LOCAL CONTRACTORS PERFORMANCE MANAGEMENT AND PROJECT COMPLETION IN CONSTRUCTION INDUSTRY. A CASE STUDY OF ROAD MAINTENANCE CONTRACTORS UNDER UNRA LIRA STATION.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study will measure the effect of local contractor's performance management on roads construction projects completion in Uganda. Local contractor's performance management in this study is considered as the independent variable and will be measured in form of contractor's technical capacity, monitoring and evaluation, selection criteria and the funding mechanisms while completion of road construction projects is the dependent variable and measured in terms of timely delivery, stakeholder satisfaction and quality output.

This proposal is arranged in three chapters: the introduction, literature review and the research methodology. The introduction chapter covers logically the background, problem statement, purpose, objectives, research questions, research hypotheses, conceptual framework, significance, justification and the scope of the study.

1.1.1 Historical Background

Construction Industry is the backbone for economic development. Kenny (2007) mentions that "construction sector role in economic development is Undeniable". In view of its importance, large investments were made by governments all across the globe for many years. In view of its identity as world oldest engineering division, construction process and practices has evolved over the centuries. As, Kenny (2007) mentions, "During last 100 years, technology in construction has developed drastically paving way for modern buildings and scientific designs". Also, the importance of construction was aptly brought out by Leesard (2011) who says that "Large engineering projects are important not only because they transform the physical

landscape and change the quality of human life, but because they are the crucibles in which new forms of collaboration are developed". Now, during last few decades there has been increasing importance to improve the practices and quickly contribute to the growing needs of society.

History of construction projects can be traced back to Egyptian Pyramids, early Greek settlement around Mediterranean, Roman Empire constructions of temples and structures in medieval age (Lewis, 2008). As it is known that in the 18th Century is Renaissance period which saw much significance to architecture and industrial revolution. Also, 19th century saw large improvements in construction industry particularly in railways and buildings. Marasini, and Dawood (2006) mentions that during 1959– 1969, the construction of Suez Canal was an international project of great proportions and contractors had gained experience in the construction of large buildings, railways, petrochemicals, dams and reservoirs. Lewis, (2008) mentions that Great Britain was first to go global with railway construction and the first major international construction company was built up by Pearson in Great Britain at about the turn of the century. Now there are massive projects constructed all over the world, driving the national economy.

1.1.2 Theoretical background

This study will utilize the Management Theory and Agency Cost Theory to understand how local contractor's performance management affect the completion of road construction projects. The Management Theory is a framework for understanding and often formally modeling the environment in which individuals, working together in groups efficiently accomplish selected aims (Koontz and Weihrich, 2000). Management Theory, attempts to deduce the managerial functions of planning, organizing, staffing, leading, and controlling. This theory will be important in predicting the contractor's/manager's behavior in choosing the most suitable

management functions depending on their management style which determine their performance levels on the project.

The Agency Cost Theory on the other hand was founded on the fundamental assumptions of financial management theory that looks at conflicts of interest between people with different interests in the same assets. This most importantly means the conflicts between: shareholders and managers of companies, shareholders and bond holders. The theory explains the relationship between principals, such as a shareholders, and agents, such as a company's managers. In this relationship the principal delegates (or hires) an agent to perform work. The theory attempts to deal with two specific problems: how to align the goals and principal of funds management so that they are not in conflict (agency problem), and that the principal and agent reconcile different tolerances for risk. This theory is important to estimate in the form of future risk and return and how estimates for specific shares are to be combined to form estimates for portfolio as a whole (Markowitz, 2005). This could help in managing the local contractor's performance on construction projects.

1.1.3 Conceptual Background

The study will be tailored on the conceptualization that local contractor's performance management affect construction projects completion in Uganda. Local contractor's performance management will be analyzed in terms of technical capacity, monitoring and evaluation, selection criteria and funding mechanism. According to Hanson *et al*., (2003), reveals that conflict, poor workmanship and incompetence of contractors are among the factors affecting project performance. According to the United Nations Relief and Works Agency (UNRWA, 2006), there is no exception in Palestine as many local construction projects report poor performance due to: unavailability of materials; excessive amendments of design and drawings; poor coordination among participants, ineffective monitoring and feedback, and lack of project leadership skills and regional conflicts.

Since Independence, the Governments of Ghana (GOG) has made several efforts to improve local capacity in the road construction industry as a means to reduce unemployment and retaining scarce foreign exchange in the local economy (Ntorinkansah, 2010). This is against the background that local road construction firms have often complained about the preference given to their foreign competitors. This is epitomized in a statement in the General News of Friday, 20 February 2009, that the "Government would also insist that a portion of the road construction industry went to local contractors". It is however clear that most government interventions have failed to yield their desired results and the construction industry continues to rely rather heavily on foreign contractors for almost all important road projects. In view of the above, there is the need for a study to assess performance management of local contractors based on road construction firms in the region.

1.1.4 Contextual Background

The construction industry plays significant role in the economy of developing countries. For example, in many developing countries, major construction activities account for about 80% of the total capital assets, 10 % of their GDP, and more than 50% of the wealth invested in fixed assets. In addition, the industry provides high employment opportunity, probably next after agriculture [(Ofori, 2006), (Jekale, 2004)1]. Despite the construction industry's significant contribution to the economy of developing countries and the critical role it plays in those countries' development, the performance of the industry still remains generally low. As (Idoko, 2008) noted, "…many projects in developing countries encounter considerable time and cost overruns, fail to realize their intended benefit or even totally terminated and abandoned before or after their completion …" Moreover, the development of the construction industry in developing countries generally lags far behind from other industries in those countries and their counter parts

in developed nations. Generally, as [(Ofori, 2006) & (Jekale, 2004)] concluded, "The construction industry in developing countries failed to meet expectations of governments, clients and society as a whole".

