A STUDY ON SELECTION OF AN APPROPRIATE CONTRACT STRATEGY FOR PROJECTS WITHIN LOCAL GOVERNMENT AUTHORITIES (CASE STUDY DAR ES SALAAM MUNICIPAL COUNCILS)

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M.Sc (Construction Economics and Management) Dissertation
Ardhi University
November, 2016

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By

MHINA, Kwingwa

A dissertation submitted in partial fulfillment of the requirements for the award of Master of Science Degree in Construction Economics and Management of Ardhi University

School of Construction Economics and Management

Ardhi University

Dar es Salaam

November, 2016

CERTIFICATION

The undersigned certifies that she has read and hereby recommend for acceptance by Ardhi University a dissertation entitled: "**A study on the selection of an appropriate contract strategy for projects within Local Government authorities (case study Dar es Salaam Municipal Councils)**" in partial fulfillment of the requirements for the Master of Science degree in Construction Economics and Management of Ardhi University.

…….

Dr. Geraldine Kikwasi

(Supervisor)

Date……

DECLARATION

I, Kwingwa Mhina hereby declare that this work titled “A study on the selection of an appropriate contract strategy for projects within Local Government authorities (case study Dar es Salaam Municipal Councils)” is a result of my own effort, study and research findings. It has never been done anywhere in previous diploma, Degree or any professional, award presentation in a higher learning institution.

…….……

MHINA, Kwingwa

AKNOWLEDGEMENT

First and foremost, I would like to thank academic staff members of Building Economics Department who were the first to correct my mistakes from the research proposal to the completion of this final dissertation.

No one really knows the blood, sweat and tear that the book went through more than my courageous supervisor Dr. Geraldine Kikwasi. Her ability to strengthen weak sentences and pull out just the right adjective or adverb was truly miraculous. To her, my profound thanks.

My sincere gratitude should also go to all students of Building Economics department, especially Master of Science in Construction Economics and Management students for the academic year 2014/2016 for their supportive assistance in different ways during my study.

My heartfelt thanks are also to my family for their moral and cooperative assistance in one way or the other, love and prayer throughout my academic life, I owe you all greatly.

Last but not least, I am very appreciative to Temeke, Ilala and Kinondoni Municipal works department staffs acknowledged for giving all necessary information regarding the contract strategies for projects within Local Government when asked, may God bless them all.

DEDICATION

I would like to dedicate this dissertation report to my beloved Wife, Mrs. Kauye R. Kwingwa and my lovely Son, Issa Kwingwa Mhina.

ABSTRACT

Contract strategy is considered as a process of selecting organizational and contractual policies required for the execution of a specific project.

The main objective of this study was to examine various contract strategies which are being used by the Dar es Salaam Municipal Councils in the execution of its civil and building construction projects. The specific objectives were to identify various contract strategies used in the execution of construction projects by Dar es Salaam Municipal Councils, to establish the criteria used in selecting contract strategies, to find out the challenges faced in selecting contract strategies and to propose a framework for the best contract strategy for various projects in Dar es Salaam Municipal Councils

In the process of examining the contract strategies for projects used in Local Government, Dar es Salaam Municipal Councils, including Temeke, Ilala and Kinondoni were selected as the case study. Questionnaires were distributed to the workers of the three Municipal Council's works departments, including engineers, quantity surveyors, architects and senior technicians.

Data analysis was succeeded by data collection whereby it was conducted by using the SPSS program in which 46 questionnaires out of 60 distributed questionnaires were returned. The findings of this study shows project management contract strategy is commonly used in most of the projects within these Municipalities followed by design and build and traditional contract strategies and the other contract strategies were very rarely utilized.

In recommendations; the Municipalities must be providing and supporting regular training to its contract management team to update their staff to newly introduced technologies and apparently selection of the contract strategy shall be depending on the characteristics of the individual project and not to be generalized

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LIST OF ACRONYMS

AQRB -Architects and quantity surveyors registration board

BOT -Build operates and transfers.

CPD -Continuous professional development

ERB -Engineers registration board

LGAs -Local Government authorities.

PID -project initiation document

PMP -project management plan

PMU -Procurement management unit

PPA -Public procurement Act

PPRA -Public procurement authority

REPOA -Research on poverty alleviation

CHAPTER ONE

INTRODUCTION

1.0 Background

A contract can simply be elucidated as legally binding or valid agreement between two or more parties (Victoria, 2015); Veld & Peters (1989) defined the contract as an agreement between two parties, whereby one party commits itself to deliver goods, software or services to a second party within a certain delivery time and for an agreed price.

Contract strategy is considered as a process of selecting organizational and contractual policies required for the execution of a specific project. According to Wearne (1995), contract strategy can be defined as a process of determining how the project will be procured. A contract strategy is concerned with an assessment of the available choices, to manage the design and construction itself to maximize the probability of achieving the project objectives (Elbeltagi, 2012).

There are different kinds of contract strategies, including traditional (lump sum), design and build, managing contracts, contract (construction) management, turnkey, project management and build-operate-Transfer (BOT). Selection among those strategies depends on different factors including scope of work, cost of work, duration of work, client characteristics, client objectives, design of the project, project constraints, project risks and the level of project complexity.

Unlike the earlier period where the Local Governments were doing most of the development activities such as construction of its people, the contemporary government policy demand that the government roles to be a facilitator or an enabler of development instead of being a provider (Brown and Potoski, 2003)

For a long time the scholastic literature and admired press are loaded with narratives of contracting failures where Local Governments have been badly burned by low quality performance. Citing a number of incomplete, failed and large project final cost contracts, assessments argue that contracting creates numerous accountability problems, sacrifice, service quality for efficiency and cost savings, often does not result in improved performance and cost savings, and ultimately "worth less" the state (de Leon *et al.* 2000). Every now and then stakeholders in Tanzania have been complaining about the poor performance of construction contracts in Local Governments. Most projects ended with delays, large project final costs, low quality, conflicts and even stoppage (Musingi, 2007).

Musingi (2007) affirms that the majority of funds from central government, donors such as World bank, United Nations, Embassies and other financiers, are deposited to LGA'S where different development projects have to be executed. Utmost all these projects are outsourced to the contractors making the LGAs employers come into contracts with contractors as employees. From these contracts, many challenges and problems in construction contract performance are faced by both parties. The problems raised include scarce funds, lack of construction equipment, insufficient skilled personnel and poor management skills are innate to the contractors in LGAs. Similar problems like little deployment of resources due to inadequate number of contractors, low quality works, inadequate capacity of some LGAs technical personnel to manage contractors are also very common in LGAs technical clients.

Owing the above problems, the LGAs are still making a lot of initiatives to make sure that the contracts are performed as required. The LGAs have put in place various strategies to ensure that contracting activities are implemented as required

and ensure good performance. Some of strategies include training (short term and long term trainings) to its technical staff, funding the technical staff to attend continuous professional development (CPD) of different regulatory bodies such as ERB and AQRB, conducting kick off meetings with the contractors before commencement of the project, conducting periodic inspection, assigning project managers for each project and conducting regular site meetings with the contractors together with the users of the project under construction and all other necessary stake holders of government construction sector .

Despite of having those strategies in place, LGAs current status of contracting is still poor. Therefore the rationale of this study is to study on selection of contract strategy for projects within the Local Government with the major aim of finding out the appropriate strategy on each project for the purpose of reducing cost overruns, improving efficiency, improving productivity and quality of the respective projects which are handled by local authorities in Tanzania.

1.1 Statement of the problem

Despite various strategies imposed by the Local Government authorities including Dar es Salaam Municipal Councils such as training, financing it's technical staff to attend continuous professional development programs (CPD) of different regulatory bodies, conducting kick off meetings with the contractors before commencement of any project, conducting periodic inspection, assigning project managers for each project and conducting regular site meetings still the construction performance in of Dar es Salaam Municipal Councils is enormously poor. Inappropriate selection of contract strategy for various projects is considered to be one among the major problems that hinder the performance of building and civil construction projects in

Dar es Salaam Municipal Councils. This is due to the fact that all construction works such as civil and building construction projects in the Local Government, without taking into consideration the factors that may affect the project such as the scope of work, complexity of the project, location of the project, requirements of the project, timing of the project, quality of the project and the like are often required by the public procurement regulatory authority in the course of its act called The public procurement act (PPA) of 2011 to be delivered under one type of contract strategy which is project management contract strategy. It is to be noted in advance that before entering into any construction contract, the issue of the contract strategy is of great importance, this is because the issue of contract strategy has great impacts in the process of the project through the risk direction, time scale and cost of the project; for this reason contract strategy for any construction project should be established at a very early stage in the cause of project implementation in order to meet target cost, program and quality objectives. Therefore taking into consideration the importance of contract strategy in administering contracts for the construction projects in Dar es Salaam Municipal Councils there is a great need to concur with various scholars in studying an aspect of selecting the appropriate contract strategy for each project rather than relying on only project management contract strategy for these Councils. Taking an example of the project management contract strategy of using local craftsmen practiced recently by the local authorities including Dar es Salaam Municipalities for the construction of secondary schools laboratories has headed to various problems in those projects including time and cost overruns, occurrence of double standards in those buildings, low quality of the buildings and

abandonment of some construction sites this is because the issue of contract strategy was not taken care at the early stages

1.2 Objectives

The main objective of this study is to examine various contract strategies which are being used by the Dar es Salaam Municipal Councils in the execution of its civil and building construction projects.

1.3 Specific objectives

i) To identify various contract strategies used in the execution of construction projects by Dar es Salaam Municipal Councils;

ii) To establish the criteria used in selecting contract strategies; and

iii) To find out the challenges faced in selecting contract strategies

iv) To propose a framework on the best contract strategy for various projects in Dar es Salaam Municipal Councils

1.4 Research questions

i) What types of contract strategies are used in various projects within Dar es Salaam Municipal Councils?

ii) What are the criteria used to select projects contract strategies in Dar es Salaam Municipal Councils?

iii) What are the challenges faced by the Dar es Salaam Municipal Councils in selecting contract strategies for its projects?

iv) What is the best projects contract strategy framework to be adopted by the Dar es Salaam Municipal Councils?

