used without proper accountability measures.

Furthermore, in Mayuge Town Council, there exist inadequate human, financial and logistic resources to monitor the works of the contractors in the Town Council. The administrative staff usually is in short supply of basic technical and managerial skills to implement the tenders awarded to contractors. This has had a direct negative effect on the quality of services, the functions assumed by the administrative staff for infrastructure provision has always collided. These indicated poor performance of construction projects which prompted the researcher to investigate the factors which affect performance of construction projects in Mayuge Town Council with an assumption that the factors could influence performance!

1.2 Problem Statement

Organizations wishing to survive have to foster performance among their workers. Tindiwesi (2006) observed that performance in a competitive way helps the district top administrators to ensure proper utilization of public funds by local contractors such as enactment of fiscal responsibility, legislation and prosecution of offenders of fiscal regulations, quality of services delivered, accountability of public funds by local contractors. Unfortunately the performance of construction projects in Muyuge Town Council has declined. This is evidenced by the rampant accountability gaps every financial year as testified by the failure of the contractors to account for UGX 21,288,000, in the financial year 2004/2005 (Auditor General report, 2010), there was gross financial mismanagement of LGDP and PAF funds. If the performance of construction projects is not given special attention a decline would

continue to occur. This would result into the poor quality of services as well as the eventual collapse of the Town Council. The researcher therefore, felt that while there might be other causes of low employee performance in Mayuge Town Council, cost factors, time factors and quality factors had a role to play in this regard, thus, the need to carry out the study to investigate the factors affecting the performance of construction projects in Mayuge Town Council.

1.3 General Objective

The general objective of the study was to examine the factors affecting the performance of construction projects in Mayuge Town Council.

1.4 Specific Objectives

The study was guided by the following specific objectives;

1. To establish the effect of time factors on the performance of construction projects in Mayuge Town Council.
2. To examine the effect of cost factors on the performance of construction projects in Mayuge Town Council.
3. To investigate the effect of the quality factors on the performance of construction projects in Mayuge Town Council

1.5 Research Questions

The study was guided by the following research questions;

1. How do the time factors affect the performance of construction projects in Mayuge Town Council?
2. How do cost factors affect the performance of construction projects in Mayuge Town Council?
3. How do quality factors affect the performance of construction projects in Mayuge Town Council?

1.6 Hypotheses of the Study

The study was guided by the following hypotheses;

1. Time factors significantly affect the performance of construction projects.
2. Cost factors significantly affect the performance of construction projects.
3. Quality factors significantly affect the performance of construction projects.

1.7 Significance of the Study

The study findings may help Mayuge Town Council identify the factors that may positively or otherwise affect employee performance and hence be in position to adjust those factors that they are in position to adjust in order to positively influence the possible outcomes.

The outcome of the study is expected to provide useful information to the policy makers especially Mayuge District top administrators in designing appropriate and practical policy

guidelines that will help improve on the factors affecting the performance of construction project in urban local government of Uganda.

The study may also help future researchers to add to the existing body of knowledge by stimulating new areas for further research through the findings and subsequent recommendations.

1.8 Justification of the Study

There was great need to investigate what exactly goes around for construction projects to be successful in Uganda. The study was in line with the struggle of the Ministry of local government, among other agencies and organizations to investigate the leading factors affecting construction projects in Uganda, however, the phenomenon is complex and many other factors could be involved. We cannot determine unilaterally which factors affect the performance of construction projects in Uganda and we do not fully understand the mechanisms, if research is not undertaken. Nonetheless, the data shows that those responsible for devising and implementing policy; lack adequate arguments to support the idea that define the factors that would necessarily improve the performance of construction projects, since so far the data reveals no casual relationship between the two. Therefore, if this study was carried out, it would provide strategies for closing the gaps on the factors influencing the performance of construction projects.

1.9 Scope of the Study

1.9.1 Geographical Scope

The study was basically conducted in Mayuge Town Council, Mayuge District. This study involved local contractors as well as Mayuge Town Council administrative staff.

1.9.2 Subject Scope

The content scope of the study was limited to the factors affecting the performance of construction projects in Mayuge Town Council. This involved an examination of factors like; cost factors, time factors and quality factors on the performance of construction projects.

1.9.3 Time Scope

The study was confined to a period between 2005-2010. This period was chosen because the researcher believes the period of five years is sufficient enough to provide a basis for the investigation of the factors affecting the performance of construction projects in Mayuge Town Council, Mayuge District, Uganda.

1.10. Operational Definitions of Terms and Concepts

Leadership is defined as a process within groups in which one person, either by virtue of position or personality or both, obtains sufficient commitment of the other members to facilitate the achievement of group goals.

Procurement is the acquisition of goods and services at the best possible total cost of ownership, in the right quality and quantity, at the right time, in the right place and from the

right source, for the direct benefit or use of corporations or individual, generally via a contract.

A project is defined as a collaborative enterprise, frequently involving research or design that is; carefully planned to achieve a particular aim.

Project performance is defined as the degree of achievement of a certain effort or undertaking which relates to the prescribed goals or objectives that form the project parameters. There are many other elements that determine project success, but the focus of this is on the critical parameters of project performance for instance time cost and quality.

Employee contract is defined as an agreement between the two parties, employer and employee, and this agreement is identified by the particular term contract of employment.

Employee performance is defined as a process that companies use to ensure their employees are contributing to producing a high quality product or service.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of related literature highlighting gaps in the existing body of knowledge that relate to the factors affecting the performance of construction projects. It also presents accessed literature regarding the dimensions of the factors in this case which includes; cost factors, time factors and the quality factors. It further reviews related works on performance and its dimensions on the delivery of expected quality of services, delivery of expected quantity of services and the citizens' satisfaction from public service delivery.

2.1 Theoretical Review

The theory adopted in this study was contracts theory which stipulates that in utility provision between public and private sector, because laws developed from contracts theory exhibit direct exchange of rights and duties to which parties to the contract don't have a continuing relationship. The contracts set standards that must be met and impose remedies should the parties not stick to their bargain. The appropriate legal system and institutional framework is fundamental in determining project success in the sense that the roles of each partner are clearly defined. Benefits and risk sharing mechanisms between partners are clarified, the term of contract period is established and performance standards are set (Crasswell, 1988).

The contract involves more than a promise, it is essentially a means of sharing risks, benefits and responsibilities (North, 1990). However, partners planning how to structure operating

relations rather than simply defining what is exchanged come to dominate a lot of modern contracts (Atiyah, 1979). This instills confidence and inspired to drive to deliver services. The cost factors which include: dimensions like; material and equipment costs, motivational costs and regular project budget up-date and escalation of material prices as well as quality factors such as; conformance to specification and scope of works, availability of competent staff, quality of equipment and raw materials and quality training were looked at in regards to this study.

In addition, the longer a contract lasts, the more likely it will be self enforcing since the parties will value the relationship (Alelvods, 1984). The contracts theory was considered relevant in this study with an assumption that the researcher would be in position to relate both quality factor as well as the cost factors to the performance of construction projects in Mayuge Town Council.

Another theory adopted in this study is the Agency theory. This theory was chosen because it focuses upon the issues that arise when one party (agent) carries out work on behalf of another (the principal). It is assumed that the interests of the principal and those of the agent do not necessarily coincide. But where, there is perfect, free information then there is little difficulty. This is because the principal is able to monitor the agent's performance and to design an effective set of sanctions and incentives. Therefore, failures are instantly and accurately observed.

In this case, if the time factors such as site preparations, availability of resources, planned time for construction are not adhered to then we might see delays in accomplishment of a given project. Macneil (1980) observes that, the problems in the relationships between the principal and agent would match if the relationship hierarchies are made longer because there would be many relationships to involve hence limit flexibility. If the incentives of the agent are aligned with those of the principals then it is assumed that they would act in accordance with the principle's interest so monitoring costs would reduce. In this study, the agency theory was considered relevant in guiding the study with an assumption that time factors could be the one's significantly affecting the performance of construction projects in urban local governments.