The performance management of road construction projects has been a subject of concern in Uganda and many countries for quite some time. The problem of underperformance is not only affecting the road construction projects but also the construction industry (Meyer, Witt, Kashiwagi & Kashiwagi, 2010). Studies show that construction projects and the industry at large have performed poorly in both the developed and under developed countries (Takim & Akintoye, 2002). Faridi and El-Sayegh (2006) asserts that shortage of skills of manpower, poor supervision and poor site management; unsuitable leadership; shortage and outdated equipment are among the factors that contribute to construction delays and subsequent performance problem.

1.2 Problem statement

The construction industry is an important part of every economy and that performance assessment holds the key to its achievement of national socio-economic goals. However, the persistent poor qualities of on-going, unfinished projects and not meeting deadlines by some contractors have contributed to the perceptions that the contractor is inefficient (Sam Stewart Mutabazi, The New Vision, Thursday, 14 July, 2015, The Ghanaian Times, Thursday, 12 March, 2009, pg. 9). The problem of underperformance is not only affecting the road construction projects but also the construction industry as a whole (Meyer, Witt, Kashiwagi & Kashiwagi, 2010). Studies show that construction projects and the industry at large have performed poorly in both the developed and under developed countries (Takim & Akintoye, 2002).

Therefore, it's upon that background that the researcher intends to scientifically prove whether the local contractor's performance in the construction industry in Uganda is low as indicated in the reviewed journals.

1.3 Purpose of the Study

To determine whether local contractors' performance management contribute to the success of road construction projects in Uganda.

1.4 Objectives

The specific objectives of the study are;

i. To examine whether the local contractors have the technical capacity undertake road construction project.
ii. To assess how the selection criteria of local contractors contribute project completion.
iii. To examine how funding mechanism of local contractors influence the completion of construction project.

1.5 Research questions

The questions that will guide the researcher are;

i. How does the technical capacity of local contractors affect the construction project completion?
ii. How do the selection criteria of local contractors contribute to the successful completion of construction projects?
iii. How does the funding mechanisms of local contractors influence completion of construction projects?

1.6 Hypotheses

The research seek to test the following hypotheses:

i. There is no significant relationship between local contractors technical capacity successful completion of road construction projects

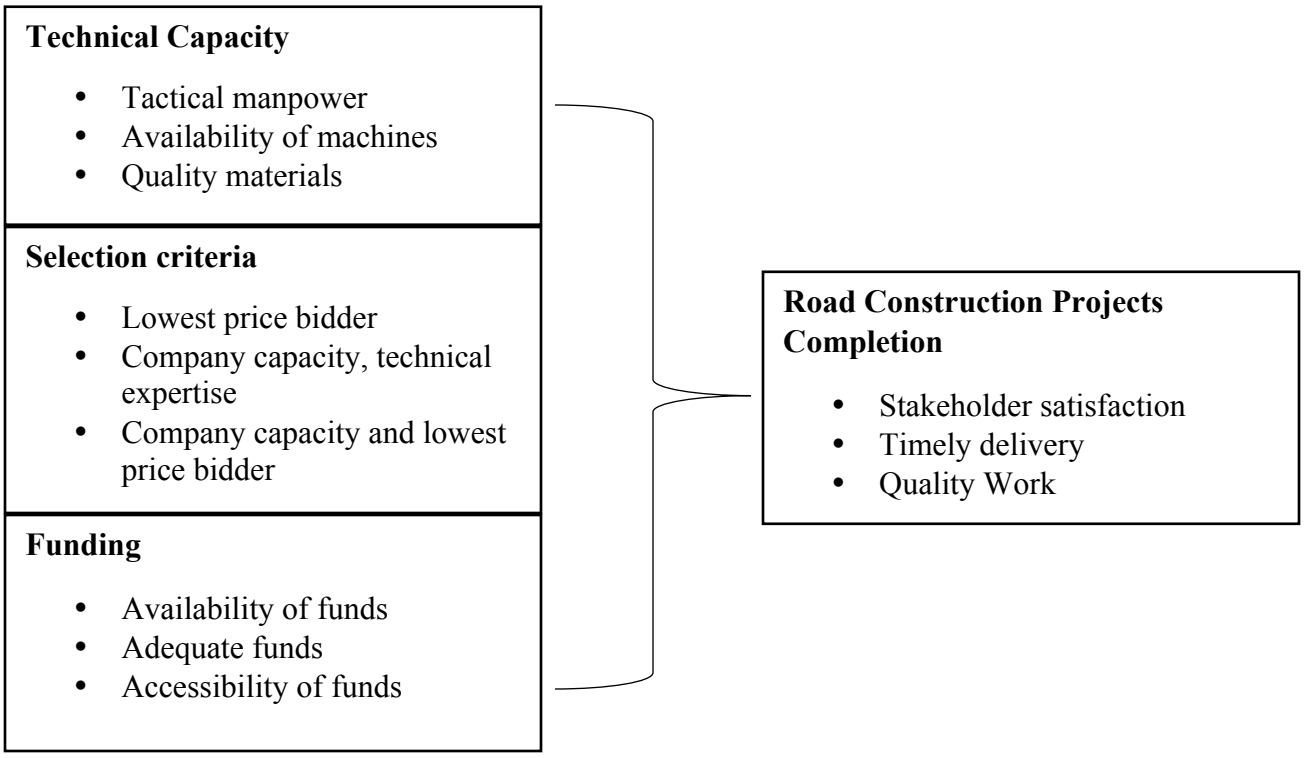
ii. There is no significant relationship between the selection criteria of local contractors and completion of construction projects.

iii. There is no significant relationship between the funding mechanisms of local contractors and completion of construction projects.

1.7 The Conceptual Framework

Local Contractor's Performance Management (I*ndependent Variable*)

Road Construction Completion *(Dependent Variable)*



Source: European Journal of business and Management, Vol.5. No.8, 2013

Project management and performance is an integral part of every successful construction work in the country Uganda. Performance management and performance assessment can help government agencies develop a continuous system of improvement. Consistent performance measures can help reveal when a program or service is not being delivered properly or

effectively, which can result in insufficient services to the public. It is important for government agencies to be receptive to introducing performance measures to become more focused on outputs and outcomes of a program.