1.5 Significance of the study

The results of this study significantly help Dar es Salaam Municipal Councils to identify and determine various contract strategies exploited in different construction projects executed in these Councils;

This study is also significant since it exposed out and gave a way forward to all the challenges and problems revealed in the current process of selecting construction contract strategies in Dar es Salaam Municipal Councils;

The study is so significant since it proposed the most appropriate contract strategy framework for each type of project and thus this will principally reduce project time and cost overruns, reduce conflicts, improve efficiency, productivity and quality of construction projects and finally increasing value for money for all projects;.

The findings of this study can be used as a reference material for further studies in the field of construction

1.6 Limitation of the study

This study was conducted in Dar es Salaam Municipal Councils due to the limitation of time, shortage of funds and easily availability of data (hard and soft copies) as compared to other peripheral Municipal Councils.

1.7 Scope of the study

The study covered a number of selected civil and buildings construction contracts (projects) worth between 30 to 500 million which are being executed by the Dar es Salaam Municipal Councils from the financial year 2005/2006 to 2015/2016. Due to the above mentioned limitations the study covered some building construction projects and the civil works project from each Municipal.

1.8 Conceptual definitions

The following are the definitions of the important terms that are frequently being used in this study:

1.8.1Contract

According to Veld & Peters (1989) contract can be defined as “an agreement between two parties, whereby one party commits itself to deliver goods, software or services to a second party within a certain delivery time and for an agreed price”; Therefore according to its simple definition, a contract is an agreement between two or more parties and is enforceable at law.

It has to be noted in advance that not all agreements are contracts and in order for an agreement to become a contract the following components must be there: Generally the contract is considered to be valid if the agreement contains the combination of all of the following critical elements:

- Offer and acceptance; an offer is an act on the part of one person whereby he/she gives to another the legal power of creating the obligation called contract. An acceptance is the exercise of the power conferred by the offer, by the performance of some other act or acts.
- An intention between the parties to create binding relations; An Agreement must be planned, or sincerely intended, to be enforceable, so that it is understood that in the event of a breach of obligation, the parties could enforce the contract through the courts of law.
- Consideration to be paid for the promise made (Valente, 2010) explains consideration as an act or forbearance of one party or the promise thereof, is

the price for which the promise of the other is bought, and the promise thus given for value is enforceable.

- Legal capacity of the parties to act; this term means that a person's legal ability to enter into a contract (Baumeyer, 2003). This can crosscut a least of factors for one to have legal capability to enter into the contract and may include;
    - ❖ Age of Maturity, a person must be of age of maturity, and the law sees this as age 18 or older. However, there are times when a minor can enter into a contract. This is true if the contract is for housing, food or things necessary to sustain life.
    - ❖ Free of Mental Illness, It is also necessary for the parties to be free of mental illness, like schizophrenia or other conditions that challenge a person's mental state.
    - ❖ Not under the Influence, No party to a contract can be under the influence of alcohol or drugs, meaning intoxicated or influenced by illicit drugs. This includes both voluntary intoxication and the influence of the other party to cause or encourage intoxication. This is worth explaining. Both parties to the contract must be of a sober mind. If one party chooses to drink or take drugs prior to the contract commitment, the contract can be voided. If one party intentionally influences a person to drink to the point of intoxication, and this can be proven, the contract can be voided.
    - ❖ Genuine consent of the parties; this refers to the situation of one party voluntarily agree to an act or proposal of another without any external

force that is imposing power to that part to enter into the contract. The formation of a contract depends on a meeting of the minds or consensus as to the terms of the proposed contract.

- Legality of the agreement the purpose of the contract is obliged to be legally accepted. For the purpose of construction contracts, all elements involved to those contracts must neither offend the public good nor violate the law. If they do, the contract will be deemed to be void.

Any agreement that can be short of one or more of the critical elements mentioned above is obviously not a valid contract.

1.8.2 Construction contract

A construction contract is a contract specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology and function or their ultimate purpose or use. According to Diplock (1974) a construction contract is an entirely agreement for the sale of goods and work and labor for a lump sum price payable by installments as the goods are delivered and work done. Decisions have to be made from time to time about such essential matters as the making of variation order, the expenditure of provisional and prime cost sums and extension of time for the carrying out of the work under the contract

1.8.3 Contract strategy

Elbeltagi (2012) defines contract strategy as the process of selecting organizational and contractual policies required for the execution of a specific project likewise the

contract strategy is defined by Wearne (1995) as “the main components of the process used to determine how the project will be procured”.

1.8.4 Local Government

Local Government refers collectively to administrative authorities over areas that are smaller than a state. Local Governments in Tanzania are recognized as autonomous bodies with legal status (community bodies) operating with mandatory powers over local affairs within the unitary system of the Republic of Tanzania. Generally Local Governments have a responsibility for social development and public service provision such as infrastructures, school buildings, dispensary and hospital buildings and the like within their areas of jurisdiction; facilitation of maintenance of law and order and promotion of local development through participatory processes (Repoa ,2008).

1.8.5 Project

A project is an investment of resources to produce goods and services, a project can be any new structure, plant, process, system or software, large or small, or replacement, refurbishing, renewal or removal of an existing one. It is a one-off investment (Dhanushkodi, 2012).

1.8.6 Project management

Project Management refers to the use of knowledge, skills, tools, and techniques to plan and implement activities to meet or exceed stakeholder needs and expectations from a project. It is a systematic way of planning, implementing, monitoring and controlling the various aspects of a project for time, materials, manpower, machine and other resources like methods, mentors, monitoring and money. Project

Management is continuous learning experience and it perhaps prevents the occurrences of repeated mistakes in the future projects. The ultimate objective of Project Management is planning, then timely and economical implementation (Shymal, 2015).

1.8.7Project Manager

Project manager is the individual responsible for managing the project; James (1989) specifies the key liability of the project manager is to effectively complete the project objectives by balancing the competing demands for quality, scope, time, and cost. In order to complete these comprehensive responsibilities, the roles of the project manager include that of a leader, administrator, entrepreneur, facilitator, arbitrator and mediator, liaison, and coordinator. The project manager must lead teams to operate cross functionally towards a common objective while assuring cohesiveness and continuity. The project manager is a key catalyst to stimulate effective communication and coordination between design, procurement and construction activities. In order to effectively manage these responsibilities and assume these roles, a project manager must have experience in the following project management knowledge areas: project integration, scope, time, cost, quality, human resources, communications, risk, and procurement management

1.8.8The Client

The client may be defined as the owner of the asset to be procured or project works, and representative of the end users of the asset (New South Wales Department of Commerce, 2005). Magotto (2005) also defined the client as the natural or legal person/individual who carries out a construction project for him or another person/organization that took the initiative of the construction.

Types of the clients in construction industry

- Private clients

  These clients are sole traders or domestic clients who may wants to have a house building altered, extended or maintained (New South Wales Department of Commerce, 2005). They always come into private agreements with a builder to execute the job. The private client may have an architect who has produced the drawings if planning or building regulations require this, they may also find a private quantity surveyor to prepare Bills of quantities for their project in case they want to take a loan from a financial institution.

- Commercial clients

  A commercial client is a factory, company or business that desires to carry out building construction works in order to produce goods, items for consumption or process, New South Wales Department of Commerce (2005) for case in point, a milk production company needs an outlet to sell its products from; therefore milk sell point has to be built in accordance with the requirement of the business in order to fit the desired purpose.

- Public limited companies

  A public limited company this is the public company that is owned by its shareholders for example a bank (New South Wales Department of Commerce, 2005); a bank could have many branches that necessitate execution of regular maintenance, looking after and improvement by refurbishment from time to time.

- The Government

  The works in governments can be issued at two levels:

First through Local Government Councils Local Government Councils have responsibility of constructing and maintenance of services (New South Wales Department of Commerce 2005). They can instigate works such as constructing schools, maintaining its roads, carrying out building works and maintenance on Council properties

Second through central government departments, such as Tanzania Building Agency (TBA) or bodies such as the Tanzania Roads Agency Service (TANROADS) plays a great deal of construction services, usually using intermediate companies who specialize in managing large building and civil works projects.

1.8.9 Contractor

According to section 3 of the Contractors Registration Amendment Act No. 15 of 2008, the contractor can be defined as:

"Any person who for reward or other valuable consideration undertakes to carry out and complete any construction work for another person, of any structure situated below, on or above the ground or water bodies or other work connected therewith, where such person undertakes to do any such works:

- Himself supplies the material necessary for the work or is authorized to exercise control over the type, quality or the use of material supplied by any other person.
- Himself supplies the labor necessary for the work or is authorized on behalf of the person for whom the work is undertaken or any other person, to employ or select for employment workmen to assist him in the execution of the work, or Any person who for himself as a developer or investor

undertakes to carry out and complete the construction work of any structure for public or private use or other works connected therewith, where such person undertake to do any such works:

- Himself supplies the material necessary for the work or is authorized to exercise control over the type, quality or the use of material supplied by any other person.
- Himself supplies the labor necessary for the work or is authorized on behalf of the person for whom the work is undertaken or any other person, to employ or select for employment workmen to assist him in the execution of the work.

The exception to this is when a person undertakes construction of the residential house for his own family and for public use, which does not require the input of structural design, or when such a person undertakes the construction of any work the value of which does not exceed such a sum as shall be determined by the BOARD from time to time.

The Contractor is the one responsible for day-to-day oversight of a construction site, management of trades and vendors, and communication of information to involved parties throughout the course of a construction project. According to New South Wales Department of Commerce, (2005) the contractor is defined as the organization that enters into the agreement with the client and is responsible for the performance of the work under the contract.