2.2 Conceptual Frame work

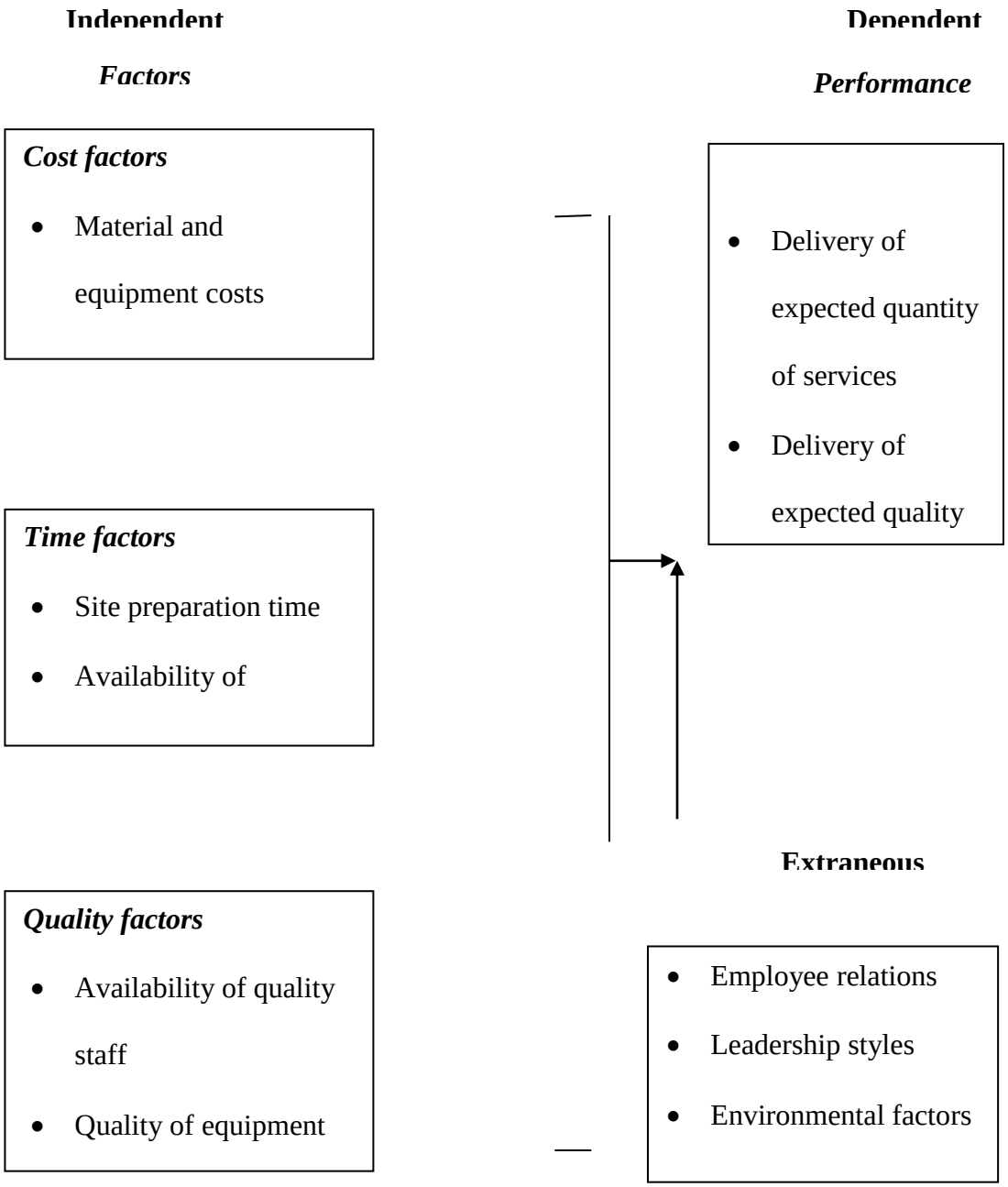

Fig 1.1*:* Conceptual frame work relating cost, time and quality factors to performance

The framework in fig. 1.1 suggests that the independent variable is conceptualized as three factors; cost factors, time factors and quality factors. Fig1.1 further suggests that the cost factors were conceptualized into; material and equipment costs, escalation of material prices, regular project budget up-date and motivation costs. The time factors were conceptualized into; site preparation time, availability of resources, average delay in claim approval and planned time of construction. While quality factors were conceptualized into availability of quality staff, quality of equipment and raw materials, quality training and conformance to specification and scope of work. Fig 1.1 also suggests that the extraneous variables such as; employee relations, leadership styles and environmental factors are competing with the independent variable (factors) to influence the dependent variable (performance). Fig 1.1 also hypothesizes that the factors (independent variable) in this study have a significant effect on the performance of construction projects (dependent variable) which is conceptualized into delivery of expected quantity of services, delivery of expected quality of services and the citizens' satisfaction from public service delivery.

2.3 Cost Factors and Performance of Contractors in Construction Projects

Small contractors have very low financial reserves and use the profit from ongoing projects to finance their next projects; hence a loss in one project ultimately leads to cash flow problems and liquidation (Stretton, 1984), material and equipment cost components that affect owners' liquidity and project budget. Stretton, (1984) results do not align with those of Lyer and Ijha (2005) and Ugwu and Haupt (2007) as materials and equipment cost rarely affect the cost performance of Indian and south African construction projects. This is exacerbated by the tendency for small contractors in developing countries to take money out of the business for

spending on personal items such as cars or a new house (ILO 1987). Most indigenous contractors in PNG are owner operated who also control the company financial matters. It is likely therefore, that project funds are sometimes channeled into other personal matters which consequently cause financial strain to the projects.

In addition, delays in contractor payment caused by the cumbersome process of making contractor payments in the public sector create financial problems for the contractor. Unless well managed, this delay is very damaging to contractors who are operating in a remote area away from the clients (Edmonds and Miles, 1984). Many small contractors also experience difficulties in obtaining money from financial institutions to finance their business due to high levels of bankruptcy in the industry; hence the initial capital for the business must come from the contractor (Miles 1979). Furthermore, most small and medium contractors in developing countries have very limited funds as they are seldom able to offer the necessary fixed assets as collateral (Ofori 1991). Small contractors therefore operate on very tight budgets, and when they make a loss on one project they tend not to have sufficient resources to continue in business (Stretton, 1984). Stretton (1984) further noted that the success of small indigenous contractors is dependent on the type of contract used- lump sum contracts requiring contractors to have sufficient finances for purchasing materials and paying workers.

Samson and Lema (2002) found out that the liquidity of the organisation is very important for evaluating of project budget and cost performance. However, Ugwu and Haupt 2007) is not in agreement with these results as this factor is not important for owners and contractors while it is moderately important for consultants. This might be owing to different economic and

political situations. As most government agencies experience financial problems, there are delays of payments to contractors with a consequent adverse effect on the contractors' cash flow (Ofori 1991). This then affects the operation of the contractor, ultimately hindering the projects from being delivered as required (Adam and Jannadi, 1997).

Only direct costs of rework for the failures observed were estimated: site overheads and work undertaken for the site from head office have not been included in estimates for rework of quality failures. This means that there is an under-estimate of their full cost through the exclusion of overheads. The exclusion of overhead cost for failures may seem to be a serious omission. However, the difficulties involved in establishing an accurate overhead figure have deterred others from including them in Cost of Quantities (COQ) calculations (Buratiet et. al, 1992).

It has been argued that the very low and unreliable rate of profitability within construction is an obstacle to sustainable healthy development (Egan, 1998). Increasing pressure on the contractors only damages the industry and merely serves to jeopardize their existence. In addition to such economic factors, other social and environmental issues from part of their sustainable development (Hill and Bowen, 1997: DETR, 2000). Love, et.al (2005) found out that cost performance relationship and their results indicate that cost is a poor predictor of employee performance. Effective equipment management practices not only increase production time and equipment availability, but also maximize the company profit by reducing several costs such as those from costly downtime (Edwards et al., 1998a).Therefore;

to contribute to the closure of such gaps this study considered cost factors as correlates to the performance of construction projects in Mayuge Town Council.

2.4 Time Factors and Performance of Contractors in Construction Projects

Clients normally expect fast projects in order to attain first position in the market to take advantage over competitors (Kong et al., 1999). Shorter construction time leads to improved client satisfaction and places contractors in an advantageous position in the market. Due to time related overheads and other relevant expenses such as the hire of construction plant and liquidated damage, contractors also prefer to shorten their stay on the site to reduce costs and increase their profits. Once delays occur, the lost time may be made up by working longer hours, more shifts, increasing the number of operatives and providing additional plant, at considerable additional cost.

Average delays in claim approval are among the factors leading to delays in construction projects. Karim and Marosszeky (1999) are in agreement with the results, as the average delay in payment from owner to contractor affect the time performance. Musoke (2007) found out that the preparation time does significantly affect the performance of construction projects in sub Saharan Africa. Musoke (2007) further contends that most contractors are characterized by effective planning and poor scheduling of projects which in turn negatively affects the success of these projects.

Lubega (2006) agrees with Musoke (2007) where he observed that the unavailability of resources as planned through project duration significantly affects the performance of such

factors like; time and quality of a given project. He contends that the unavailability of resources such as material can deter the project success in such a way that both human resources as well as financial resources have to be in full provision for the success of any organizational project. Okello (2008) found out that construction time is important to both clients and contractors because of its economic implications. Delays lead to an increase in construction costs and reduction in quality. Okello (2008) further states that in regard to time factors, contractor owners should dwell on aspects like; lifetime employment policy, the work force may be more stable and more committed and contractors are more willing to invest in training, resulting into a better workforce and improved overall performance.

In regards to the improvement of construction projects, Ofori (2008) is in agreement with Okello (2008) where Ofori (2007) observed that in order to improve their overall performance, contractors are advised to focus on aspects of time performance, maintain a stable and well –trained workforce, and establish long -term partnerships with their sub-contractors. Clients should realize that design variations during construction bring about uncertainties and risks and are disruptive to the planned work, and should be avoided as much as possible. Walker (1995) postulated that project scope is a useful predictor for construction time. The attributes used to measure this factor are type, nature of project, number of floors of the project, complexity of project and size of projects. Procurement of major construction equipment not only costs as high as 36 per cent of the total construction project cost, but also causes a high delivery time uncertainty, which may disrupt the construction schedule (Yeo and Ning, 2006). However, all the studies carried out revealed that there is a significant correlation between time factors and the performance of construction projects. Therefore, this

explains why time factors are hypothesized as a correlate to the performance of construction projects in Mayuge Town Council.

2.5 Quality Factors and Performance of Contractors in Construction Projects

Garvin (2010) defines quality in terms of cost and prices. In addition, a quality product is one that provides performance at an acceptable price or conformance at an acceptable cost. In this study, quality factors will mean; conformance to specifications/scope of works, availability of competent staff, quality equipments of raw materials and quality training. Different researchers have linked quality factors to performance. For instance, (ILO, 1987) found out that the deficiency in planning and management skills is said to be the greatest single problem small-scale contractors generally face. In developing countries, the local construction industry lacks the capacity and capability of undertaking large construction projects, resulting in the continual domination of expatriate construction companies in undertaking all major projects (Adam, 1997). Consequently, smaller companies find it hard to acquire experienced employees in their type of project (Jannadi, 1997) hence leading to contractors with limited management and technical skills (Ofori, 1991). This affects their ability to acquire building materials, manage their workers, successful bid for work (Stretton, 1984) and generally contributing to poor performance (Ofori, 1991).