Performance measurements can also result in positive behavioral change. Local contractors should embrace the concept of continuous improvement and be willing to be measured (benchmarked) against outcomes. Establishing a receptive climate for performance measurement is as important as the measurements themselves.

Managing project is the capability to identify the system, control the work and to accept its output efficiently and effectively under required conditions (Shigenobu and Takayuki 2009). Project cannot come out under the best conditions if performance is not measured against a good and properly set standard. It is therefore necessary that as a project start there is the need for monitoring and control measures to be carried on. In most part of the country most road projects are completed and in less than one year there is the development of "pot holes" on the road. Such an output cannot therefore be accepted in project.

Road projects are very important to the government of Uganda and all member of the nation. It beholds on all road contractors to be up to the task and complete their road constructional work on time. The importance of effective project management is to be able to predict the dangers and problems, plan, organize and control activities for the project to be completed within schedule (Lock 2007). Time is an essential element of every successful project. It a project is well done but not completed on the takes a big mark from the project therefore it is good for every road contractor to be able to predict the dangers and the problems the road project will go through and find the possible solutions to these problems and be able to complete road works on time. (Gray and McEvoy 2012 and Verzuh 2012) attest to the fact that a project is a finite process with a

definite start and end. This confirms the fact that all projects have a limited time span and are designed to achieve a goal. The biggest question here is, do Ugandan contractors.

1.8 Significance of the Study

Encourage Ministry of Works and Transport, Uganda National Roads Authority (UNRA), Ministry of Finance and Planning, Uganda Road Fund, Funders other government institutions, and policy makers on the significance of local contractors performance on roads construction projects Completion. The study will determine the factors affecting local contractor's performance on roads construction projects Completion in UNRA – Lira station so as to identify the areas where urgent action need to be taken to safeguard the interest of the sector. The study will help in the application of theoretical training to policy makers to address practical problems in the sector, and to provide insights to today's and the future managers on the importance of proper road construction completion. The study will encourage further researchers on the area to research as it's not exhaustive. The study will also benefit scholars who would wish to undertake further studies aimed at establishing the effectiveness of local contractor's performance on roads construction projects in their own case studies.

1.9 Justification of the Study

Construction industry has complexity in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders, regulators and others. Construction projects in UNRA suffer from many problems and complex issues in performance because of many reasons and factors. This study is very important to identify and to assess the performance of local contractors on government funded projects under UNRA Lira station. The practices concerning with the Key Performance Indicators (KPIs) such as time, cost, project owner satisfaction and safety checklists will be analyzed in order to know the main practical problems

of projects completion in the Lira station network and then to formulate recommendations to improve performance of local contractors on road construction projects in in the region. Because of completion problems in the northern sub region as shown previously and because previous related studies in Uganda about this topic do not deal with all aspects of local contractors performance in roads construction projects in UNRA stations; this study is required and very important to be considered. In this study, it will be measuring the local contractor's performance on roads construction projects in UNRA Lira station. These factors can be said as key performance indicators (KPIs). These KPIs can be used to measure construction projects completion and can then be used for benchmarking purposes. This will be a key component of any organization move towards achieving best practice in order to overcome completion problems in the region.

1.10 Scope of the study

1.10.1 Content Scope

The study will focus on local contractor's performance management as the independent variable and completion of construction project as the dependent variable. The independent variable has three dimensions which include; technical capacity, selection criteria and the funding mechanism; while the dependent variable will also be based on three major indicators which include: timely delivery, effectiveness and efficiency, quality of work and stakeholder satisfaction. The variables will be considered since they would be used to examine the relationship between local contractor's performance management and completion of road construction projects in Uganda focusing on UNRA-Lira network station.

1.10.2 Geographic Scope

The study will be carried out within UNRA Lira network station and will focus mainly on road construction projects under the UNRA administration. UNRA is mandated to manage the provision and maintenance of the national roads network in a more efficient and effective manner, to render advisory services to government on roads related matters and manage ferries linking the national roads network. The quality of the roads influences the flow of traffic and a number of issues will be highlighted in the road construction sector in Lira network station.

1.10.3 Time Scope

To effectively capture data relating to local contractors performance management and completion of road construction projects from 2010 to 2016, the literature content will included period from 1990 to 2014 because during this period the construction industry has been experiencing major developments in the road construction sector where some projects generally completed while others were unsuccessful, which caused great loss to the government.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

According to Amin (2005:138), literature review involves the systematic identification, location and analysis of documents containing information related to the research problem. This chapter provides the review of literature on local contractor's performance management and construction projects completion. It includes the theories to be used as well as the key concepts of the study and their interrelationships.

2.2 Theoretical review

According to Adams (2007:28), a theory is a set of systematically interrelated concepts, definitions and propositions that are advanced to explain and predict phenomena (facts). Theory also explains how some aspects of human behavior or performance and enables us to make predictions about their behaviors. This study will employ management theory and agency cost theory in order to describe, understand, explain and predict local contractor's performance management in response to construction projects completion.

2.2.1Management Theory

Management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims (Koontz and Weihrich, 2000). In its expanded form, this basic definition means several things. First, as managers, people carry out the managerial functions of planning, organizing, staffing, leading, and controlling. Second, management applies to any kind of organization. Third, management applies to managers at all organizational levels. Fourth, the aim of all managers is the same to create surplus. Finally, managing is concerned with productivity this implies effectiveness and efficiency.

Managing, like all other practices whether medicine, music composition, engineering, accountancy, or even baseball is an art; it is know-how. It is doing things in the light of the realities of a situation. Yet managers can work better by using the organized knowledge about management. It is this knowledge that constitutes science. However, the science underlying managing is fairly crude and inexact. This is true because the many variables with which managers deal are extremely complex. Nevertheless, such management knowledge can certainly improve managerial practice. Managers who attempt to manage without management science must put their trust to luck, intuition, or what they did in the past (Gardiner, 2000). In managing, as in any other field, unless practitioners are to learn by trial and error, there is no place they can turn for meaningful guidance other than the accumulated knowledge underlying their practice; this accumulated knowledge is theory. For practical purposes, all managers must develop three sets of skills, namely; conceptual, technical, and human (Peterson 2004). In regard to that local contractors believe that completion of road construction projects require performance management.