1.8.10 Subcontractor

A subcontractor is a person who is hired by a general contractor (or prime contractor, or main contractor) to perform a specific task as part of the overall project and is

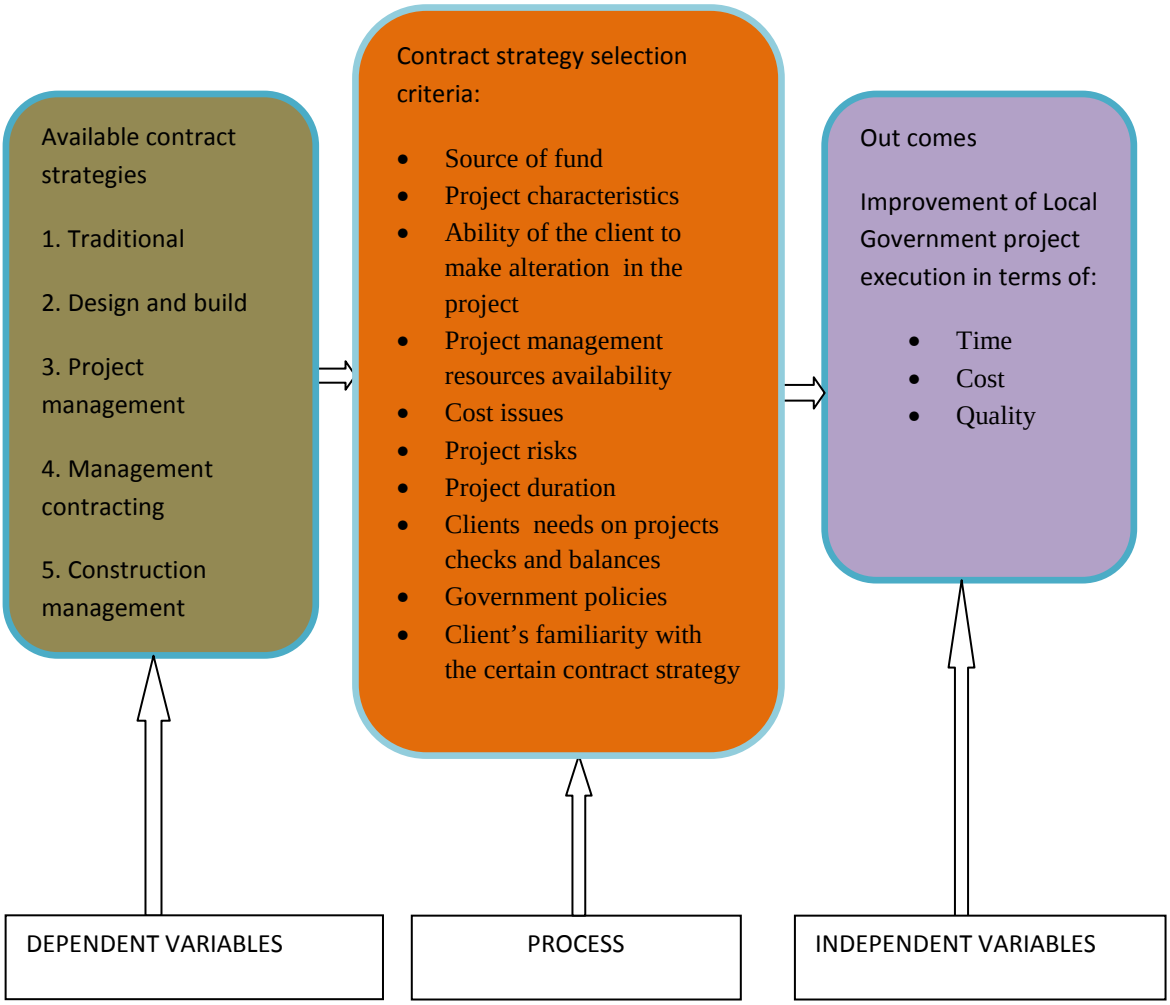
normally paid for services provided to the project by the originating general contractor

1.9 Conceptual framework

Jabarem (2009) defined conceptual framework as a network of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena. Conceptual undoubtedly build up attentiveness and thoughtful of the study. Furthermore conceptual framework make clear graphically or in description status, the main stuffs to be studied, the key factors, variable and presumed relationships among them (Miles and Hurbeman, 1994)

Figure (i) illustrate on how proper selection of contract strategy for project leads to greater outcome of Local Government executed projects in terms of completion time, final cost and quality (independent variables) as it requires the use of an appropriate contract strategy at early stages by linking it to the dependent variables which are the available contract strategies to the process of selection depending on various criteria set to enhance the better performance of the projects.

Therefore this research tries to figure out the most appropriate contract strategy for each project executed in Local Government in order to reduce project time overlap, rise in project cost and at the same time improving the quality of the projects. The relationship between independent and dependent variables is illustrated in Figure 3.1. In this explains the most important process that help in paving the way for the selection of appropriate contract strategies for projects with in Local Governments.



Key ⟶ line of communication

Figure 1.1: Conceptual framework

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The significance of contract strategies for Local Government construction projects is reviewed in this chapter. Various contract strategies and their application in construction field especially in Local Government authorities are discussed. This literature review shows the role that Local Government project management team can take part in the implementation of its building and civil construction contracts

2.1 Contract strategies

Contract strategy is a system designed to achieve the satisfactory completion of a construction project from conception to occupancy. Contract strategy may employ any one or more contracting formats to achieve the delivery. A great determinant of any construction project success is the selection of the most appropriate contract strategy which will be used as a framework to acquire the services of professionals in the construction industry (Morledge at el, 2006). Before an appropriate construction contract strategy can be selected, there are many variables that need to be considered, these variables include: understanding the client, assessing client objectives, identifying the project constraints including the risks and the method of organizing the design and construction. Due to financial, organizational and time constraints, different contract strategies have evolved to fit particular project and owner needs. There are various contract strategies to be adopted by the Municipal Councils, including traditional, design and build, turnkey, build operate and transfer

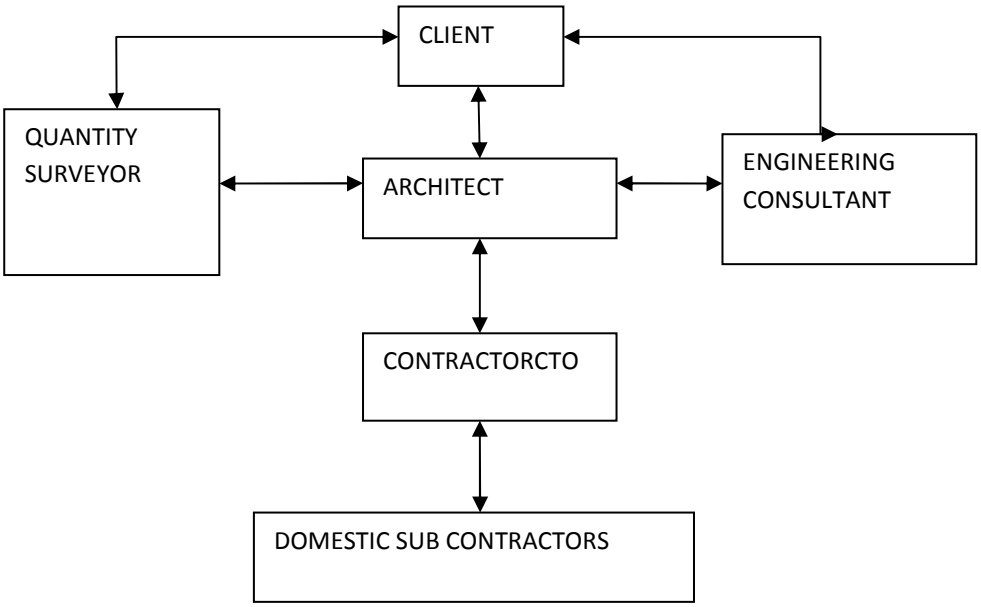
(BOT), management contracting, construction management and project management contract strategies.

2.1.1 Traditional

This is the most common approach in building and civil engineering projects in which the design has to be completed before construction can start (Elbeltagi 2012). This method is referred by some authors and researchers as the separated system and it is the oldest form of contract (Masterman 2002). The method is characterized by the separation between the design and the construction phases and therefore offers multiple points of responsibility Oyegoke *et al.* (2009), the traditional model is considered to be fairly rigid and sequential, with construction following procurement, which can only be initiated after the completion of the design.

The client first appoints consultants who will be responsible for the design, cost control and contract administration. Once the design is complete, the client and his team invite tenders from suitable contractors and eventually appoint one of them who will be responsible for carrying out the works.

There is therefore a direct contractual relationship between the client and the consultants and also between the client and the contractor. The contractor is responsible for all the workmanship and materials, including work by sub-contractors and suppliers (Clamp *et al.* 1990). In some cases, the client could notate subcontractors or suppliers with whom the main contractor will have legal contracts.



Key: ⟷ indicates the line of communication

Figure 2.1: contractual relations between various parties under traditional contract strategy (Ramus *at al*, 2008).

There are three types of contract under the traditional Contract strategy (Davis *at al*, 2008):

1. Lump sum contracts – This is a sort of traditional contract strategy in which the contract amount is well-known prior beginning of construction works and the contract amount is entered into the agreement through the bills of quantities provided. The contractor starts to execute a known quantity of work in return for an agreed contract sum. This contract can be a fixed amount not focus to changes in the quantities, and therefore there will be no possibility for the client to make changes in the project. Probably the contract amount is subject to some degree of alterations in order to cover up the taxes and contingencies for all items which are not seen or cannot be measured at the time of tendering. The amount possibly will be subject to

fluctuations in the cost of labor, plant and materials, the so called fluctuations provision. Recovery of the fluctuation sums may be calculated by the use of rules, or by checking proof of purchase such as receipts and invoices. Lump sum contracts with quantities are priced on the basis of drawings and a firm bill of quantities. For all the items which cannot be accurately measured by the time of tendering can be recovered by an estimated quantity or a provisional sum, although these provisional and estimated quantities are required to be executed at a very minimum level to avoid unnecessary future variations in the said project. Lump sum contracts with no quantities are priced on the foundation of drawings and another document. This may just be a specification of a descriptive kind, in which case the lump sum will not be itemized, or one that is detailed to the extent that the contract sum is the total of the priceable items. The work might be more adequately illustrated as a 'Schedule of Works', where the lump sum is the total of the priced items. In the latter cases, an itemized breakdown of the lump sum will be a useful basis for valuing additional work. Where only a lump sum is tendered, then a supporting 'Schedule of Rates' or a 'Contract Sum Analysis' will be needed from the tenderer. Tenders can be prepared on the basis of notional quantities, but they will need to be replaced by firm quantities if it is intended to enter into a 'with quantities' lump sum contract.