In addition, small contractors in developing countries experience a shortage in skilled labour due to the salary and the security of employment offered by large construction companies being greater than that offered by the small contractor (ILO, 1987). Inappropriate contract documents have been identified as one of the most common problems affecting the operation

of small scale contractors (Ofori, 1997). In most developing countries, most public sector clients do not use a standard set of contract documents and building plans. The methods of construction are also different which often confuse contractors. Shortage or the lack of client supervision staff in some developing countries also contributes to the contractor's problem. This may result in the contractor doing remedial work, which can be very costly for construction projects.

As in all business ventures in PNG that are family owned, members of the family are employed to work for the company. Local building contractors also employ people from their family, the clan and the village. It has been found that, when a contractor employs only relatives, work input is very low when the owner is away from the site (Stretton, 1984). Quality standards may also invariably drop during accelerated work (Farrow, 1996). An emphasis on time could make contractors realize quality problems which would cause rework, making the time target more difficult to achieve, and therefore greater effort is expended in an attempt to guarantee satisfactory performance. However, contractors' past performance is one of the most important determinants of predictive performance (Tam and Harris, 1996).

This means those contractors who complete projects successfully are more likely to achieve project targets in future. Delays are not uncommon in construction projects (Wright, 1997; Graves and Rowe, 1999) and have significant cost quality implications as contended above. Thus, a high priority should be given to contractors' past performance during selection (Khosrowshahi, 1999; Fong and Choi, 2000). Contractors of high repute and better past

performance will bring about improved client confidence and raise the possibility of future business.

To overcome industry fragmentation, a number of integration approaches and strategies which have been successfully applied in other industries have been put forward, including design and construct, design for construction, concurrent engineering, lean production and business process reengineering (Mohamed, 2003).But, according to Mokhtar and Bendard (1995), these approaches have been proved to be inadequate in coping with the increasing complexity of construction projects without the support of it.

Quality problems in the construction industry were primarily looked on as specific problems related to the site, building structures, production, financing and end-users, among others. However, if quality problems can be identified and resolved so readily as such, poor quality standards would have long been eliminated completely in the construction industry. Nevertheless, this is not to suggest that the efforts taken individually to resolve the specific quality problems identified are irrelevant. The fact that poor quality standards still persist in the construction industry seems to suggest that there is a much more fundamental problem than contemplated or acknowledged thus far. This structural problem is related to the uncertain demand for construction or workload instability.

Mbajja (2006) studied the factors affecting the performance of construction projects and found out that there are three main factors such as; the environmental factors, people factors and client satisfaction factors that were considered. In this study however, the effect of quality

factors on performance of construction projects based on items oparationalized such as; conformance to specification/scope of works, availability of competent staff, quality of equipment and raw materials and quality training are different from those Mbajja dealt with.

2.6 Summary of Literature Review

There is empirical evidence that the construction industry is vital for the development of any nation in many ways and Ugwa & Haupt (2007) contend that the pace of economic growth is measured by the development of the physical infrastructure such as buildings, roads and bridges. A number of scholars have identified procurement success factors in terms of cost factors for instance; Stretton,1984; Lyer and Ijha, 2005; Ugwu and Haupt, 2007 and Edmonds and Miles,1984; these researchers observed that cost factors are the ones that mostly influence the smooth running of construction projects and without the cost factors any construction project cannot stand.

On the other hand, a number of studies have gone ahead to identify other factors such as: time factors. These researchers include; Karim and Marosszeky, 1999; Okello, 2008; Lubega, 2006; Ofor, 2008; Walker, 1995. Similarly, a number of other scholars; Adam, 1997; Jannadi, 1997; Ofori, 1991; Farrow, 1997; Tom and Harris, 1996 observed that quality factors are ultimately influenced by the context in which the project operates. In relation, Graves and others observed that contractor performance has declined overtime due to unavailability of competent staff, quality of equipment and raw materials among other factor.

The literature reviewed that projects which do not fully involve end-users at all levels of the project might tend to face costly failures. It further suggests that there is a significant effect on the factors affecting the construction projects in Uganda. However, the reviewed literature has not fully come up with responses to the researchers' apprehension of the possible causes of failure to sustain construction projects. There has been no empirical evidence found in the reviewed literature about whether there are sufficient factors that do affect construction projects in Mayuge Town Council. The literature does not fully pronounce on the cases of the decline in Mayuge District in general and Mayuge Town Council in particular. This study was therefore undertaken in an attempt to find out the linkage at this level and the researcher also found out that there was need to examine the factors affecting the performance of construction projects.

CHAPTER THREE

METHODOLOGY

3.0. Introduction

This chapter presents the research design, study population sampling strategies, data collection methods, data collection instruments and data quality control, data collection procedure and data analysis techniques that were used in the study.

3.1. Research Design

The study was based on a descriptive cross sectional survey where both qualitative and quantitative methods were employed (Sarantakos, 1997). These data collection methods were used for purposes of drawing valid conclusions. A cross sectional descriptive survey research design was used because the study was intended to select respondents across different departments with the purpose of soliciting for their opinions and analyzing them for comparison. A cross sectional survey was also used to gather data from a large number of cases at a particular time. The qualitative methods included interviews that were guided by an interview schedule. The quantitative data collection methods involved mainly the use of closed ended questionnaires, which were filled in by the respondents. The use of triangulation is supported by Amin (2005), especially where the study involves investigating peoples' opinions in regards to the study.

3.2. Study Population

The target population of this study constituted all employees in Mayuge Town Council. These employees were 205 in number in accordance with the statistics of Chief Administrative Officer. The category of employees that were investigated in this study included; contractors,

members of the procurement and disposable unit, members of the contracts committee, members of the evaluation committee and members of the technical planning committee. This population was chosen because the performance of construction projects in Mayuge Town Council has declined hence requiring immediate attention.

Table 3.1: Population and Sample Sizes in Mayuge Town Council

Category	**Total number**	**Total number sample**	**Sampling technique**
Contractors	108	96	Simple random sampling
Members of the procurement and disposable unit	20	I9	Stratified sampling
Members of the contracts committee	25	24	Stratified Sampling
Members of the technical planning committee	15	14	Judgmental Sampling
Members of the evaluation committee	20	19	Stratified Sampling
Total	**205**	**172**	

Source: CAO, Mayuge District (2010)

Table 3.1 indicates population and sample size for given categories of respondents suggests that for a population of 205 respondents Krejcie and Morgans table of sample size determination suggest 172 respondents as portrayed in table 3.1.

3.3 Sampling Strategies

Table 3.1 suggests that of the target population of 205 respondents that were used in this study, Krejcie and Morgans' (1970's) Table for determining sample size for a given population suggested a minimum sample size of 172 respondents who were given the questionnaires to give their views regarding factors affecting the performance of construction projects in Mayuge Town Council. Sampling satisfies the basic law of probability and assures the researcher of an utmost representation of the total population within an accepted margin of error. In this study, stratified sampling technique was employed to determine the category of the employees that were selected in Mayuge Town Council. Random sampling technique was also used to ensure that relevant information is obtained from the respondents of equal chance. Judgmental sampling technique was used to allow the researcher choose only respondents who have the exposure that best fits the purpose of the study.

3.4 Data Collection Methods

The study employed both secondary and primary data collection methods. Secondary data was gathered from published journals, research reports, text books, newspapers and internet data, to be used for the current purpose of the study. This is because it is a cheap method of obtaining data for the research. Primary data was collected from the original source (Mayuge Town Council) through self administered questionnaires, interviews and observation. This is because the data was tailor made and up to date for the study.

3.5 Data Collection Instruments

The data collection instruments included the self administered questionnaires and an interview guide.

3.5.1. Self-Administered Questionnaire

The researcher used self-administered questionnaires (SAQs) which consisted of both open-ended and closed-ended questions designed to obtain data on the respondents; background, independent variable (factors) and the dependent variable performance. The researcher used questionnaires in a survey that involved a large number of respondents (Amin, 2005). In addition, Self Administered Questionnaires (SAQ's) were also used because they were suitable for the target respondents given their high levels of English proficiency.

3.5.2. Interview Guide

The researcher also used an interview guide for interviewing the top administrators. Interviews were used because of their importance in yielding detailed information about the subject matter.

3.6. Validity and Reliability

Validity and reliability of the research instruments were ensured as follows:

3.6.1. Validity

In order to ensure validity of the instrument the drafted questionnaires were given to the supervisors and colleagues for critical assessment of each item. In addition, they were requested to state whether each item was relevant (R) or not relevant (NR) to the content

validity index (CVI) was thus computed using standardized measures so that appropriate adjustment is made. The instrument was revised until the content validity index was at least 0.794. This was because 0.7 is the least content validity index recommended in the survey studies (Amin, 2005).

$$CVI = \frac{\text{Number of items rated relevant}}{\text{Total number of items}}$$

$$CVI = \frac{27}{34} = 0.794$$

The content validity value of the questionnaire was 0.794 above 0.5 implying that the instrument was highly valid.

3.6.2. Reliability

To ensure reliability of an instrument, a pre-test aimed at getting precisely the duration it was to take to complete the questionnaires, whether the instructions, questions, the layout of the questionnaire was clear and attractive were administered to at least 20 respondents outside the sample frame. The reliability of the instrument was then analyzed using Cronbach's alpha coefficient with the help of a computer program of SPSS (Statistical package for social scientists) when the reliability alpha is greater than 0.5 (Alpha >0.5) it implies high level of reliability of the instruments (Amin 2005).