2.2.2 Agency Cost Theory

Agency theory is the branch of financial management theory that looks at conflicts of interest between people with different interests in the same assets. This most importantly means the conflicts between: shareholders and managers of companies, shareholders and bond holders. The theory explains the relationship between principals, such as a shareholders, and agents, such as a company's managers. In this relationship the principal delegates (or hires) an agent to perform work. The theory attempts to deal with two specific problems: how to align the goals and principal of funds management so that they are not in conflict (agency problem), and that the principal and agent reconcile different tolerances for risk.

The case fund managers faced major problems in implementing finance theory, especially with MPT and CAPM when estimating stock returns, and when using optimization routines to find the efficient frontier and the optimum risk, return portfolio. The problems arose, in part, because of the limitations of public domain data and because of the uncertainty implicit in forecasting stock risk and return characteristics. These problems also arose because of the many controversies and fundamental problems facing finance theorists laid the foundations of modern portfolio theory (Minocha, 2005). He stated that investors seek a risk/return trade off by seeking to maximize returns for a given level of risk or to minimize risk for a given level of return. He argued that a portfolio manager needed to know the weighting of for each of N stocks, N estimates of expected return and of variance of return, and N (N-1)/2 estimates of covariance of return between each pair of stocks in the portfolio. This information could be used to generate a large number of feasible portfolios which were dominated by a smaller number of efficient risk/return portfolios lying on the efficient frontier.

Risk averse, rational portfolio managers could choose one of these portfolios to reflect their or their clients risk/return preferences (utility). Given the above input data the portfolio selection problem could be solved to find the optimal solution using a quadratic programming approach. This approach was further simplified by the development of the Capital Asset pricing model by Sharpe and Lintner in the 1960s. They identified a single factor, linear model, in which a company's Beta measured the stock's return volatility relative to that of the market overall. This model reduced the number of covariance (now company to market return) to be estimated to the number of stocks in the portfolio. This much simplified the estimation and portfolio construction decision process.

Markowitz (2005) argued that finance theory tells us what is to be estimated in the form of future risk and return and how estimates for specific shares are to be combined to form estimates for the portfolio as a whole. However, theory does not tell us how to make the estimates of return, variance and covariance. These parameters are not known with certainty and some form of estimation bias is inevitable, given that some combination of historic data and/or forward looking subjective or expectancy data has to be used hence will be useful in analyzing the local contractor's performance management while adopting completion strategies for roads construction projects.

2.3 Performance Management in Construction

The last two decades have seen changes in business perceptions of construction industry worldwide. Various researchers commented on poor performance and the inefficiency of the industry (Anumba and Evbuomwan, 1999; Beatham, 2003), this can be buttressed by a general decline in the performance of construction companies which was also observed in US construction industry (Larson, 1995; Yasamis et al., 2002). Considering a publication by the UK government (Egan, 1998) explaining the targets for improvement in construction industry, all comments and recommendations for improvement were stressing the fact that determination of the performance measures was inevitable for sustainable improvement. Defining performance as being on-time, on-budget, and meeting quality expectations, Kashiwati (2002) concluded that construction is a business issue and not engineering technical issue. A layman can identify whether the contractor finished on time, on-budget, and whether the owner's expectations were met.

Traditionally, the construction industry was focused mainly on project performance (Ward et al., 1991; Mohsini and Davidson, 1992). Moreover, the performance of projects and contractors

were assessed based on the extent to which the client's objectives like cost, time and quality were achieved on those projects (Smallwood and Venter, 2001). Although these three measures provide an indication of the success or failure of a project, they do not in isolation provide a balanced view of the project's performance, and their implementation in construction projects is apparent only at the end of the project. Therefore, as suggested by Kagioglou et al. (2001), these three measures can only be classified as "lagging" other than "leading" indicators of performance. International research also supports this argument, which indicates that performance relative to cost, quality and schedule is influenced by other factors like health and safety, productivity, performance relative to the environment, and employee satisfaction (Smallwood and Venter, 2001). Ward et al. (1991) mentioned that the evaluation of projects, contractors, professionals or procurement methods solely according to the client's objectives is problematic. Another research conducted by Atkinson et al. (1997) reveals that clients will not be satisfied if the end product fails to meet their price, quality, time frame, functionality and delivery performance standard.

2.3.1 Technical Capacity

Competence is the ability of an individual to do a job properly. A competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in individual employees (Chan and Mohan 2009). Competencies are also what people need to be successful in their jobs. Job competencies are not the same as job task. Competencies include all the related knowledge, skills, abilities, and attributes that form a person's job. This set of context-specific qualities is correlated with superior job performance and can be used as a standard against which to measure job performance as well as to develop, recruit, and hire employees.

Competencies provide organizations with a way to define in behavioral terms what it is that people need to do to produce the results that the organization desires, in a way that is in keep with its culture. By having competencies defined in the organization, it allows employees to know what they need to be productive. When properly defined, competencies, allows organizations to evaluate the extent to which behaviors employees are demonstrating and where they may be lacking (Dubois and Rothwell 2006). For competencies where employees are lacking, they can learn. This will allow organizations to know potentially what resources they may need to help the employee develop and learn those competencies. Competencies can distinguish and differentiate your organization from your competitors. Competencies can provide a structured model that can be used to integrate management practices throughout the organization. Competencies that align their recruiting, performance management, training and development and reward practices to reinforce key behaviors that the organization values.

in the future (Dubois and Rothwell, 2007).

2.3.2 Selection criteria

Building projects are getting more complex. Because of that, the contractors that build these projects have to meet specific demands. Nowadays, the most important criterion for tendering in the Dutch construction industry is price. This means that the contractor that offers the lowest price gets the work. In the Enquete Bouwnijverheid, performed by the Dutch Government in 2003, the disadvantages of this way of tendering are mentioned (Parlementaire Enquetecommissie Bouwnijverheid 2003). The research points out that the criterion of lowest price does not stimulate and supplement the quality of the work and innovation in the building industry.