2. Measurement contracts – this is where the contract amount is precisely known after the completion of the project and re-measurement of the works executed to some established basis. Measurement contracts are also known as 're-measurement contracts'. This kind of contract is always appropriate to the projects in which it is difficult or unworkable to take measurements of the quantities for the works to be

executed before tendering process. The assumption under this scenario is that it, the work has been substantially designed, and that reasonably accurate picture of the amount and quality of what is required is given to the tenderer. Almost certain the mainly effective measurement contracts, involving less risk is for the employer, are those based on drawings' with approximate quantities. Measurement contracts can also be based on drawings and a 'Schedule of Rates' or prices prepared by the employer for the tenderer to compete. This category of agreement might be suitably fitting where there is not enough time to prepare even approximate quantities or where the quantity of work is very uncertain. Apparently the employer has to accept the risk involved in starting work with no accurate idea of the total cost, and generally this type of contract is best limited to small jobs.

3. Cost reimbursement – where the contract amount is established through the actual calculated costs of labor, materials, plant and equipments, under which overheads and profit is added for the contractor. These are sometimes referred to as 'Cost Plus' contracts. The contractors agree to carry out an undefined amount of job on the basis that they are paid the prime or the actual cost of labor, materials, plants and equipments. Adding up, the contractor takes delivery of an agreed charge to cover administration, overheads and profit. Hybrids of the cost reimbursement contracts include:

- Cost-plus percentage fee – the payment charges are directly proportional to the primary cost of an item. It is typically a flat rate amount percentage, although it can also be on a sliding scale in some situations. On the other hand, the contractor has no real motivation to work at utmost effectiveness,

and this variant is only likely to be considered where the requirements are particularly indeterminate pre contract.

- Cost-plus fixed fee – The contractor tender for the job by a certain amount. This is suitable since it provides that the amount and type of work is mostly predictable. The contractor has sincerely motivation to work proficiently so as to remain within the agreed fee.
- Cost-plus fluctuating fee – The fee fluctuates directly proportional to the discrepancy between the estimated cost and the actual prime cost. The assumption is that as the latter cost increases, the contractor's supposed inefficiency will result in a fee which decreases. This approach depends upon there being a realistic chance of ascertaining the amount and type of work at tender stage.

Osama (2013) clarified that bidding process for the traditional contract strategy may be executed in one of the following ways:

• Open tendering

This is a method under which any contractor is allowed to submit tenders for the interest of executing the project. This procedure involves either the client or consultant (on behalf of the client) placing a public advertisement through newspapers, notice boards, clients website and the like giving a brief description of the work. Normally the client will require a cash deposit in exchange to contract documents by the contractors.

• Selective tendering

This is a method which involves the process of selecting the type of contractor to execute a certain project. This method is done by short listing a small number of contractors that are known to have the suitable qualifications and experience to carry out the work pleasingly. Those contractors who seek to be listed are asked for further details concerning their technical competence, financial standing, resources at their disposal and relevant experience. Pre-qualifying contractors who are on the list are invited to tender

• Negotiated tendering

This method is applied by the client, especially private clients inviting a single contractor of his/her choice to submit a tender for a particular project. This is normally based on the past experience of working with the same contractor in the same kind of the project, familiarity with the contractor and even cost issues in the circumstances the contractor seems to be convincingly cheap in his building rates.

The main challenges of the traditional contracting method according to Osama (2013) and Rashid *et al.* (2006) are as follows:

- Long time as the process needs the design to be completed before the commencement of the project
- Overall project duration may be longer than other procurement methods as the strategy is sequential and construction cannot be commenced prior to the completion of the design
- Design does not benefit from construction expertise

- Conflict between owner, contractor and other stakeholders of the project since it involves a vast of various people with different qualifications and professions.
- No input into the design or planning of the project by the contractor as they are not appointed during the design stage and therefore If any delay happens in the provision of design information such as drawings to the contractor in accordance with the program is likely to result in claims by the contractor for extensions of time, loss and/or expense
- There may be problems of buildability and less economic methods of construction being used as a result of the contractor not being involved in the design.

2.1.2 Design and build

This system is characterized by the integration of the design and construction phases. The method gives out the full responsibility of the design and construction with a single organization: the contractor. Rashid *et al.* (2006) explains that the selection of the most suitable contractor is based on the brief and the specification given by the client at the time of bidding. In effect, the contractor has the total responsibility for all the works, co-ordination and integration of the whole process as well as appointment of any consultants, specialists or subcontractors (Murdoch and Hughes, 2008).

According to Murdoch and Hughes (2008), there are some characteristics of a project which determine whether the design and build method will be suitable for a particular project, these are listed below:

- The client's familiarity with construction (experience)
- The relative importance of client priorities (time, cost, function, quality and value for money)
- The technical complexity of the project
- The need to make variations in requirements as work proceeds
- The patterns of responsibility and communication
- The need for an early start of the project

According to Rowlinson (1987) the design and build contractor executes their jobs in either of the following systems:

i. Pure design and build

Under this system all the design and construction experts are within the same roof of the design and build company. In such situation, all aspects of design and construction have the capacity to be highly integrated and organized.

ii. Integrated design and build

In this structure, a center of designers and project managers exists within the design and build company; where by this type of contractor is ready to buy in design expertise whenever necessary. Though more effort is required to integrate the internal and external members of the design and build team, in-house project managers are employed to coordinate these functions

iii. Fragmented design and build

Most designs and build companies uses the approach to design and build projects, whereby external design consultants are hired and organized by in-house project managers whose other main assignment is to capture and refine client briefs on the requirement of the project.

According to El Wardani (2004) the design and build tendering procedure can be executed at any one of the following five ways

a) Sole source selection

The sole source procurement methods involve the direct selection of the design and build team without project proposals.

b) Qualifications-based selection

In a qualifications-based selection, the owner selects the most qualified design and build team and often negotiates only with that entity to a fair and reasonable price. Selection of the team is primarily based on qualitative criteria such as past performance, design and builds team reputation, technical competence and financial stability

c) Fixed budget best design selection

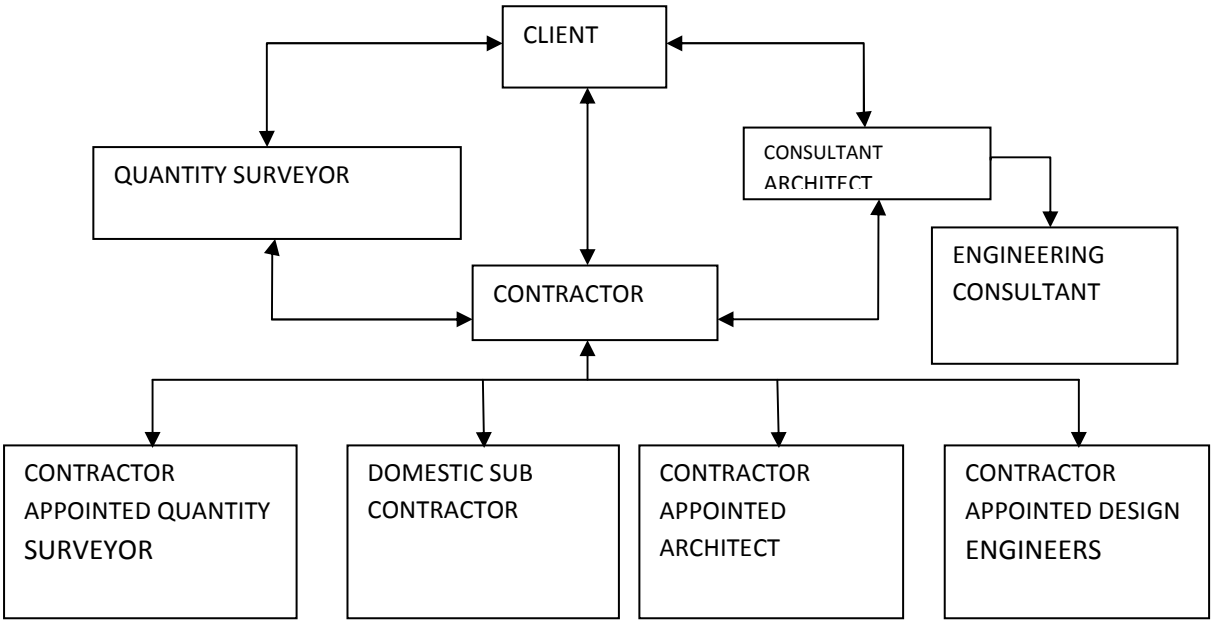
The fixed budget best design is a procurement method where the owner specifies the project budget during the request for proposal process. The design and build teams compete by placing as much scope as they can in their submitted proposals. The design and build teams are selected based on qualitative and technical aspects.

d) Best value selection

The best value procurement method is an approach where the design and build teams respond to the owner by submitting proposals that are primarily evaluated based on the technical aspects together with the associated cost of the project. Negotiations may take place after the proposal submittals phase. The owner selects the proposal that offers the best value.

e) Low bid selection

The low bid is a procurement method where the owners primarily selects the design and build team based on the project value and related cost items. Cost criteria represent more than 90% of the design and build team procurement selection process.