Table 3.2: Reliability Analysis on Questionnaires after Data Collection

Variable	alpha	Number of items
Cost factors	0.88	8
Quality factors	0.76	8
Time factors	0.78	8
Performance	0.83	10
Total	**0.71**	**34**

Source: Primary data

Internal consistencies of the scales used in the study were calculated using co-efficient Alpha. This helped to refine questions and eliminate those found lacking until results were satisfactory. The reliability co-efficient in all variables were found adequate as they indicated Alpha co-efficient above 0.70 which according to Nunnally (1978) an alpha of 0.70 and above shows that reliability coefficient is adequate.

3.7 Data Collection Procedure

The researcher sought an introductory letter from the department of Higher Degrees at Uganda Management Institute Kampala. Thereafter, the researcher contacted the administration in Mayuge town council to seek permission to carry out the study. Once granted permission the researcher ensured that the respondents were informed that the research was purely for academic purpose. The head of departments of the selected departments then helped the researcher in supplying the questionnaires to their respective subordinates but where there was need for interviews in order to ensure the usefulness,

accuracy and comparability of data, the researcher contacted the respondents themselves. Time was given upon which each selected respondent was to fill in the questionnaires thereafter, unfilled and wrongly filled questionnaires were collected, processed, analyzed and then the researcher came up with a written report.

3.8. Data Analysis

Both qualitative and quantitative data was collected and thus the analysis considered two categories of data. The collected data were edited for consistency and completeness to ensure correctness of the information. The Statistical Package for Social Scientists (SPSS) was used for data entry and analysis to yield descriptive statistics like percentages, frequencies. Pearson's correlation analysis test was used to determine the degree of relationship between the factors affecting the performance of construction projects. Regression analysis ascertained factors that are significant in predicting the performance of contractors.

Quantitative data from structured questionnaires were analyzed using the 4 point Likert scale while qualitative method relied on interviews. These were analyzed for content or for language used. Content and discourse analysis was through reading the scripts to detect various categories themes and patterns and establish the relationships among them. Under qualitative analysis relationship between categories and patterns were considered and established. The test used measured association of the variables in a non parametric Pearson correlation significance value or p-value to be considered significant. It had to measure 0.05 or less. In that case the implication was that, the results got on that response was not by chance therefore, it was a reality. For those that measured 0.006 and above, it was concluded that, there was no significant evidence about the response given on the variable.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

The aim of the study was to examine the factors affecting the performance of construction projects in Mayuge Town Council. The presentation of the results was done in line with the study objectives of the study which were; to establish the effect of time factors on the performance of construction projects, to examine the effect of cost factors on the performance of construction projects and to investigate the effect of the quality factors on the performance of construction projects in Mayuge Town Council. However, the presentation divided into three sub sections: the description of the background variables, the independent variable and the dependent variable. The information in this chapter is presented in table forms, standard deviations and percentages which have been worked on grand totals. The grand totals in this study do not add up to 100% of the total respondents in all cases due to missing scores. Further, in drawing inferential statistics with more empirical findings, the results of the bi-variate correlations were also presented in tables according to the objectives of the survey.

4.1 Response Rate

Response rates show percentage of participants that were involved in the study. These included contractors who were particularly given questionnaires and the members of the different committees who were interviewed as explained and shown in the table below. According to Phelps, et al (2001), poor response rates reduce sample size and consequently precision. This is a potential source of bias lessening the confidence with which findings can be accepted and generalized. Therefore, the response rates are presented in the study below.

Table 4.1 Response Rate

Category	Population	Sample size	Response rate	Percentage of response rate
Contractors	150	108	96	89%
Member of procurement committee	20	19	10	52%
Members of the contracts committee	25	24	15	63%
Members of the technical committee	15	14	09	64%
Members of the evaluation committee	20	19	10	53%
Total	**205**	**189**	**140**	**74%**

In this study, respondents who participated in the study included; contractors, Members of the procurement and disposal units, Members of the contracts committee, Members of the technical planning committee and Members of the evaluation committee was established. This helped to determine the sample size of each category of respondents. In this regard, only 89% of the respondents participated in the study while others who did not participate in the study thought that their information would not be treated with utmost confidentiality hence shying away from the study. In addition, 52% among the members of the procurement committee were involved in an interview, 63% among the members of the members of the contract committee were also involved in an interview, 64% among the members of the

members of the technical planning committee were also involved in an interview lastly, 53% among the members of the members of the evaluation committee were also involved in an interview with the researcher. The overall response rate in regards to this study was 70%.

4.2 Demographic Characteristics of Respondents

Section A of the questionnaire sought for data on the respondents' background. This was intended to gauge whether data collected was authentic. Data collected included the quantified demographic characteristics of respondents (contractors) such as; Age, Gender, level of education, marital status, and length of service were measured in terms of majority.

4.2.1 Respondents by Age

Respondents were requested to indicate their ages. This was aimed at enabling the researcher to describe the age of the respondents which could also affect their performance in construction projects. In this study, age of respondents was categorized into four categorizes namely; less than 30, 31-40, 41-50 and 51 years plus.

Table 4.2: Respondents by Age

Age	**Frequency**	**Percent**
Valid less than 30	22	22.9
31 – 40 years	49	51.0
41 – 50 years	19	19.8
51+	06	6.3
Total	**96**	**10.0**

In the Table 4.2 above, the majority of the respondents indicated the age bracket of 31-40 years with frequencies scoring 51%, followed by those respondents in age bracket of less than 30 years with frequency 22.9%, 41-50 got 19.8% and those of age bracket 51 years plus were only, 6(63%). The implications of these findings are that more contractors are still in their prime years and would mean that they are able to work hard for their organization.

4.2.2 Gender of Respondents

Respondents were asked to indicate their gender. This was intended to ensure proportionate representation of both male and the female contractors in Mayuge Town Council. Data collected was thus presented in Table below:

Table 4.3: Distribution of Respondents According to Gender

Valid	**Gender**	**Frequency**	**Percentage**
	Male	75	78.1
	Female	21	21.9
	Total	**96**	**100.0**

Table 4.3 indicates that male respondents formed the majority (75 or 78.1%) of the respondents while the female were only 21(21.9%). The fact that the majority (75 or 78.1%) of the respondents were male is in consonance with the record that most contractors in Mayuge Town Council are males (CAO - Mayuge District, 2008). This implies that there are more males in the construction projects than females in Uganda.

4.2.3 Respondents According to Academic Qualification

Respondents were asked to indicate their highest level of academic qualification. The academic qualifications of contractors were deemed important in the study as Busingye (2006) found out that there is a significant relationship between academic qualifications and employee performance in Wakiso District. Respondents were therefore asked to indicate their education levels in the questionnaire given to them during the field work and results were summarized in table below.

Table 4.4: Respondents According to Academic Qualification

Qualification	**Frequency**	**Percent**
Diploma	46	47.9
Graduate	44	45.8
Postgraduate	06	6.3
Total	**96**	**10.0**

Table 4.4 revealed that the majority of the respondents who participated in the study, 47.9% of the respondents with 46 frequencies were diploma holders. Also 45.8% of the respondents with 44 frequencies were degree holders; only 6.3% had post graduate qualifications. This implies that most contractors in Mayuge Town Council are qualified employees since the survey under taken indicated that in order to work as a contractor you must possesses at least a diploma in the respective field. Therefore, this is in consonance with what is prevailing in Uganda today were the minimum qualification of any employee in local government is a diploma (Local Government Report, 2008).

4.2.4 Respondents by Marital Status

The respondents were requested to indicate their marital status. This was aimed at enabling the researcher describe the contractors' marital states which could also affect their performance in construction projects in Mayuge Town Council. It was coded as I for single and 2 for married. Data on the marital status was presented in Table 4.5.

Table 4.5: Respondents by Marital Status

Valid	**Gender**	**Frequency**	**Percentage**
	Single	22	22.9
	Married	74	77.1
	Total	**96**	**100.0**

Table 4.5 indicates that married contractors formed the majority (74 or 77.1%) of the respondents while the single contractors were only 22(22.9%). Since the majority (74 or 77.1%) of the respondents was married, implies that they do get fewer interruptions at the work place and this explains the reasons as to why they are more committed than their single counterparts in Mayuge town council.

4.2.5 Respondents According to Working Experience

The respondents were requested to indicate their years of working experience. This was aimed at helping the researcher to describe the experience of contractors in Mayuge Town Council which could affect their performance. It was coded I for less than 2 years, 2 for 3-5 years 3 for 6 – 10 years and 10 years plus. Data collected was thus presented in Table 4.6.

Table 4.6: Respondents According to Working Experience

Valid	Experience	Frequency	Percentage
	Less than 2 years	3	3.1%
	3 – 5 years	39	40.6%
	6 – 10 years	48	50.0%
	10+	6	6.3%
	Total	**96**	**100.0**

Table 4.6 indicates that the respondents with less than 2 years working experience were 3(3.1%), the respondents in the category of 3-5 years of working experience were 39 (40.6%), respondents in the category of 6-10 years were 48 (50%) and in the category of 10 years plus were only 6 (6.3%) of the total respondents. This implies that the majority of the respondents were between the categories of 6-10 years. However, according to the data obtained, the majority of the contractors had been working in Mayuge town council for over six years which is in line with the employee transfer reports from the Ministry of Local Government showing that employees are given enough time in their areas of jurisdiction before they are transferred to the next duty station.

4.3 Findings

The study was set out to investigate the factors affecting the performance of construction projects in Mayuge Town Council, Mayuge District. Three research hypotheses were derived and these included, time factors significantly affect the performance of construction projects in Mayuge Town Council, cost factors significantly affect the

performance of construction projects in Mayuge Town Council, and quality factors significantly affect the performance of construction projects at Mayuge Town Council. To test these hypotheses the researcher therefore presented empirical evidence using descriptive analysis and percentage distribution, bi-variate correlations on the objectives. These mentioned above gives the evidence and the nature of relationship between variables at the extent to which each item affects or contributes to the other. The survey questionnaires were shown in Tables below: Items were measured using a 4-likert item ranging from best opinion strongly agree (1) to the worst opinion strongly disagree.