Also, because of the lowest price tendering, all contractors have to do exactly the same thing. Because of this, there are hardly any contractors with a particular expertise. This is very bad for innovation in the industry. This way of tendering also leads to highly divided responsibilities and in a lot of cases bad relationships between contractor and client. These bad relationships are a result of the fact that contractors try to come up with the lowest possible price. When they have the lowest price in the tender, they are allowed to build the project. During the project, the contractor tries to earn as much extra money as possible. When, for example, the client wants to make a little change in the design, the contractor will ask a lot of money for that. Most of the time he will ask for more money than he really needs to fulfil that job. This will lead to distrust, unpleasant situations and negative energy.

One of the most important steps in every production process is the selection of a supplier. In the construction industry, very difficult, unique products have to be developed. In the construction industry, one of the suppliers is the contractor. He is responsible for the execution of the work.

Although there are a lot of differences between the construction industry and other industries, the principle of selecting suppliers is the same: a client buys a product from a supplier. The whole process of supplier selection has been discussed in literature for several years. Van Weele has developed a purchasing model that includes the following steps: Determining specification, Selecting supplier, Contracting, Ordering, Expediting and evaluation, Follow-up and evaluation

Another model for contractor selection is developed by Momme and Hvolby (2002) and is called the outsourcing framework. It contains the following steps: Competence analysis, Assessment and approval, Contract negotiation, Project execution and transfer, Managing relationship, and Contract termination

2.3.3 Funding mechanism

"Funding" is the act of providing financial resources, usually in the form of money, or other values such as effort or time, to finance a need, program, and project, usually by an organisation or government. Generally, this word is used when a firm uses its internal reserves to satisfy its necessity for cash, while the term ‘financing‘ is used when the firms acquires capital from external sources (Gyula, 2008) . Available funds may also refer to funds that can be withdrawn from a margin account at a brokerage firm, where margin loans are still outstanding. In this regard, the funding mechanism influences the local contractor’s performance management on road construction projects.

2.4 Project performance management and completion

Project management and performance is an integral part of every successful construction work in the country Ghana. Performance management and performance assessment can help government agencies develop a continuous system of improvement. Consistent performance measures can help reveal when a program or service is not being delivered properly or effectively, which can result in insufficient services to the public. It is important for government agencies to be receptive to introducing performance measures to become more focused on outputs and outcomes of a program. Performance measurements can also result in positive behavioral change. Local contractors should embrace the concept of continuous improvement and be willing to be measured (benchmarked) against outcomes. Establishing a receptive climate for performance measurement is as important as the measurements themselves.

Managing project is the capability to identify the system, control the work and to accept its output efficiently and effectively under required conditions (Shigenobu and Takayuki 2009). Project cannot come out under the best conditions if performance is not measured against a good

and properly set standard. It is therefore necessary that as a project start there is the need for monitoring and control measures to be carried on. In most part of the country Ghana most road projects are completed and in less than one year there is the development of "pot holes" on the road. Such an output cannot therefore be accepted in project.

Road projects are very important to the government of Ghana and all member of the nation. It beholds on all road contractors to be up to the task and complete their road constructional work on time. The importance of effective project management is to be able to predict the dangers and problems, plan, organize and control activities for the project to be completed within schedule (Lock 2007). Time is an essential element of every successful project. It a project is well done but not completed on the takes a big mark from the project therefore it is good for every road contractor to be able to predict the dangers and the problems the road project will go through and find the possible solutions to these problems and be able to complete road works on time. (Gray and McEvoy 2012 and Verzuh 2012) attest to the fact that a project is a finite process with a definite start and end. This confirms the fact that all projects have a limited time span and are designed to achieve a goal. The biggest question here is, do Ghanaian contractors start and end their road contraction work on time?

Work performance of contractors is very important to the people of Ghana so when constructional works are not done to the expectations of the Ghanaian public then name calling of the contractor begins. Most of the local contractors bear the brunt of public criticisms of shoddy work, undue delay of projects and perceived diversion or misapplication of contract payments. Local contractors are synonymous with shoddy work (http:ghanabusinessnews.com).

Product outcome is one of the Malcolm Baldrige Criteria for performance Excellence. These are measures and indicators of product and service performance that have strong correlation with

customer satisfaction (Evans and Lindsay 2011). When the customers of a product keep complaining about the outcome of a project then the producer or the service provider will have to rethink about the product or service. The local contractors in Ghana will have to evaluate their work performance so that the perception of shoddy work being associated to them will be erased and their product outcomes will satisfy the customers.

In projects the availability or unavailability of resources will often have influence on the project. One of these resources is the human. This is the most important project resource. Human resources are usually classified by the skills they bring to the project (Larson and Gray 2011). Some of these human resource are not will qualified to perform the task but because some of the local contractors want to cut cost most of the human resource brought to perform the tasks are not as qualified as they should and in the end shoddy work is done.

According to (Mckean 2012 and MTD Training 2010) the most important part of the job of the project manager is to make sure that the team on each and every part of the project has skills, experience and skills. Abilities skills and competence are very important for every project and if these skills and abilities are not there them the project is in trouble.

2.5 Empirical Review

Nirmal K.A, Soo Y.K, (2016) researched on the factors affecting timely completion of construction projects where they found that construction projects need more time extending from one year to several years as per the most objectives. Also identified so many hindrances or barriers which may obstruct smooth operation of works.

Regina Bekoe (2013), researched on the performance of local contractors on government projects in Ghana where she found that most local contractors do not have the technical capacity

to undertake projects and recommended on the funding mechanisms used in financing these projects.

Benon C. Basheka, Milton Tumutegyereize (2012), measured the performance of contractors in government projects in developing countries; Uganda's context discovered that contractor performance is judged basing on their ability to use resources effectively, concern on being reasonable during contract modifications, ability to structure and work with teams, ability to continuously improve their internal employee capabilities through training, do the right job at the right time, and use of high quality of supplies and materials. These are expected of all contractors despite the set of challenges such contractors may face in growing economy like Uganda.