Key: ⟷ indicates the line of communication

Figure 2.2: Contractual relations between various parties under design and build contract strategy (Ramus *et al.* 2008)

Elbeltagi (2012) has analyzed the challenges of this approach as reviewed below:

- Project cost under this strategy may not be known until the end of the construction
- High risk is directed to the contractor and it is subjected to more costs to the client
- Design-build Company may temper with the quality and may sometimes reduce quality of work so as to save cost and make more profits
- Any alterations made by client or client representative may prove to be more expensive than they might otherwise have been if they could have been priced utilizing information contained in the contractor's design proposals.
- The client loses control over the quality of the design and construction of the project as they have no direct control over the contractor's design team with whom they may interfere
- This kind of contract strategy is less appropriate for more complex projects as the brief and performance specification must be complete and unambiguous prior to the execution of the contract.
- If the contractor becomes bankrupt prior to the completion of the project, there may be problems in executing the project using another contractor who will utilize the originally appointed contractor's design.

2.1.3 Turnkey

This approach is the same as the design-build approach, but with the organization being responsible for performing both design, construction, know-how (if any), and project financing. Owner payment is then made at the completion (when the contractor turns over the "key"). This is always appropriate when the client wants to maintain the same design, construction quality, and service quality of the previous conducted project.

Challenges encountered in turnkey contract strategy

A turnkey solution may not work as well for a buyer who wants more authority, control and flexibility in a design process.

Turnkey solution is not customized to an individual buyer's needs.

It is typically created with general guidelines to allow flexibility for various types of buyers

If the contractor becomes bankrupt prior to the completion of the project, there may be problems in executing the project using another contractor who will utilize the originally appointed contractor’s design.

The client loses control over the quality of the design and construction of the project as they have no direct control over the contractor’s design team with whom they may interfere

2.1.4 Build-Operate-Transfer (BOT)

In this approach, a business entity is responsible for performing the design, construction, long-term financing, and temporary operation of the project. At the end of the operational period, which can be many years, the operation of the project is transferred to the owner. This approach has been extensively used in recent years and is expected to continue. An example of its use is in express routes and turnpikes. An example of Mkuki house at Kamata which is being constructed by an investor and operates it afterwards, the project returns to the government to become publicly owned. This approach has also been used extensively in large infrastructure projects financed by the World Bank in parts of the world that cannot afford the high investment cost of such projects.

The main challenges of Build Operate and Transfer (BOT) contract strategy (Morledge *et al.* 2006) are:

- BOT projects are successful only when substantial revenues are generated during the operation phase.
- The success of the BOT project depends upon the successful rising of necessary finance.
- Transaction costs are high, they amount to 5-10% of total project cost

- BOT is not an easy method to operate because it needs a high capability of promoters.

2.1.5 Management contracting

Management contract strategy is an arrangement under which responsibility for the management of construction work is placed with a management contractor, and separate contracts for work packages are placed with individual works contractors. This is a method of procurement in which the management contractor is paid a fee by the client to manage the whole building process and therefore has direct contractual relations with all the works contractors (Morledge *et al.* 2006). The management contractor gives advices on the buildability of the designs as well as value management during the design. The construction works are let out in packages therefore there is an early start with this method. The management contractor does not take part in the actual construction, but provide preliminaries for the project. The method is appropriate when:

- The detailed design is incomplete prior to commencement of construction on site, the design for each works package being completed as required by the program for the tender and appointment of works contractors
- There is a need for early completion of the project
- The project is fairly large
- The project requirements are complex
- The project entails, or might entail, changing the employer's requirements during the building period
- The employer requiring early completion wants the maximum possible competition in respect of the price for the building works.

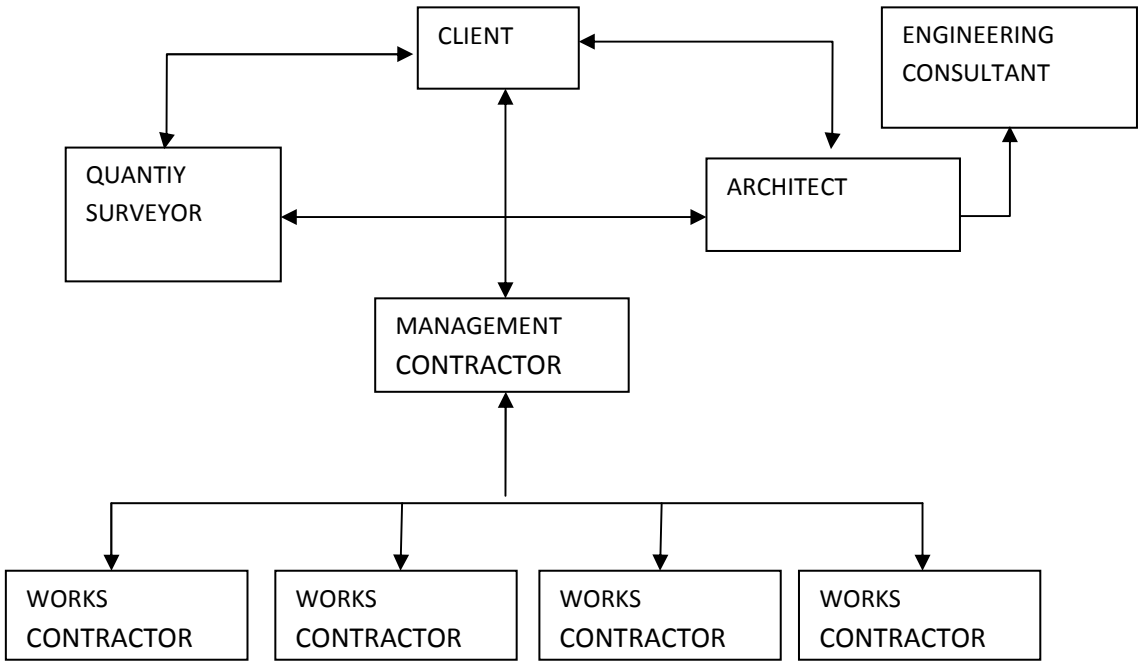


Figure 2.3: Contractual relations between various parties under Management contract strategy (Ramus *et al.* 2008).

Challenges encountered in a management contract strategy are:

- Price certainty is unattainable until the works contractor has been appointed for the final works package unless a large proportion of the work packages are let prior to commencement on site
- It is a very expensive contract strategy for the client is required to have adequate resources to administer both the design consultants and the management contractor
- Since the work packages are let as the project progresses, in a time of rising tender prices, higher tenders may arise than originally envisaged for work packages in the contract cost plan for the project

- This strategy brings a high risk for clients because, in the event of default by a works contractor, any compensation that the client may seek to recover from the management contractor IS normally restricted to the amount that the management contractor can recover from the works contractor.
- A management contract strategy has the greatest risk of cost overruns which could jeopardize the financial stability of the client

2.1.6 Construction management

With this procurement system, the client appoints the construction manager on the basis of a fee to manage, prepare and co-ordinate the design and construction as well as advising the design team on the buildability of the design (Morledge *et al.* 2006) as such the client does not allocate risk and responsibility to a single firm because the works are subsequently let out to packages contractors who are in direct contractual relation with the client. The contractual relation with this procurement type is shown below.

According to Murdoch and Hughes (2000) construction management is suitable when the characteristics of the project fulfills in part or whole of the following:

The employer is familiar with construction, and knows some or all of the professional team.

The risks associated with the project are dominated by timeliness and cost (For example the employer may be a private sector employer requiring a commercial building).

The project is technologically complex, involving diverse technologies and sub-systems.

The employer wants to make minor variations in requirements, as the project proceeds.

There is scope for separating responsibility for design from responsibility for management of the project.

The employer requires an early start on site.

The price needs to be competitive, but 'value for money' is more important than simply securing the least possible cost

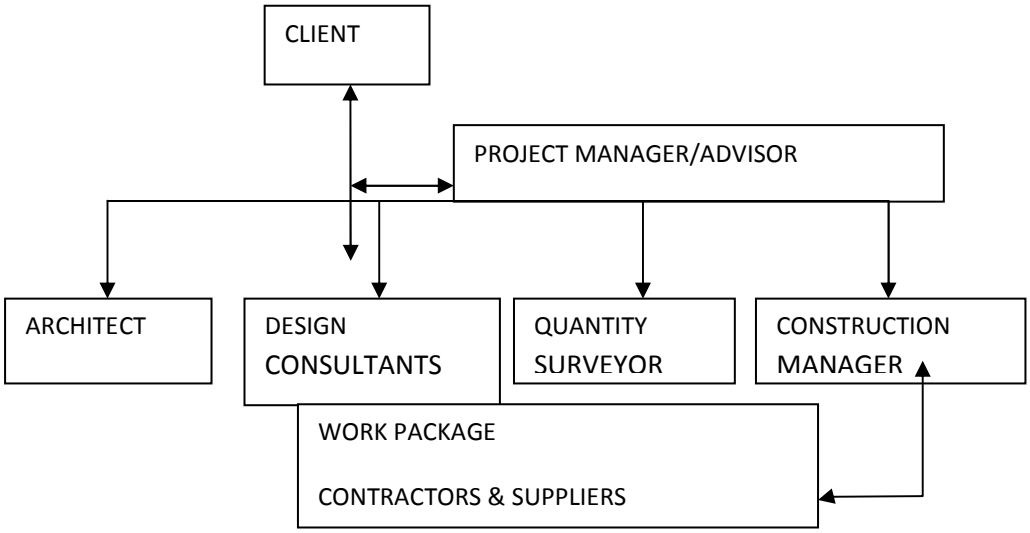


Figure 2.4: Contractual relations between various parties under construction management contract strategy (Davis *et al.* 2008)

The main challenges in a construction management strategy Morledge *et al.* (2006) are:

- Since there is no main contractor, there is a risk of the activity of individual works contractors delaying or disrupting each other
- This strategy is expensive and the client must have enough resources to administer the construction manager, design team and works contractors
- Since all the works contracts are directly with the client there may be more individual disputes to resolve, many of which may be related as the cause of a dispute with one works contractor may have an impact on works contractors appointed for subsequent work packages
- Price certainty is unattainable until the works contractor has been appointed for the final works package unless a large proportion of the work packages are let prior to commencement on site.