4.3.1 The Effect of Time Factors on the Performance of Construction Projects at Mayuge Town Council

This objective was set to find out whether time factors significantly affect the construction projects. Time factors were measured according to the four sub-dimensions namely: site preparation time, availability of resources, average delay in claim approval and planned time. Using eight items, respondents were asked to do self-rating on time factors in Mayuge Town Council. The 4 point Likert Scale rating was used ranging from one to represent strongly agree to 4 to represent strongly disagree and all responses were aggregated into one Index Time Factors called Tf. The findings are presented in the Table below:

Table 4.7: Distributive Statistics on Time Factors

	Item	SA%	A%	D%	SD%
1.	There is enough supply of work materials.	30.9	36.2	33.0	0.00
2.	The claims are approved on time	21.3	11.7	67.0	0.00
3.	The contractual companies do experience equipment breakdown leading to delays.	13.5	60.4	0.00	26.0
4.	There is late procurement or work materials	11.8	48.4	26.9	12.9
5.	There is good site management	0.00	28.6	62.6	8.8
6.	The contractors are constantly being supervised	0.00	59.6	20.2	20.2
7.	There are re-works due to errors	19.8	60.4	19.8	0.00
8.	The original contract duration is appropriate	12.5	19.6	58.3	6.3

Table 4.7 above, indicated that the majority (67.1%) of the respondents expressed that there is enough supply of work materials in Mayuge Town Council while the minority (33.0%) disagreed to it. 33.1% of the respondents agreed that the claims are approved on time while the majority (67.1%) indicated that the claims are not approved on time. In a similar instance, 73.9% of the respondents indicated that contractual companies do experience equipment breakdown and only 26% disagreed to it. 60.2% of the respondents agreed that at Mayuge Town Council there is late procurement of work materials while only 39.8% of the respondents disagreed to it. In relation, 28.6% of the respondents agreed to it that there is good site management while the majority (70.4%) of the respondents pointed out that there was good site management. In addition, 80.2% of the respondents opined to it that there are

re-works due to errors while 19.8% disagreed to it. Lastly, 64.6% of the respondents indicated to the fact that the original contract duration was appropriate and only 32.1% agreed implying that there is no original contract duration which is appropriate.

4.3.1.1 Correlation Analysis on the Effect of Time Factors on the Performance of Construction Projects

From the first objective to establish the effect of time factors on the performance of construction projects at Mayuge Town Council. This hypothesis was turned into a null hypothesis for testing which was also stated that there is no significant relationship between time factors and the performance of construction projects in Mayuge Town Council. To test the relationship the Pearson's Product Moment Correlation Index was used to establish the relationship between the two indexes (perf & Tf) as indicated in the Table below.

Table 4.8: Correlation Co-efficient between Performance and Time Factors

		Performance	**Time factors**
Performance	Pearson Correlation	1	.479(***)
	Sig. (2 tailed)	-	.000
	N	87	87
Time factors	Pearson Correlation	.479(***)	1
	Sig. (2 tailed)	.000	-
	N	87	87

*** …**correlation is significant at the 0.01 level (2-tailed)**

Table 4.8 shows the Pearson Correlation Coefficient for performance and time factors yielded r = 0.479 whose sig. = 0.00 which is less than $\propto$ = 0.01. Hence the researcher hypothesis is accepted and the null hypothesis is rejected Ho; there is no significant relationship between time factors and the performance of construction projects in Mayuge Town Council. Thus the researcher concluded that there is a significant relationship between time factors and the performance of construction projects in Mayuge Town Council. In regards to this study, the researcher believes that the management will need to avail contractors with adequate resources in terms of financial and non financial resources so as to eliminate any delays that may arise as a result of time factors.

4.3.1.2 Regression Model between Time Factors and Performance

A regression analysis was conducted to measure the extent to which time factors relate to contractual performance using the adjusted R^2 values, standardized beta values, t-values and significance measures at 0.05 level. The results of tabulatation are presented in table.

Table 4.9: Regression Analysis between Time Factors and Performance

Predictor	**Adjusted R**	**df**	**Mean square**	**f**	**Sig**
	0.56	1	3.241	21.771	.000(a)
	adjusted R square	standard error	standardized co-efficient Beta (β)	t	sig
Constant		.328		4.560	.000
Time factors	0.562	.120	.479	4.660	.000

The regression model in Table 4.9 above shows adjusted R^2 value 0.562 between time factors and contractual performance suggesting that time factors is 56.2% of variance in enhancing the performance of construction projects. The R^2 = 0.562, β = 0.479, t= 4.660 and significance 0.00 suggested that time factors was a strong significant predictor of enhancing the performance of construction projects in Mayuge Town Council.

4.3.1.3 Results from the Interview

When the researcher asked the interviewee about the effect of time factors on the performance of construction projects. One administrator said "Uganda being a third world country, the Town Council does experience scarcity of resources in terms of; financial and the physical ones which in turn do have a positive bearing on the time factors." The other interviewee lamented that, "there is a time when I submitted in my claim for approval and to my dismay, it took six months to be approved" therefore, this implied that the project had to come to a stand still up to when the claim was approved.

On a similar note, the researcher asked the head of the procurement unit about the effect of time factors on the performance of construction projects he stressed that the Town Council usually takes 3 – 6 months to study the various proposals submitted in by the different clients. In this regard, the researcher does differ with the study findings from the interviews were he stressed that there is a significant correlation between time factors and the performance of construction projects in Mayuge Town Council.

4.3.2 The effect of Cost Factors on the Performance of Construction Projects

This objective was set to find out whether cost factors significantly affect the construction projects. Cost factors were conceptualized according to the four sub-dimensions namely;

material and equipment costs, escalation of material prices, regular project budget updates and motivational costs using eight items, respondents were asked to do self-rating on cost factors in Mayuge Town Council. All these responses were aggregated into one index cost factors called Cf. the findings are presented in the Table below.

Table 4.10: Descriptive Statistics on Cost Factors

	Item	**SA%**	**A%**	**D%**	**SD%**
1.	There are delays in the progress payment	1.0	54.3	2.1	42.8
2.	There are difficulties in financing construction projects	29.2	35.4	10.4	25.0
3.	The incentives are always available	2.0	15.6	26.0	56.3
4.	The material and equipments costs are high	0.1	60.4	33.3	0.2
5.	There are regular project up dates	30.9	28.7	0.00	40.4
6.	There are escalations in material prices	6.8	58.0	0.00	35.0
7.	The contractors are offered motivational costs	37.5	31.3	16.7	14.6
8.	The Town Council undergoes budget progress monitoring	2.6	57.3	22.9	17.2

In Table 4.10 above, indicated that the majority (55.3%) of the respondents indicated that there are delays in the progress payment of workers and only (44.9%) disagreed to it. 64.6% who were the majority agreed to the view that there are difficulties in financing construction while 35.4% disagreed to it. 17.6% of the respondents indicated that the incentives are always available while (82.3%) of the respondents agreed to it that incentives are always available. 60.4% of the respondents opined to it that the material and equipment costs are high while only 33.5% of the respondents disagreed. In a similar instance, 59.6% of the respondents

pointed out that there are regular project updates while only (40.4%) disagreed to it. In addition, 68.8% of the respondents opined to it. Lastly, when asked whether the town council undergoes regular project updates the majority (59.9%) agreed to it and only 40.1% disagreed to it that the town council doesn't undergo regular budget updates.

4.3.2.1 Correlation Analysis on the Effect of Cost Factors on the Performance of Construction Projects

From the second objective to establish the effect of cost factors in Mayuge Town Council. This was later converted into a research hypothesis which stated that, there is a significant relationship between cost factors and the performance of construction projects in Mayuge Town Council. This research hypothesis was later turned into the null hypothesis for testing, Ho; there is no significant relationship between cost factors and the performance of construction projects in Mayuge Town Council. To test the relationship the Pearson's Product Moment Co-relation Index was used to establish the relationship between the two indexes (perf & Tf) as indicated in the Table below.

Table 4.11: Correlation Coefficient between Performance and Cost Factors

		Performance	**Cost factors**
Performance	Pearson Correlation	1	-.143
	Sig (2 tailed)	-	.209
	N	87	87
Cost factors	Pearson Correlation	-.143	1
	Sig (2 tailed)	.209	-
	N	87	87

Table 4.11 indicates that cost factors negatively affect the performance of construction projects with the Pearson Correlation yielding r = (-.143) at the p-value of .209 which is greater than 0.05. This implies that we accept the Ho: that there is no relationship between cost factors and the performance of construction projects and reject the H1: there is a significant relationship between cost factors and the construction projects in Mayuge Town Council. Therefore, this type of relationship is weak or negative in a linear sense based on the Pearson's Correlation of -.143 which is less than the absolute value of -1. Thus the researcher concluded that there is a negative relationship between cost factors and the performance of construction projects in Mayuge Town Council. This implies that Mayuge Town Council administrators should carry out a viability as well as a feasibility study especially members of the procurement committee to find out the costs of materials as well as the equipments and carry out regular project up dates so as to minimize this weakness but about by cost factors.

4.3.2.2. Regression Model between Cost Factors and Performance

A regression analysis was conducted to measure the extent to which cost factors relate to contractual performance using the adjusted R^2 values, standardized beta values, t-values and significance measures at 0.05 level. The results of tabulation are presented in table.