David Ndiang'ui Wambui, Kepha Ombui, Assumptah Kagiri (2015) researched on the factors affecting completion of road construction projects which included project managers competence, project technology, project funds and project equipments as the main factors affecting completion of road construction projects in Nairobi city.

Therefore, it's upon this background that the researcher intend to fill the gaps that may be affecting the construction industry in Uganda by measuring the local contractor's performance measurement on the successful completion of road construction projects in Uganda.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Kothari (2004:8) defined research methodology as a way of systematically solving a research problem. This involves various steps that were followed by the researcher during the study. The chapter provides the research design, the study area, and the target population, sampling procedure, methods of data collection and data collection instruments, data validity and reliability, measurement of the variables and data analysis.

3.2 Research Design

According to Kothari (2004:31), research design is a plan, a roadmap and blueprint strategy of investigation conceived so as to obtain answers to research questions. It is a procedural plan that is adopted by the researcher to answer research questions objectively, accurately and economically (Kumar, 1996:74). This study utilized a cross-sectional survey design which adopted mixed methods. A cross-sectional study predominantly uses questionnaires or structured interviews for data collection with the intent of generalizing from a sample to a population (Creswell, 2003). Under the aspect of mixed methods to provide the best understanding of a research problem (Creswell, 2003:12). Mixed methods employs strategies of inquiry that involves collecting data either simultaneously or sequentially to best understand research problem (Creswell, 2003:18). Both quantitative and qualitative methods will be employed to allow the researcher solicit information that cannot be expressed in numerical information about the phenomenon under study to aid establish patterns, trends and relationships from the information gathered (Mugenda and Mugenda, 1999). The quantitative methods will be

administered by the use of questionnaire while the qualitative methods will use key informant interview and document review.

3.3 Study Population

According to Amin (2005:235), a target population is the population to which the researcher ultimately wants to generalize the results. The target population for this study will be two hundred fifty respondents according to UNRA, 2016. Records indicate that there are 30 local construction companies contracted by UNRA-Lira Network Station out of which a sample is to be selected. Other key stakeholders that will inform this research include senior employees from these companies, UNRA Employees, MoWT officials, Local Leaders, Local Government Officials, Uganda Road Fund officials, and Civil Society Organizations.

Table 1: List of Local Contractors under UNRA-Lira Station

No.	Name of Local Contractors	No.	Name of Local Contractors
1	Angich Enterprises Ltd	11	Delarus Engineering Services Ltd
2	DOTTS Services Ltd	12	Tamp Engineering Services
3	Rukooge Gen. Enterprises Ltd	13	Mutoni construction (u) ltd
4	Kark Technical Services	14	Alam constructions ltd.
5	Tegeka Tech.	15	Alpine constructions ltd.
6	Allied Tech Services Ltd	16	Pearl engineering company limited
7	C&B Engineering Works Ltd	17	Associated engineering services
8	Noas Enterprises Ltd	18	Plan technical services ltd
9	OLET Elyak Ltd	19	Costa construction services.
10	JS Engineering Works Ltd	20	Gem engineering co. Ltd

Source: Africa One

Table 2: Population of Respondents

No.	Respondents	Population
1	Local contractors	20
2	Employees in construction companies	60

3	UNRA Employees	30
4	MoWT Officials	20
5	Local Leaders	40
6	Local Government Officials	50
7	Uganda Road Fund Officials	10
8	Civil Society Organizations	30
	Total	**260**

Source: UNRA, 2016

3.4 Sampling Techniques

3.4.1 Sampling Size

A sample is a finite part of a statistical population whose properties are studied to gain information about the whole. A good sample should be adequate and representative of the underlying population. A sample of 30% is an adequate sample in a descriptive study of this nature as supported by Gay (2005). An optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility (Kothari, 2004:57) Amin (2005:238) emphasize that a researcher must determine the sample size that will provide sufficient data to answer the research problem. A sample is important to reduce costs, time and has a high degree of accuracy (Amin, 2005:238-239). The sampling process will follow the table below

Table 2: Sample Frame

No.	Respondents	Population	Sample size	Sampling Procedure
1	Local contractors	20	6	Random Sampling
2	Employees in construction companies	60	18	Purposive Sampling
3	UNRA Employees	30	9	Purposive Sampling
4	MoWT Officials	20	6	Purposive Sampling
5	Local Leaders	40	12	Random Sampling

6	Local Government Officials	50	15	Purposive Sampling
7	Uganda Road Fund Officials	10	3	Purposive Sampling
8	Civil Society Organizations	30	9	Random Sampling
	Total	**260**	**78**	

Source: UNRA, 2016

3.4.2 Sampling Techniques

The researcher will use simple random sampling because of the following reason namely; the ease of assembling the sample. It will consider a fair way of selecting a sample from a given population since every member will be given equal opportunity of being selected due to the representativeness of a sample obtained by simple random sampling, it will reasonably make generalizations from the results of the sample back to the population as one of the goals of research will be able to make conclusions pertaining to the population from the results obtained from a sample.

The sample will be calculated using Fishers (1925) which has ideal formula for populations of targeted population 260. i.e.

$$n = \left(\frac{z^2}{d^2}\ xp\right) xq$$

Note: n –Sample Size

z – 1.96 corresponding to 95% confidence level

d – margin of error set at 5%

p – 10% proportion of employees from targeted departments

q – 1-p

3.5 Data Collection Methods

Both primary and secondary data will be used in this study. The primary data will be collected using a semi-structured questionnaire subdivided into two parts. Part 1 consist of open-ended questions aimed at obtaining general information on the station while Part 2 consist of questions aimed at obtaining data on local contractors.

3.6 Data collection instruments

Mugenda and Mugenda (2003) define data as facts of known or available information. Data are more than information of experiences or memories of a teller of a life story. They are all the relevant materials, past and the present, serving as the bases for study and analysis. Data collection therefore is the process of gathering such information from all the available sources with the main purpose of using such data in a research or a study. The data collection will be done using both open ended and closed ended questionnaires, survey design, interview guides and observation. Drop and pick methods will be used, and follow up will be done using emails and research assistants (Orodho, 2004).