2.1.7 Project management

According to Ramus *et al.* (2008) project management has been defined as 'the overall planning, control and co-ordination of a project from inception to completion aimed at meeting a Client's requirements in order that the project will be completed on time within authorized cost and to the required quality standards'. Project management itself does not involve the site construction process, but it just deal with general supervision of the works on site and is quietly suitable for large and complex project. Most of the clients currently do not have the permanent in house skills and experience necessary for the successful management of construction projects and so they need to employ an autonomous project management company to do it for them.

In most cases project management companies necessitate to have quantity surveyors who by their training and experience in finance, contractual matters, are coupled with a detailed knowledge of construction processes. The quantity surveyors based on their contractual and financial matters capabilities are well qualified to offer a project management service, although other groups of professionals, such as architects, engineers, and building and valuation surveyors, are also now trained to fill the role of a project manager. The project manager, in effect, becomes the client's representative, with authority to supervise and control the entire planning and building operation from acquisition of the site to completion of the project and settlement of the accounts.

The project manager has a significant role of following up the services provided by land surveyors, land officers, lawyers and the like in relation to site acquisition; and also the architect, engineers and quantity surveyor in relation to project planning and design; and the contractor and subcontractors in carrying out the site construction work; but does not include the carrying out of any of their duties himself.

Any construction project is having five phases which need the service of the project manager, the phases includes initiation, planning, execution of the project, performance and monitoring of the project and the last phase is the closure of the project (Ramus *et al.* 2008).

i. Initiation of the project

Any project manager in an early stage of the project is required to create and make a critical evaluation of the project objectives in order to determine if the project is

significant feasible and if it should be undertaken. On the other hand other stakeholders of the project such as the client and users do their due diligence and feasibility testing of the project, if needed. If the project manager and other stakeholders agree and decide to move forward with the project, a project charter or Project Initiation Document (PID) is created, including the project needs and project case.

ii. Planning of the project

After the feasibility study of the project the next step now is for the project team to develop an approach through for everyone to go after depending on his/her responsibility or duties to the pertaining project. During this phase, the project manager creates the project management plan (PMP), a formal, approved document to guide execution and control. The PMP also documents scope, cost, and schedule baselines. Other documents included in the planning phase include:

Scope statement and scope documentation: A document that defines the project need, benefits, objectives, deliverables, and key milestones.

Work breakdown structure: visual representation that breaks down the scope of the project into manageable chunks.

iii. Communication plan: This plan outlines the communication goals and objectives, communication roles, and communication tools and methods. Because everyone has a different way of communicating, the communication plan creates a basic

framework to get everyone on the same page and avoid misunderstandings or conflict.

Risk management plan: This plan helps project managers identify foreseeable risks, including unrealistic time and cost estimates, budget cuts, changing requirements, and lack of committed resources

i.v Execution of the project

This is a phase whereby the project execution starts. The kick-off meeting for the project is arranged and then after the meeting, the project team allocates resources, execute project management plans, set up tracking systems, execute tasks, update the project schedule, and modify the project plan.

Performance and Monitoring of the project

The monitoring phase often happens at the same time as the execution phase. This step is all about measuring progress and performance to ensure that items are tracked with the project management plan.

v. Closure of the project

This phase corresponds to the project finalization, often project managers arrange a post-mortem meeting to evaluate what went well in the project and identify failures. Then, the team creates a project punch list of any tasks that didn't get accomplished, performs a final budget, and creates a project report. This phase is very essential and it the records must be kept well due to the fact that it is determining the good matters of the project, which are to be adopted in the future project and awful matters which are to be avoided in the next projects if happens.

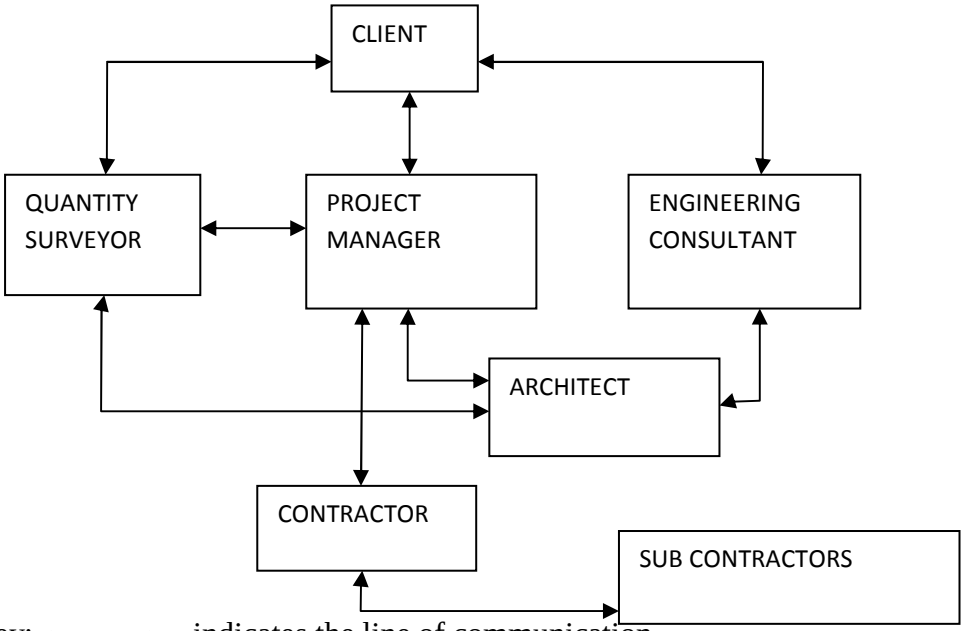


Figure 2.5: Contractual relations between various parties under Project management contract strategy (Ramus *et al.* 2008).

2.2 Factors to consider in selecting project contract strategy

For any construction project the following key factors should be well thought-out when evaluating the most appropriate contract strategy:

2.2.1 External factors

Contemplation should be given to the potential impact of economic, commercial, technological, political, social and legal factors which pressurize the client and their business, and the project team during the project's lifecycle. For example, potential changes in interest rates, exchange rates, changes in legislation and market Rowlinson (1987) and (Morledge *et al.* 2006).

2.2.2 Client resources

This may include client's familiarity with the project, and the environment within which projects it operates, the experience of the organization with constructing civil

works and buildings will automatically influence the contract strategy adopted Rowlinson (1987) and (Morledge *et al.* 2006).

2.2.3 Project characteristics

The scope, size, quality and complexity of the project shall be taken care of as this will influence time, cost and risk. According to Nick and Armstrong (2010) project characteristics can be clarified as follows:

-Project Scope has a significant influence on the client's selection of an appropriate contract strategy. In the context that the scope of work is unclear and the project necessities are hard to be determined at the conceptual stage, there is little inducement for the designer and the contractor to agree to a fixed price for their services instead other contract delivery method such as construction management will be considered.

-The size of the project, as far as overall budget in relation to the size of the project is considered, it can automatically manipulate the selection of a contract strategy to be adopted for the expected project. Great projects necessitate complicated management and project organization structures which some delivery strategies have built into them, taking an example of traditional contract strategy is sincerely appropriate to large size project as compared to other contract strategies.

-High Quality of work required, this refers to project design features, equipment and material specifications, inspection and workmanship standards, system redundancies and safety requirements, and project life cycle considerations. The more Increasing

project superiority further than what is expected “standard” for the project under consideration will likely increase both the cost and time of construction.

-Project complexity, under this factor significant, complex project requires the participation of numerous design consultants with specialized experience and enough number of professional personnel registered by the respective bodies such as AQRB and ERB.

2.2.4 Ability to make changes

Always it is ideal that the needs of the client to be determined at the inception stage of the project, although this is relatively impossible due to the fact that there may raise changes in technology which may influence changes to a project. Any changes in scope of work will perpetually result in costs and time overruns when they occur during the construction phase. It is very important to make consideration at the inception stage of the project the degree to which plan can be accomplished and the option of changes that may happen. If there is a possibility that the client’s wants will vary in the future, for instance, due to stakeholder input, regulatory mandates, market forces, or cost limitations and other economic factors, the traditional contract strategy may not be ideal. The traditional contract strategy takes for granted that the owner’s wants are fixed and can be competitively priced by the contractor in the bills of quantities provided with the tender document (Rowlinson, 1987 and Morledge *et al.* 2006).

2.2.5 Project Management Resources

Level and availability of experienced technical personnel of the client’s resources are significant factors to consider in the selection of an appropriate contract strategy for

executing the project. Client's who have experienced engineers and project managers who are engaged continuously in various projects are more likely to assume design and build contract strategy while those client's who have no permanent consultant teams or experienced engineers, architects and quantity surveyors engaged on them permanently will develop strong relationships with designers, equipment suppliers, and constructors that carry over from one project to another (Rowlinson 1987 and Morledge *et al.* 2006).

2.2.6 Cost issues

An evaluation of the requirement for price certainty by the client should be undertaken considering that there is a time delay from the initial estimate of when tenders are received. The extent to which design is complete will influence the cost at the time of tender. If price certainty is required, then the design must be complete before construction commences and design changes avoided. Cost is considered to be the furthermost threat and the greatest determining factor for the client in deciding whether to carry on with a large capital project Nick and Armstrong (2010) usually; public sector like Local Government projects must also be justified through cost benefit analyses before taxpayer funds are expended. Cost is a function of the client's monetary availability. The client is required to assess alternatives in support that not only considering on the lowest capital cost, but also on the cost of operating, maintaining, and replacing the facility over time. To finish the project within the overall budget, trade-offs may be needed to balance considerations of safety, reliability, durability, and cost.

2.2.7 Project risks

The majority of flourishing projects naturally is an outcome of the efficient and appropriate allocation of risk among the project participants. In the case of the construction industry, the party that can control, manage, or absorb project risk is usually the best the party to assign the risk. The project client's loom to risk share is most likely to influence its selection of the contract strategy. For example, in the case where the client's project scope of work is not worth not defined, contractors will be reluctant to accept fixed-price contracts. Contractors generally attempt to shed risk during the construction phase and pass it on to the owner. In determining which project delivery strategy to use it is important to understand the owner's risk appetite (Rowlinson 1987 and Morledge *et al.* 2006).