Table 4.12: Regression Results between Cost Factors and Contractual Performance

Predictor	**Adjusted**	**df**	**Mean square**	**f**	**sig**
	0.97	1	.097	.497	.483(a)
	Adjusted R squared	standard error	standardized co-efficient Beta (β)	t	sig
Constant		.263		12.148	.000
Time factors	-.069	.098	-.080	-.705	.483

The regression model in table 4.12 above shows adjusted R^2 value -.069 between time factors and contractual performance suggesting that cost factors is -69% of variance in enhancing the performance of construction projects The R^2 = -.069, β = -.080, t= 12.148 and significance 0.483 suggested that cost factors was a weak significant predictor of enhancing the performance of construction projects in Mayuge Town Council.

4.3.2.3 Results from the Interviews

When the researcher asked the interviewee to comment on the extent of the effect of cost factors on the performance of construction projects in Mayuge Town Council one member of the contract committee said, “What hinders our Town Council to progress are the constant increase of the material prices within Uganda.”

When interviewed about the effect of cost factors on the performance of construction projects one member of the technical planning committee lamented that, “the Central Government usually avails us with finances meant for construction in quarters yet there

are constant escalations of material prices in Uganda today. In this regard the technical planning committee should carry out regular project budget updates to rectify this problem at hand. Therefore the interview results were consistent with the study findings as they both suggested a negative relationship between cost factors and the performance of construction projects in urban local governments in Mayuge Town Council, Mayuge District.

4.3.4 The effect of Quality Factors on the Performance of Construction Projects

The third objective was set to find out whether quality factors significantly affect the construction projects. Quality factors were conceptualized into four sub-dimensions namely; availability of competent staff, quality of equipment and raw materials, quality training and conformance to specification and scope of works. Using eight questions respondents were asked to do self-rating on quality factors in Mayuge Town Council. The Likert Scale rating was used ranging from 1 to represent Strongly Agree, 2 to represent Agree, 3 to represent Disagree and 4 to represent Strongly Disagree. All these responses were aggregated into one index quality factors called qf. The findings are presented in the Table below.

Table 4.13: Descriptive Statistics On Quality Factors

	Item	SA%	A%	D%	SD%
1.	The quality of the contractual work conforms to specification	63	0.00	13.7	80.0
2.	There is availability of competent staff	5.7	19.5	36.8	37.9
3.	The quality of work equipments conform to specification	10.3	26.4	0.00	63.2
4.	The qualification of technical team is desirable	18.2	1.1	34.1	46.6
5.	There is adequate experience among the consultants	32.9	7.3	25.6	34.1
6.	There are complexities in construction project designs	21.6	22.7	12.5	43.2
7.	The town council offers training courses	19.8	65.6	0.00	14.6
8.	There are control mechanisms	30.7	6.8	9.3	43.2

Source: Primary data

Table 4.13 above, indicated that the majority (93.7%) of the respondents expressed that the quality of the contractual work conforms to specification while 6.3% disagreed to it. 74.7% of the respondents agreed to it that there is availability of competent staff while 15.2% disagreed to it. While 63.2% of the respondents disagreed that the quality of work equipments conform to specification and only 36.7% of the respondents agreed to it. In a similar instance,19.3% of the respondents pointed out that the qualification of technical team is desirable while 59.7% of the respondents disagreed to it that there is adequate experience

among the consultants while 40.2% of the respondents agreed to it that Mayuge Town Council offers training courses to its employees while 14.6% of the respondents disagreed to it. Lastly, when asked whether in the town council there are control mechanisms the majority (52.5%) of the respondents disagreed to it that there are no control mechanisms while 37.5% of the respondents agreed to it.

4.3.4.1 Correlation Analysis On The Effect Of Quality Factors On The Performance Of Construction Projects

From the third objective, to establish the effect of quality factors on the performance of construction projects in Mayuge Town Council a researcher hypothesis was derived which stated that quality factors significantly affect the performance of construction projects in Mayuge Town Council. This research hypothesis was turned into a null hypothesis for testing. This null hypothesis stated that Ho: there is no significant relationship between quality factors and the performance of construction projects in Mayuge Town Council. To test the relationship the Pearson's Product Moment Correlation Index was used to establish the relationship between the two indexes (perf & Qf) as indicated in the Table below.

Table 4.14: Correlation Co-efficient between performance and quality factors

		Performance	**Quality factors**
Performance	Pearson Correlation	1	.277(**)
	Sig (2 tailed)		.014
	N	87	87
Cost factors	Pearson Correlation	.227(*)	1
	Sig (2 tailed)	.014	
	N	87	87

* Correlation is significant at 0.05 levels (2 –tailed)

Table 4.14 shows the Pearson's Correlation Coefficient for performance and quality factors which yielded r = 0.277 whose sig. = 0.014 which is less than $\propto$ = 0.05. Hence the research hypothesis is accepted and the null hypothesis is rejected Ho: there is no significant relationship between quality factors and the performance of construction projects in Mayuge Town Council. Thus the researcher concluded that there is a significant relationship between quality factors and the performance of construction projects in Mayuge Town Council. This implies that that members of the contract committee and other related departments will need to sustain and motivate the competent staff they do have at their disposal and as well as train more employees so as to enhance the performance of construction projects in Mayuge Town Council.

4.3.4.2 Regression Model between Quality Factors and Performance

A regression analysis was conducted to measure the extent to which quality factors relate to contractual performance using the adjusted R^2 values, standardized beta values, t-values and significance measures at 0.05 level. The results of tabulation are presented in table

Table 4.15: Regression Model between Quality Factors and Performance

Predictor	**Adjusted**	**df**	**Mean square**	**f**	**Sig**
	.486	1	.486	2.450	.000(a)
	Adjusted R squared	standard error	standardized co-efficient Beta (β	t	sig
Constant		.294		8.673	.000
Time factors	.486	.109	.184	1.565	.000

The regression model in table 4.15 above shows adjusted R^2 value 0.486 between quality factors and contractual performance suggesting that quality factors is 48% of variance in enhancing the performance of construction projects. The R^2 = .048, β = .184, t= 8.673 and significance 0.00 suggested that quality factors is a strong significant predictor of enhancing the performance of construction projects in Mayuge Town Council.

4.3.4.3 Results from Interviews

When different administrators in Mayuge Town Council were asked to comment about the quality of their work in the Town Council one administrator said "There are very few competent staff in the town Council due to the fact that there is a staff ceiling and the few who are there do not want to go for upgrading."

On the same note, in an interview with the Town Engineer he pointed out that," In the Town Council we have very old machinery such as tractors and other service Lorries," In this regard, the quality of service they do offer needs a lot to be desired. Hence, the interviews differed with the study results which indicated that there is a significant relationship between quality factors and the performance of construction projects in Mayuge Town Council.

4.4 Summary of Correlation Analysis of Variables

Correlation analysis was done to measure the relationship between variables; time factors, cost factors and quality factors. The correlation table displays Pearson coefficient significant values and the number of cases missing.

Table 4.16: Summary of Correlation Index of Variables

	Time factors	**Cost factors**	**Quality factors**	**performance**
TIME Pearson correlation	1	.482	.406	.476
Sig(2-tailed)	-	.000	.000	.000
N	84	84	84	75
COST Pearson correlation	.482	1	.724	-.080
Sig(2-tailed)	.000	-	.000	.483
N	84	84	84	84
quality Pearson correlation	.406	.724	1	.184
Sig(2-tailed)	.000	.000	-	.122
N	70	84	80	1
performance Pearson correlation	.479	-.080	.184	1
Sig(2-tailed)	.000	.483	.122	-
N	84	84	84	84

Source: primary data.

It should be noted that the values of correlation co-efficient range from -1 to+1 in which the absolute value indicates the strength with larger absolute values indicating relationships. The significance of the correlation co-efficient indicates the direction of the relationship (positive

or negative). However, according to Fink (1995) correlation co-efficient are not easy to interpret based on values of +1, 0 and -1. So he recommended another statistic; the co-efficient of determination of r^2 which tells the proportion of the variation in the dependent variable associated with the variations or changes in the dependent variables.

As shown in the Table above the correlation co-efficients on the main diagnol is always 1 because each variable has a perfect positive linear relationship with itself. The correlation co efficient for time factors and performance is 0.479 whereas that of cost factors is -.143 and that of quality factors is .277. This shows that there is a high positive correlation between time factors and quality factors and a negative significant relationship on the cost factors. Therefore, increasing the use of these variables will help contractors in Mayuge Town Council in improving on their performance.

4.5 Summary of Regression Analysis

Regression analysis was also done to ascertain factors that are significant in predicting the study objectives which included; establishing the effect of time factors on the performance of construction projects in Mayuge Town Council. To examine the effect of cost factors on the performance of construction projects in Mayuge Town Council and to investigate the effect of the quality factors on the performance of construction projects in Mayuge Town Council.

Table 4.17: A summary of Linear Regression Model

	Model	R	R square	Adjusted R	Std error	Mean Square	f_a	df_1	df_2	sig
1	1	.479	.230	.219	.120	.149	21.7	.562	.479	0.000
2	1	.080	.006	-.006	.098	.497	.497	-.069	-.080	.483
3	1	.184	.034	.020	.109	.198	2.45	.171	.184	.000

1) Predictor (time factors)
2) Predictor (cost factors)
3) Predictor (quality factors)

From the above Table 4.17, R is referred to as the correlation between the observed and predicted values of the dependent variable (performance) the values of R range from -1 to +1. R squared is the proportion of variation in the dependent variable explained by the regression model, the values of R squared therefore range from 0 to 1 small values indicate that the model does not fit the data well but in this case the values are not small as they tend to 1 and therefore the data fits well. In addition, the sample R squared tends to optimistically estimate how well the model fits the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population since the predictors (time factors, cost factors) and quality factors have high values, and then it implies that these variables are significant at enhancing contractual performance.