3.7 Data Analysis and Reporting

Analysis of data will be done in order to answer the four research questions of this study. Data collected will be sorted, classified and coded then tabulated for ease of analysis. The data will be summarized and categorized according to common themes. The SPSS computer software will be used to aid the analysis as it is more user friendly and most appropriate for analysis of Management related attitudinal responses (Martin and Acuna, 2002). Descriptive statistics will be employed to analyze both qualitative and quantitative data.

3.8 Data Validity and Reliability

3.8.1 Validity

Validity refers to the extent to which an instrument measures what is supposed to measure, data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable (Mugenda and Mugenda, 2003). To establish the validity of the data collection instruments, the research instruments will be given to contractors, managers, district officials, opinion leaders, consultants, supervisors, and political leaders in the region. The managers and staffs will be expected to tick if the item in the questionnaires addresses the influence of the efficient performance in organizations. The content of the responses given by the managers and other stakeholders will be checked against the study objectives and rated using a scale of 1(very relevant) to 4 (not very relevant). The Content Validity Index will be used to determine the validity by adding up all the items rated using a scale of 3 and 4 by the managers and dividing the total sum by the total number of items in the questionnaires. The coefficient of the data gathered from the pilot study will be computed with assistance of Statistical Package for Social Sciences (SPSS).

3.8.2 Reliability

Reliability refers to the consistence, stability, or dependability of the data. Whenever an investigator measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results (Cooper & Schindler, 2003). A reliable measurement is one that if repeated a second time gives the same results as it did the first time. If the results are different, then the measurement is unreliable (Mugenda & Mugenda, 2003). To measure the reliability of the data collection instruments an internal consistency technique using Cronbach's

alpha will be applied. Cronbach's alpha is a coefficient of reliability that gives an unbiased estimate of data generalizability.

3.9 Ethical Consideration

For the study to be carried out efficiently and effectively, the researcher will obtain a letter of introduction from the University which will be presented to the respondents prior to starting any interview or filling-in a questionnaire and sensitization of the respondents for the study. This will enable the researcher to carry out the study without fear and substantive information will therefore be obtained. The researcher will further seek permission to conduct interviews from specific group as a matter of procedure in other relevant institutions that will be consulted. It will also take into consideration the confidentiality of the information obtained without disclosing the identity of my respondents.

REFERENCES

Adams, J., Hafiz, T., Khan, A., Raeside, R., and White, D. (2007). Research methods for graduate business and social science students. ISBN: 978-0-7619-3589-6 (PB) 978-81-7829-750-7 (India-PB).

Amin, M.A. (2005). *Social Science research: Conceptions, methodology and analysis*, Kampala, Makerere University press.

Anumba, C. J. and Evbuomwan, N. F. O. (1999). "A taxonomy for communication facets in concurrent life-cycle design and construction." Computer-Aided Civil and Infrastructure Engineering, 14, 37-44.

Atkinson, A. A., Waterhouse, J. H. and Wells, R. B. (1997). "A stakeholder approach to strategic performance measurement." Sloan Management Review; Cambridge, 38(3), 25-37.

Beatham, S. (2003). Development of an integrated business improvement system for construction. EngD Thesis submitted to CICE, Loughborough University.

California, pp. 609-625, (May 12-13, 2010).

Candida C. Peterson, (2004). Theory-of-mind development in oral deaf children with cochlear implants or conventional hearing aids, First Edition.

Chan W., & Mohan M., (2009). Compressing construction durations: lessons learned from Hong Kong building projects, International Journal of Project Management, 20, 23.35

Creswell, J. (2003). *Research design: Qualitative, Quantitative and mixed methods approaches*. Sage: London.

Dubois, D., & Rothwell, W. (2006). The Competency Toolkit (Volumes 1 & 2). HRD Press

Dubois, D., & Rothwell, W. (2007). Competency-Based Human Resource Management. Davies-Black Publishing.

Faridi, A. and El-Sayegh, S. (2006) 'Significant factors causing delay in the UAE construction industry', *Construction Management and Economics,* Vol. 24(11), 1167-1176.

General News of Friday, 20 February 2009

Gray, M. N. and McEvoy, E. (2012). Guzza's guide to practical project management: tips and advice on surviving the project management journey: Cliff South Head.

Gyula, S., (2008) Construction: Craft to Industry, Spon Press, London, UK.

Hanson, D.; Mbachu, J.; Nkando, R. 2003. Causes of client dissatisfaction in the South African building industry and ways of improvement: the contractors' perspectives, in CIDB, South Africa.

Harry M. Markowitz, (2005). Financial Analysts Journal. Market Efficiency: A Theoretical Distinction and So What? Vol. 61, Issue 5.

Kagioglou, M., Cooper, R. and Aouad, G. (2001). "Performance management in construction: A conceptual framework." Journal of Construction Management and Economics, 19(1), 85-95.

Kashiwai, D. T. (2002). The difficulty in implementing performance specifications in construction industry. Paper presented at the International Symposium of the Working Committee, CIB W92 (Procurement Systems).

Kenny, C. (2007) Construction, Corruption, and Developing Countries, World Bank

Kothari, C.R. (2004). *Research methodology. Methods and techniques*. (2nd Ed). India. New Age.

Kumar, K. (1996). Research methodology. *A step-by step guide for beginners*. Addison Wesley Longman.

Larson, E. (1995). "Project partnering: Results of study of 280 construction projects." Journal of Management in Engineering, 11(2), 30–35.

Leesard, R., (2011) Strategic Management of Large Engineering Projects: Shaping Journal of knowledge management, 4(3), 195-203.

Lewis, J. (2008). Mastering project management: Applying advanced concepts to systems thinking, control & evaluation, resource allocation. McGraw Hill Professional.

Lock, D. (2007). Project management 9th edition Ashgate publishing limited.