2.2.8 Timing

All projects are required within a certain assured time frame. It is so essential that the adequate design time is allowed for the designer to accomplish his design, particularly if design is required to be complete before construction. Assurances from the design team about the resources that are available for the project should be sought. Planning approvals can influence the progress of the project. If early completion is a critical factor, then design and construction activities can be overlapped so that construction can commence earlier on-site. Time and cost tradeoffs should be evaluated. Construction time is vital as money because any construction delays caused by unusually deprived planning and design, management of work on-site among contractors, delayed onset of significant equipment, site accessibility and security requirements, bad weather, abnormal or differing site

conditions, and other time related issues can quickly drain the project's contingency funds (Nick and Armstrong, 2010).

2.2.9 Number of Contracts/Interface Risk

The client's with inadequate construction contract management ability can limit the number of contracts on a project. This is especially true for small to mid-size construction projects where the internal costs of contract management are excessive and cannot be justified from a budget perspective. Also, a large number of contracts add to the interface risks among designers and contractors. Unless the various contracts are aligned with one another, there is a risk of overlapping responsibility, questions of interpretation, and ambiguities, which can result in increased administrative burdens and legal fees (Rowlinson, 1987 and Morledge *et al.* 2006).

2.2.10 Checks and Balances

This also can be an important factor in selecting an appropriate contract strategy for executing the project. For example, the traditional contract strategy allows the client's vital checks and balances. This is due to the fact that the designer contracts directly with the owner for design services and, in some cases, additional project inspection and construction observation services; there is a built-in system of checks and balances that carries over into the construction phase. The design team monitors the performance of the general contractor to make sure that the drawings and specifications are followed and that the design intent is carried out, but in other strategies such as design and build there is no room for checks and balance since the contractor is given all the mandatory power of designing and delivering the project, the client loses control over the project (Rowlinson, 1987 and Morledge *et al.* 2006).

2.2.11 Government policies

The choice contract strategy to be adopted in the project could be affected by the various Government policies. This could be witnessed where clients have to follow an imposed order have to follow Government's procedures or directives in choosing a particular procurement route for government projects. In 2015, the Tanzanian president has instructed that all secondary school laboratory projects should be procured by the management contract method because Tanzania had an express need of the laboratories and wanted to construct them immediately at the lowest cost as possible. Another example of the government policy which affected the selection of the contract strategy was the construction of 13 nucleus hospitals in the whole of peninsular Malaysia; the project was procured by the turnkey method, which is quite similar to the traditional method (Hashim, 2006).

2.2.12 Familiarity of contract strategy

The familiarity of the contract strategy will automatically influence the client's selection of the contract strategy to be adopted for the project. Most of the time clients are not convinced to use other contract strategies other than those which they are familiar with because they are don't need to change their mindset and take the financial risk in case of failure of the new method (Rowlinson, 1987 and Morledge *et al.* 2006).

When all these factors are properly evaluated, a good decision can be made on the selection of a construction contract strategy that best fits the goals and requirements of the owner and the project.

2.3 Chapter summary

Chapter two can be termed as the heart of this dissertation; different authors evaluated on various contract strategies employed on projects within Local Governments, and they went further in describing the important contractual relationships between various parties in different contract strategies, also the chapter reviewed the basic criteria which were used to select contract strategies for projects within Local Governments. The chapter went further and ascertained the main challenges faced on the currently used contract strategies for projects within Local Governments, the chapter also reviewed different types of contracts and the way of selecting those contracts which are undertaken in conjunction with various contract strategies for projects within Local Governments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter generally comprises of the methodology employed in this study. According to Kothari (2004) research methodology can be defined as a way to systematically solve the research problem or it may also be defined as understanding a science of studying how research is done scientifically. In research methodology we study the various steps that are generally adopted with the logic behind them. Research methodology gives the concrete details about the research design, population, sample size, various approaches to data collection and data analysis. This chapter is very essential for the study since it identifies the questionnaire design.

3.2 Research design

Research design is described as an arrangement of the research and it demonstrates what is to be carried out and the ways of implementing it. It engages the arrangement of different variables in a way that permits their relationship to be determined (Leady and Ormond, 2001). The main function of research design according to Kumar (2011) is to explain how to answer to the research questions shall be sought. The research design has mainly two purposes; the first is related to the identification and development of procedures and logistical arrangement required to undertake a study, and the second emphasizes the importance of quality in those procedures, to ensure their validity, objectives and accuracy.

In this study Descriptive research or diagnosis research design will be used, descriptive research design refers to those studies which are concerned with

describing the characteristics of a particular individual, or of a group, whereas diagnostic research studies determine the frequency with which something occurs or its association with something else (Kothari, 2004).

This research used a descriptive research design because there was no need of any kind for subjects manipulation, the research measured things as they were. According to Mc Millan and Schumacher, (1993) this is a proper design for such kind of study which does not manipulate the subjects.

This method is chosen for, the researcher has to be capable of describing undoubtedly, exactly what he/she wants to measure and must find adequate methods for measuring it along with a clear cut definition of the population he wants to study. The major aim of the descriptive or diagnosis, research is to attain absolute and correct data in the said studies, hence the procedure to be exploited must be skeptically planned.

The strategic plan steps in the execution of the study in descriptive and diagnosis research design must be as follows:

a) Formulating the objective of the study; that is to state the objectives with sufficient precision to ensure that the data collected are relevant. If this is not done carefully, the study may not provide the desired information.
b) Designing the methods of data collection selecting the methods by which the data are to be obtained, several methods such as observation and questionnaires can be used in collecting data.

c) Selecting the sample is being based on how much material will be needed for the particular study

d) Collecting the data; this involves things like where can the required data be found and with what time period should the data be related.

e) Processing and analyzing the data. This includes steps like coding the questionnaire replies, observations, etc.; tabulating the data; and performing several statistical computations. To the extent possible, the processing and analyzing procedure should be planned in detail before actual work is started.

f) Reporting the findings. This is the task of communicating the findings to others and the researcher must do it in an efficient manner. The layout of the report needs to be well planned so that all things relating to the research study may be well presented in simple and effective style.

3.3 Research setting

The study was conducted in the Dar es Salaam Region, which is formed by the three Municipalities namely Temeke, Ilala and Kinondoni. These Councils execute a vast of both civil works and building construction projects in every financial year through various funds obtained through various sources, including own source funds collected from various resources of the Councils, Central government capitation, financial aids from friend countries and united Nation organizations such as the world bank and UNICEF.

3.4 Data required

In this study there are five types of data required, the first type of data is concerning about identifying contract strategies practiced by Dar es Salaam Municipal Councils

in civil and building construction projects, the second type of data is about identification of the criteria used in the selection of contract strategies in Dar es Salaam Municipal Councils for the civil and civil and building construction, the third type of data is about identification of different challenges encountered in the current contract strategies used in Dar es Salaam Municipal Councils for the civil and building construction, the fourth type of data is regarding to different ways to overcome those challenges on contract strategies used in Dar es Salaam Municipal Councils for the civil and building construction, and the last type of data focused on the best possible contract strategy framework to be adopted by Dar es Salaam Municipal Councils in civil and building construction.

3.5 Population of the study

The population of this study is of two kinds, the first population group is building construction projects and the other group is civil work projects executed with in Dar es Salaam Municipalities.

3.6 Sample size

The study covered about 60 respondents in which 30 respondents were from building construction projects and the other 30 respondents were from civil works project this is to say from each Municipal 20 respondents were taken by using the method stated in the sample selection.

Table 3.1: Respondents sample size

	Civil works projects respondents	Building works projects respondents	Number
Temeke Municipal Council	10	10	20
Kinondoni Municipal Council	10	10	20
Ilala Municipal Council	10	10	20
Total	30	30	60

3.7 Sample selection

Sample for this study is obtained by using the method of probability sampling this is because probability sampling guarantees that every individual has an equal opportunity for selection and this can be achieved if the researcher utilizes randomization Kothari (2004). The advantage of using a random sample is the absence of both systematic and sampling bias. Therefore for the case of this study Stratified probability sampling was used at first in selecting projects based on the type of the project under which the projects were set into two groups involving civil and building construction projects; and afterward simple random sampling was adopted in selecting project from each group of every Municipal Council of Dar es Salaam.

3.8 Data collection Method

This study consists of two kinds of data which are primary data and secondary data.

3.8.1 Primary data

Primary data for this study was collected through literature review in which various text books, journals, previous research reports, workshop papers, websites and newspapers relating to the subject concerning contract strategies that provided useful guidelines on the study was reviewed

3.8.2 Secondary data

Secondary data for this study was gathered by using one instrument which is a written questionnaire. Chaleunvong (2009) describes that a written questionnaire is

also referred to as self administered questionnaire. This is a data collection tool in which written questions are presented that is to be answered by the respondents in written form. This is considered to be advantageous due to the fact that it is less expensive, it permits anonymity and may result in more honest responses, it does not require research assistants, also it eliminates bias due to phrasing questions differently with different respondents. Notwithstanding its advantages but it has the disadvantage of requiring some extra training of researches and can isolate those who are illiterate. According to Kothari (2004) questionnaire is among the reliable survey instrument. Data collection was through self-administered questionnaires which were distributed by hand in the same research environment of Dar es Salaam Municipal Council's that is Temeke, Ilala and Kinondoni. Taking into consideration the characteristics of research environment and limited time available to collect data, hand delivering questionnaires was deemed to be the most effective as compare to administering them via Internet or other means which results in much lower response rates and require more time and costs.

3.9 Data collection instrument

Literature review and questionnaires is used as the major instrument for collection of data required for this particular study.

3.9.1 Literature review.

Various text books, journals, previous research reports, workshop papers, websites and newspapers relating to the subject concerning contract strategies that provided useful guidelines on the study was used.