The regression model results for time factors (r= .479[a]) r^2 =0.230 revealed that a standard deviation in time factors leads to 0.120 increased performance in construction projects. Therefore site preparation time, availability of resources and planned time for construction are positively significant in showing that time factors are critical predictors in enhancing the performance of construction projects in Mayuge Town Council.

The regression model results for cost factors (r= 0.080[a]) r^2 = -.006 revealed that a standard deviation in cost factors leads to 0.098 increased performance in construction projects. Therefore, material and equipment costs, escalation of material prices, regular project budget updates for construction are positively significant in showing that cost factors are critical predictors in enhancing the performance of construction projects in Mayuge Town Council.

The regression model results for quality factors (r= 0.184[a]) r^2 = 0.034 revealed that a standard deviation in quality factors leads to 0.109 increased performance in construction projects. Therefore availability of quality staff, quality of equipment and raw materials, quality of training and conformance to specification are critical predictors in enhancing the performance of construction projects in Mayuge Town Council.

4.6. Summary of Hypothesis Testing

The data presented in this chapter was used to test the three hypotheses formulated in chapter one and the results are tabulated below in Table 4.18. The hypotheses were applied to test the relationship between the independent variable and the dependent variable.

Table 4.18: Summary of Hypothesis Testing

Hypotheses	**Supported/not supported**
Time factors	Supported
Cost factors	Not supported
Quality factors	Supported

The hypothesis that time factors have a significant relationship on contractual performance has been supported by evidence from the findings. There is a positive correlation between time factors and the performance of construction projects. The tests using the Pearson product moment correlation co-efficient indicated a result of .479*** confirming the strength of the relationship which is statistically significant at 0.05 level of significant

On the second hypothesis that; cost factors have a significant relationship on the performance of construction projects was not supported as evidenced from the study findings. Therefore, the results indicated a weak correlation between cost factors and the performance of construction projects. The tests using the Pearson product moment correlation co-efficient indicated a result of -.143 confirming the weakness of the relationship implying it was not statistically significant at 0.05 level of significant

The third hypothesis that quality factors have a significant relationship on contractual performance has been supported by evidence from the findings. Therefore, the results

indicated that there is a positive correlation between quality factors and the performance construction projects. When the tests were conducted using the Pearson product moment correlation co-efficient indicated a result of .227*** confirming the strength of the relationship is statistically significant at 0.05 level of significant

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In this chapter the summary, discussion, conclusions and recommendations of the study are presented according to the findings and their appropriate existing literature were included in the discussions, limitations contributions and implications for future research were also integrated in this section.

5.1 Summary

From the study findings, the study revealed that the relationship between the different factors affecting construction projects exists. This was confirmed from the data collected using S.A.Qs and the face-to-face interviews with the top administrators. The descriptive, correlation of these data reported more empirical evidence. The major findings of the survey were summarized according to the objectives below.

5.1.1 Effect of time factors on the performance of construction projects.

On this objective, the researcher found out that time factors have a strong significant relationship on the performance of construction projects in Mayuge Town Council since its dimensions consists of site preparation time, availability of resources, average delays in claim approval and planned time construction which do affect the performance of construction projects. Therefore, time factors do have a strong significant relationship on the performance of construction projects in Mayuge Town Council.

5.1.2 The effect of cost factors on the performance of construction projects.

On the second objective, the researcher found out that there is a negative relationship between cost factors and the performance of construction projects in Mayuge Town Council since its dimensions consists of material and equipment costs, escalation of material prices, regular project budget up-dates and motivational costs which do affect the performance of construction projects.

5.1.3 The effect of quality factors on the performance of construction projects.

On the third objective, the researcher found out that there is a strong significant relationship between quality factors and the performance of construction projects in Mayuge Town Council since its dimensions consists of availability of competent staff, quality of equipment and raw-materials, quality training and conformance to specification which do affect the performance of construction projects. The results are in line with Adam (1997) who found out that the deficiency in planning and management skills are said to be the greatest single problem small-scale contractors encountered. In developing countries, the local construction industry lacks the capacity as well as the capability of undertaking large construction projects, resulting in the continued domination of expatriate construction companies in undertaking all major projects.

5.2 Discussion of findings

5.2.1 Effect of time factors on the performance of construction projects.

In this objective, the sub-dimensions included site preparation time, availability of resources, average delays in claim approval and planned time. The results indicated that there is positive significant relationship between time factors and the performance of construction projects. To emphasize the findings, Okello (2008) found out that construction time is important to both clients and contractors because of its economic indications. Delays leads to an increase in construction costs and reduction in quality. Okello (2008) further contends that in regards to time factors contractor owners should dwell on aspects like; life time employment policy the work force may be more stable and more committed and contractors are more willing to invest in training, resulting into a better work force and improved overall performance. The study findings are theoretically supported by Musoke (2007) who found out that the preparation time does significantly affect the performance of construction projects in Sub-Saharan Africa. Musoke (2007) further contends that most contractors are characterized by ineffective planning and poor scheduling of projects which negatively affects the success of these projects. Thus the researcher believes that when the four dimensions of site preparation time, availability of resources, average delays in claim approval and planned time for construction are adhered to certainly the performance of construction projects in Mayuge Town Council would be achieved.

5.2.2 The effect of cost factors on the performance of construction projects

In this study, the researcher discussed; the effect of cost factors on the performance of construction projects in Mayuge Town Council. It should be noted that the variable cost factors were measured in terms of material and equipment costs, escalation of material prices, regular project budget up-dates and motivation costs in enhancing the performance of construction projects in the Town Council. The findings stated that there was a negative relationship between cost factors and the performance of construction projects. These results were consistent with Ofori (1991) who found out that small contractors therefore operate on very tight budgets, and when they make a loss on one project, they tend not to have sufficient resources to continue in business. The study results are empirically supported by Egan (1998) who observed that very low and unreliable rate of profitability within construction is an obstacle to sustainable economic development. Hill and Brown (2000) further noted that increasing pressure on the constructors, only damage the industry and merely serve to jeopardize their existence. In addition to such economic factors, other social and environmental issues form part of their sustainability. Thus, the researcher believes that there are many other factors that do influence the performance of construction projects although the results indicated that cost factors have a negative relationship on the performance of construction projects in Mayuge Town Council.

5.2.3 The effect of quality factors on the performance of construction projects

In regards to the study findings it was revealed that quality factors have a significant relationship on the performance of construction projects. From this analysis, it was evident that quality factor dimensions which included availability of competent staff, quality of equipment and raw-materials, quality training and conformance to specification have a significant relationship on the performance of construction projects. This is related to existing literatures as put forward by Adam (1997) who observed that the deficiency in planning and management skills is said to be the greatest single problem small-scale contractors encountered. In developing countries, the local construction industry lacks the capacity as well as the capability of undertaking large construction projects, resulting in the continued domination of expatriate construction companies in undertaking all major projects. These findings are theoretically supported by Tom and Harris (1996) who observed that quality problems will cause reworks, making the time target more difficult to achieve and therefore effort is expended in an attempt to guarantee satisfactory performance. Thus the researcher believes that for the town council to prosper there should be competent staff, quality equipments and quality training among the employees for performance to be realized.

5.3. Conclusions

5.3.1 To establish the effect of time factors on the performance of construction projects.

In this analysis, the evidence indicated that the four sub-dimensions of time factors had an impact on the performance in that there is a direct and positive relationship between time factors and the performance of construction projects in Mayuge Town Council. Hence, if

management adheres to the time factors then construction performance will certainly be achieved. Specifically, the researcher concluded that the different stakeholders should take the leading role in the implementation of the contract procedures and processes set to minimize time and other related factors in relation to the construction projects. By so doing, employee performance will certainly be achieved as issues of site preparation time, availability of resource and planned time for construction will surely be checked. Hence leading to better performance of construction projects in Mayuge Town Council.

5.3.2 To examine the effect of cost factors on the performance of construction projects.

In this analysis, the results indicated four dimensions of material and equipment costs, escalation of material prices, regular project budget up-dates, motivational costs have a negative relationship on the performance of construction project in Mayuge Town Council, if there are constant budget up-dates among the different stakeholders involved surely the cost factors in Mayuge Town Council could not be a problem in enhancing the performance of construction projects.

Specifically, the researcher concluded that when the different stakeholders join hands in the planning and implementation of construction projects in Mayuge Town Council to address issues like escalation of material prices, material and equipment costs which do have a negative relationship on the performance of construction project surely we shall see a difference on how issues are done in Uganda.

5.3.3 To investigate the effect of quality factors on the performance of construction projects.

In this analysis, the results indicated that its four dimensions, of availability of competent staff, quality of equipment and raw-materials, quality training and conformance to specification have a significant relationship on the performance of construction projects. Specifically, the researcher concluded that the various committees should have an upper hand in carrying out the supervisory and minority roles in manning the different construction projects so as to address the issues of the provision of competent staff, quality of equipments which do have a positive bearing on the performance of any construction projects. Therefore, the researcher believes that quality factors have a direct relationship on the performance of construction projects in Mayuge Town Council.

5.4 Recommendations

5.4.1 To establish the effect of time factors on the performance of construction projects in Mayuge Town Council

The researcher recommended that;

Work equipment should be procured in time by the contractors in the right quality and quantity so as to minimize issues in relation to time which might be a hindrance to development.

The Town council engineer, the Auditors and other technical staff should constantly carryout supervisory roles of workers at the site to avoid re-works due to errors.

The top administrators should take reasonable time in the verification and approval of contracts so as to minimize the delays that may arise as result of this phenomenology.

5.4.2 To examine the effect of cost factors on the performance of construction projects in Mayuge Town Council

The researcher recommended that;

The top administrators and especially the technical planning committee should periodically review the project budgets in order to rectify the problem of constant escalation of material prices.