Marasini, R., & Dawood, N., (2006) Innovative managerial control system (IMCS): a Market Research: An International Journal, 3(2): 82-89, MCB UP

Meyer, J., Witt, S., Kashiwagi, J. and Kashiwagi, D. (2010) 'General Services Administration

Minocha, S., (2005) Dissertation Preparation and Research Methods, 2nd Ed., model, International Journal of Project Management, 24(): 53-65, Elsevier Science Ltd

Mohsini, R. A. and Davidson, C. H. (1992). "Determinants of performance in the traditional building process." Construction Management & Economics, 10(4), 343-59.

Momme, J & Hvolby, H-H 2002, 'an outsourcing framework: action research in the heavy industry sector' *Journal of Purchasing & Supply Management*, no. 8, pp. 185-196.

Mugenda, O. M., & Mugenda, A. G. (1999). *Research methods: Quantitative and Qualitative approaches.* African Centre for Technology Studies press, Nairobi Kenya.

Mugenda, O., & Mugenda, A.G. (2003): revised. Research Methods; Quantitative Qualitative Approaches: ACTS Press, Nairobi.

Ntorinkansa, H. (2010). NEWS: Presidential Palace Ghana - "Jubilee House" costs $176 million (US-Dollar). Retrieved from: www.Ghana-Net.com.

Ofori, G. (2006), "Construction Industry in Developing Countries: A research Agenda", Journal of Construction in Developing countries, Volume 11, Number 1, pp. 51-62

Orodho, J., A. (2004). Techniques of writing research proposals and reports in education and social sciences. Nairobi: Masola Publishers.

Sam Stewart Mutabazi, The New Vision, Thursday, 14 July, 2015, Brief case contractors killing Uganda's construction industry. http://www.newvision.co.ug/new_vision/news/1330348

Shigenobu, O. and Takayuki, A. (2009). Japanese project management: KPM – Innovation, development and improvement: Monden institute of management, Japanese management and international studies, Vol. 3. Task Force Report, (2007) Improving the performance of the Local Construction Industry.

Smallwood, J. and Venter, D. (2001). The performance of contractors: client's perceptions, performance in product and service. CIB World Building Congress, Wellington, New Zealand.

Smith, M. J. (1988). *Contemporary communication research methods*. Belmont, CA: Wadsworth, Inc.

Streamlines the Procurement of Construction Services', *Proceedings seventh annual acquisition research symposium Volume II*, Naval Postgraduate School, Monterey,

Takim, R. and Akintoye, A. (2002) 'Performance indicators for successful construction project', School of Built and Natural Environment, Glasgow Caledonian University, City Campus, Glasgow, UK.

The Ghanaian Times, (2009). The construction Industry – challenges and the way forward, Thursday, March 12, 2009, pp.9.

UNRWA. 2006. Projects completion reports, UNRWA, Gaza

Verzuh, E. (2012). The fast forward MBA in project management 4th edition John Wiley and Sons, Inc.

Ward, S. C., Curtis, B. and Chapman, C. B. (1991). "Objectives and performance in construction projects." Construction Management and Economics, 9(4), 343-353.

Weihrich and Koontz. (2000). Management – A Global perspective, McGraw-Hill International Editions, Tenth Edition, Singapore.

Yasamis, F., Arditi, D. and Mohammadi, J. (2002). "Assessing contractor quality performance." Construction Management and Economics, 20(3), 211–223.

QUESTIONAIRE FOR CHRIS OPUCH (UTAMU-EMBA-PPM)

INSTRUCTIONS:

Fill in the blank space the most appropriate answer in the box provided

Background information

1. Respondent's sex [ ] M [ ] F

2. Highest level of education of respondent?

None [ ] Certificate [ ] Diploma [ ] Degree [ ] Masters [ ] Phd [ ]

3. Age: [ ] 15-20yrs [ ] 21-30yrs [ ] 31-40yrs [ ] 41-50yrs [ ] 51-60yrs [ ] 60yrs and above

4. Status:……

5. What is your role in the company:……...

6. How many people are in this company? ……

8. How many departments do you have?.....

9. In which department do you work?.....

10. What is your position in the company?…….

11. For how many years have you worked in this Organisation?……..….

Technical Capacity

Indicate your view on the following statements availability of technical capacity of local contractors to undertake road construction projects under UNRA framework.

Using a rating of 1 to 4 please indicate your view of the following statement on the **technical capacity of the local contractors.**

Where SA= Strongly Agree; A= Agree; NS=Not Sure; SD= Strongly Disagree; D= Disagree

	SA	**A**	**NS**	**D**	**SD**

Local contractors have the technical capacity to undertake road construction projects.					
There is technical manpower on each project undertaken					
The availability of Plant & machinery influences road construction projects Completion					
Project Level of advancement is influenced by project equipment's in road construction projects Completion					
Quality work is influenced by man power and project equipment's of road construction projects Completion					
Contractors decision making capability affect project completion					
Contractors experience affects the performance of roads construction projects					
The availability of technical skills of the contractors affect the completion of roads construction projects					
Knowledge of the contractors affect the completion of roads construction projects					

Selection Criteria

Using a rating of 1 to 4 please indicate your view on the following statement on the **criteria used in the selection successful contractor.**

Where 1= Strongly Agree; 2= Agree; 3 = Strongly Disagree; 4= Disagree

	SA	**A**	**NS**	**SD**
The selection criteria of the local contractors is transparent.				
Call for bids is made public to all potential bidders				
Selection of the best evaluated bidder is done based on the lowest price bidder				
Awarding of contracts is based on the company capacity and technical expertise				
Awarding of contracts is based on the capacity and lowest price bidder				
Before awarding the contract, do the contracts committee carry out due diligence to confirm the existence of the contracted companies?				
The awarding committee follow the PPDA guidelines to award contracts				

Funding Mechanisms

Using a rating of 1 to 4 please indicate your view on the following statement on the **budgetary control.**

Where 1= Strongly Agree; 2= Agree; 3 = Strongly Disagree; 4= Disagree

	SA	**A**	**NS**	**SD**
Availability of funds influences road construction projects Completion				
Adequate funds influences road construction projects Completion				
Management of funds influences the road construction projects Completion				
Cost saving influences road construction projects Completion				
Accessibility of funds influences road construction projects Completion				

Thank you for your time and cooperation