Members of the evaluation committee should carry out a functional analysis to identify the right prices for the different kinds of materials and equipments needed for the Town Council.

The management in Mayuge Town Council should avail the contractors with motivational funds so as to enhance their effectiveness and efficiency in the different construction projects.

5.4.3 To investigate the effect of quality factors on the performance of construction projects in Mayuge Town Council

The researcher recommended that;

The employers should recruit competent staffs that have the core and basic competencies required to perform in those positions.

Human resource development should be undertaken within Mayuge Town Council so as to improve the quality of their employees.

Quality equipments and raw-materials should be availed to the workers so as to improve on the quality of the work done in the Town Council.

5.5 Contributions of the study

Although the major contribution of this study was to obtain a masters degree in management studies, the study might also contribute in identifying some other factors that may enhance contractor performance in Mayuge Town Council. These would help stakeholders in improving the performance of contraction projects that would eventually lead to good standards and better service delivery.

More so, the study might help in highlighting the cost factors which had a negative relationship on the performance of construction projects in regards to the study findings. Therefore, issues such as material and equipment costs, escalation of material prices, regular project budget updates and motivational costs should be adhered to for any project to be successful.

The study findings might also contribute to the construction projects were the researcher found out that there was a positive relationship between time factors on performance of construction projects. Therefore, dimensions such as site preparation time, availability of resources, average delays in claim approval and planned time for construction should be paid eminent attention to for any construction project to be successful.

The study might also contribute to employees and other future managers who would design measures for contractor performance based on the findings of the study that quality factors had a positive effect on the performance of construction projects. Therefore, dimensions such as availability of quality staff, quality of equipment and raw materials, quality of training and conformance to specification (SOW) should be adhered to for future managers to be progressive in construction projects.

The study has added to the existing body of knowledge by stimulating new areas for further research through the findings and subsequent recommendations.

5.6 Limitations of the study

Time was a problem since the research had a cross-sectional descriptive design and yet the researcher had to meet the deadline. Thus, this problem was solved by drawing up a work plan.

Transport was a problem to the researcher since the researcher had to look for the respondents even in the field where they were for the purpose of finishing the said study in time.

Mayuge Town Council is in a rural District of Mayuge where transport is a very big challenge.

5.7 Areas for further research

Since the findings in this study revealed both positive and negative relationship between time factors, cost factors, quality factors and the performance of construction projects in Mayuge Town Council further research should be made in the following areas;

- The relationship between cost factors on the commitment of contractors.
- The factors affecting job satisfaction of contractors in Mayuge Town Council.
- The impact of situational factors on employee commitment in Uganda.
- The impact of quality factors on employee job satisfaction in Uganda.
- Expanding the sample size in a similar research design will strengthen the generation of the study findings study should therefore be carried out on a wider scale; a region would probably bring out more general results.

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APPENDIX I

Self-Administered Questionnaire for contractors on factors affecting the performance of construction projects in Mayuge Town Council

Dear Respondents

I am carrying out a research on factors affecting construction projects Mayuge Town Council. The following questionnaire is for members of the contractual department like you. Contractors are expected to enjoy their work for effective performance. It is against this background that you have been selected to participate in the research by completing the questionnaire. It would thus be very helpful if you assist by answering the questionnaire as per the instructions at the beginning of each section. You should provide the most appropriate answer in your opinion. Your responses will be kept confidential. In any case the questionnaire is anonymous. Please endeavor to fill the questionnaire

Yours faithfully

Section A: Background Information

In this section, you are kindly requested to tick that alternative response that fits your opinion as a teacher:

1. Your age group

   (1) Less than 30 (2) 31-40 (3) 41-50 (4) 51+

2. Your sex:

   (1) Male (2) Female

3. Your highest level of Education:

   (1) Diploma qualification (2) Graduate qualification (3) post graduate qualification

4. Your marital Status:

   (1) Single (2) Married (3) Divorced/separated (4) Others

5. How long have you served in this position..

   (1)Less than 2yrs (2) 3-5yrs (3) 6-10yrs (4) 10+

Section B: Independent Variable: Factors

Using the key given, choose or tick the right alternative that corresponds with your opinion as they relate to you regarding the factors affecting the performance of construction projects follows:

4. Strongly Agree (SA) 3. Agree (A) 2. Strongly Disagree (SD) 1. Disagree (D)

NO.	TIME FACTORS	SA	A	SD	D
I	There is enough supply of work materials at the town council.	4	3	2	1
2	The claims are approved on time.	4	3	2	1
3	The contractual companies do experience equipment breakdown in Mayuge town council hence leading to time delays.	4	3	2	1
4	There is late procurement of work materials in Mayuge Town Council.	4	3	2	1
5	There is good site management by the technical team	4	3	2	1
6	The contractors are constantly being supervised.	4	3	2	1
7	There are re-works due to errors during construction.	4	3	2	1
8	The original contract duration is appropriate.	4	3	2	1

No.	Cost Factors	SA	A	SD	D
9	There are delays in the progress payment by the Town Council.	4	3	2	1
10	There are difficulties in financing construction projects in Mayuge town council.	4	3	2	1
11	The incentives are always available for finishing ahead of schedule.	4	3	2	1
12	The material and equipment costs are high.	4	3	2	1
13	There are regular project budget up-dates in Mayuge Town Council.	4	3	2	1
14	There are escalations of material prices in Mayuge Town Council.	4	3	2	1
15	The contractors are offered motivation costs to accomplish their projects in time.	4	3	2	1
16	The town council undergoes budget progress monitoring.	4	3	2	1

No.	Quality Factors	SA	A	SD	D
17	The quality of the contractual work conforms to specifications.	4	3	2	1
18	There is availability of competent staff among the contractors.	4	3	2	1
19	The quality of the work equipments and raw materials conform to specifications.	4	3	2	1
20	The qualification of the technical staff in Mayuge town council is desirable.	4	3	2	1
21	There is adequate experience among the consultants in Mayuge Town Council.	4	3	2	1

22	There are complexities in Mayuge Town Council construction project designs.	4	3	2	1
23	The town council has offered training courses for contractors to undertake these projects.	4	3	2	1
24	There are control mechanisms in regards to the project activities.	4	3	2	1

Dependent Variable: Job Performance

No.	**Performance Of Construction Projects**	**SA**	**A**	**SD**	**D**
25	The Town council has adequate resources for the work.	4	3	2	11
26	I always report at work in time	4	3	2	1
27	I am motivated to work by my employers.	4	3	2	1
28	My colleagues encourage me to work harder.	4	3	2	1
29	There is team work in my department.	4	3	2	1
30	I am committed to my work.	4	3	2	1
31	I like my job	4	3	2	1
32	My supervisor is a team player	4	3	2	1
33	I work under minimum supervision.	4	3	2	1
34	The job meets my expectations	4	3	2	1

Thank you very much for making this study a success may the Almighty God rewards you abundantly.

APPENDIX II

AN INTERVIEW GUIDE ON FACTORS AFFECTING THE PERFORMANCE OF CONSTRUCTION PROJECTS IN MAYUGE TOWN COUNCIL

Dear Respondent

The researcher is a student undertaking a Masters degree in management studies (procurement and supply chain management) carrying out research on the factors affecting the performance of construction projects in Mayuge Town Council. You are kindly requested to answer the following questions as honestly as possible. The information you provide will be treated with confidentiality and used solely for the purpose of the study.

Thanks for your kind consideration and cooperation to the request.

Section A: Background Information

1. Your age
2. Gender
3. Marital status
4. Academic qualifications
5. Field of professional qualification
6. Your working experience

Section B: Give relevant answers as precisely as possible

7. Are the contractors appraised on the given work done?

   ……..

8. Do the contractors apply for the contracts?

   …….……..

9. What challenges does the town council meet in awarding contracts?

   ……..

10. What recommendations can you give to improve the system above?

    …….…….

11. Is the system transparent enough for all contractors to be awarded contracts? If no why?

    ……

    ……

12. Are the contractors paid in time for them to accomplish their work?

    ……

    ……

13. Do the contractors conform to work specifications?

    ……

    ……

14. Do the technicians carry out the evaluation and monitoring of the contractors?

    ……

    ……

APPENDIX III

RELIABILITY TEST

Cronbach's Alpha	Number of Items
.070	40

APPENDIX IV

PROPOSED BUDGET

Items	Quantity	Price per Unit	Amount
1. Stationary			
Pens	1 packet	3,500	3,500
Pencils	1 packet	1,000	1,000
Note books	5	1,200	6,000
Markers	10	1,000	1,000
Rubbers	4	5,000	2,000
Reams of papers	4	7,000	2,800
Sub-total			5,500
2. Secretarial Services			
Photo-copying	_	60,000	60,000
Type- setting	_	100,000	100,000
Disk	1 piece	35,000	35,000
Surfing	35 hours	25/= per minutes	52,500
Printing proposal	6 copies	7,000	42,000
Printing copies of instruments	3 copies	3,000	9,000
Sub- total			289,000
3. Feeding And Transport	-	-	200,000
4.Data collection	10 persons working day	10x5x5x5,000	250,000
5. Data analysis	_	_	250,000
6. Printing 1st draft	1 copy	40,000	40,000
7. Printing 2nd draft	2 copies	30,000	60,000
8 Printing and binding final report	6 copies	30,000	180,000
Sub-total			**1,268,500**
Grand-total			**1,329,000**

APPENDIX V

RESEARCH WORK PLAN AND TIME FRAME WORK

Activity	*Time (months)*	*Date*
Proposal development	3	January-March, 2011
Proposal presentation	1	April, 2011
Questionnaire development	1	May, 2011
Data organisation and analysis	1	June, 2011
Dissertation report writing and defence	2	July-August, 2011
Submission of the final copy	1	October, 2011
Graduation ceremony of UMI	-	March, 2012