3.9.2 Questionnaires

Questionnaires were directed to the Dar es Salaam Municipal Council's (Temeke, Ilala and Kinondoni) stake holders of construction and contract management such as procurement officers, quantity surveyors, architects, engineers and technicians. The information obtained through a questionnaire is similar to that obtained by an interview, but the questions tend to have less depth (Burns & Grove, 1993). Designing the questionnaire for gathering appropriate information required for this study take up a significant section in the data gathering progression. To facilitate respondents to straightforwardly understand the questions and amplify the readiness and ability to answer questions, clear and accurate scaled response questions were used.

3.10 Data analysis

Mugenda and Mugenda (1999) recommended that when the questionnaire has been directed, the raw data collected must be systematically organized in a manner that facilitates analysis, Therefore after collection of data, data was edited to assure that the data were accurate, consistency with other facts gathered, uniformly entered, as completed as possible and have been well arranged. Then after, the researcher analyzed them by categorizing them using the following techniques; coding, tabulation, and statistical techniques such as statistical package for social sciences (SPSS 16) and Microsoft excel so as to obtain a comprehensive and accurate analysis in both the descriptive and statistics, then after the analyzed data were presented using frequency tables and they were drawn in pie diagrams and bar graphs.

CHAPTER FOUR
DATA COLLECTION AND ANALYSIS

4.1 Introduction

This chapter is of essential importance in accomplishing the study. It includes data analysis and giving out the findings of the study. Method attempted in data collection was questionnaires whereby questionnaires papers were distributed to different stakeholders of the construction industry in Dar es Salaam Municipal Councils and thereafter collected for the result comparing and giving the results for giving suggestions on research problems. Data collection based on examining contract strategies which are being used in the projects executed by the Dar es Salaam Municipal Councils. This paved the way to provide an appropriate contract strategy for different projects within Local Government or probable recommendation for the way of selecting appropriate contract strategy depending on the individual project characteristics.

4.2 Data collection

In this research data were collected from 3 Municipalities that is Temeke, Ilala and Kinondoni which are undertaking different building and civil works projects within Dar es Salaam region. The method employed in data collection for the purpose of accomplishing the research was questionnaires. These questionnaires were distributed to construction stakeholders within Dar es Salaam Municipal Councils and it was primarily composed of the filled information that reflected the problem of the study under investigation. Different types of construction stakeholders of the Municipal works department, such as engineers, quantity surveyors, architects and senior technicians were provided with these questionnaires. Questionnaires were prepared to them only so as to facilitate the standardization of data.

4.2.1 Response rate

The information collected was from 3 Municipalities which are undertaking different building and civil works projects within Dar es Salaam region. Sixty questionnaires were distributed to different works department officials whereby 46 questionnaires equivalent to 76.7% were returned. Questionnaires were filled by engineers, quantity surveyors, architects and technicians.

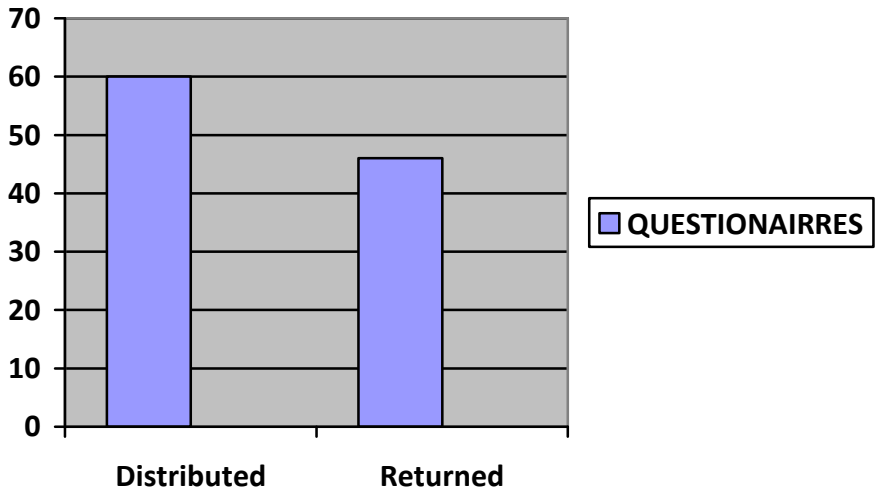


Figure 4.1: Response in relation to distributed and returned questionnaires

4.3 Data analysis

The tools used for analysis was Statistical Package for Social Scientists (SPSS 16) and Microsoft Excel. The major aim of data processing phase was to summarize the information obtained from questionnaires distributed to different people; this involved the descriptive tables or figures. The data and information collected in this study were mainly summarized by tables or figures and some of them were summarized by statistical descriptions.

4.3.1 Respondent's characteristics

Respondents were required to provide their gender in order to identify participation groups in the matters concerning contract strategies for projects within Local Governments.

Figure 4.2 shows that the number of females participating in the matters concerning contract strategies for projects within Local Governments is very low as compared to male in which males responded were 82.6%, while female responded were 17.4%.

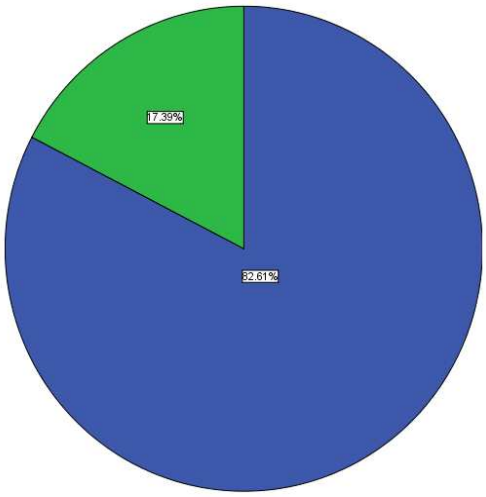


Figure 4.2: gender of the respondents

Respondents were required to provide their ages in order to identify the age groups participating in the matters concerning contract strategies for projects within Local Governments.

Figure 4.3 depicts that the most participating groups of ages in the matters concerning contract strategies are the group of ages between 36 to 45 which participated by 52.17%, followed by the group of 24 to 35 years which participated by 21.74%.

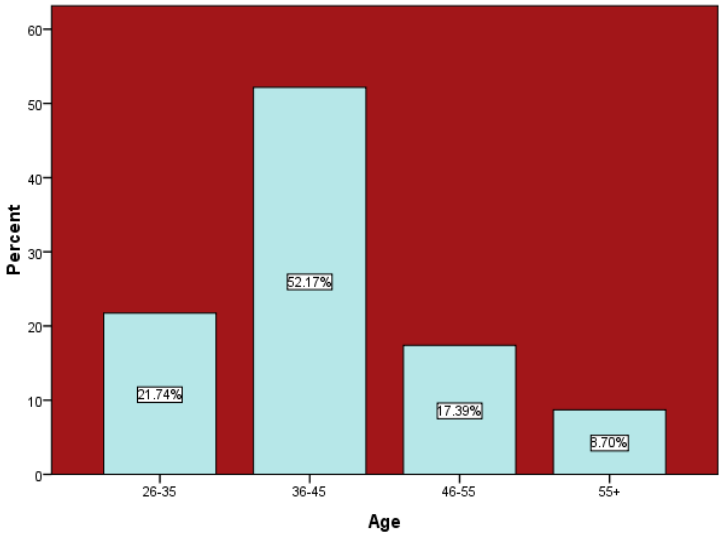


Figure 4.3: age of the respondents

Carrier of the respondents mainly inquired to identify different professional groups participating in the matters concerning contract strategies for projects within Local Governments.

Figure 4.4 depicts the distribution of respondents focusing to their professions. Engineers were 50%, followed by the quantity surveyors who were 26.1%.

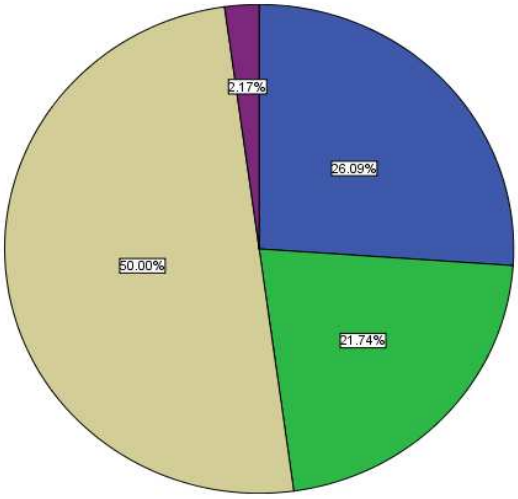


Figure 4.4: Respondent's carrier

Working experience of the respondents was asked in order to determine the experience of the respondents in the matters concerning contracts strategies for projects within Local Government.

Figure 4.5 illustrates the experience of the respondents in which were mainly distributed in four groups, mainly with experience between 0-1, 1-5 , 5-10 and more than 10 years. Results indicate that majority 54.35% have the experience of more than 10 years, followed by 30.43% who have experience between 5-10 years.

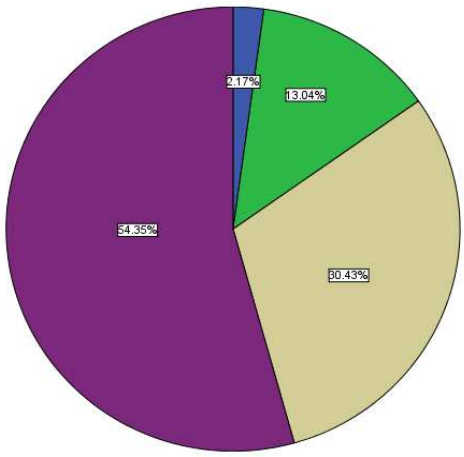


Figure 4.5: Working experience of the respondents

Number of projects that respondents were involved in their carrier, this was inquired in order to explore more about the experience of the respondents in the matters concerning contracts strategies for projects within Local Government, if the respondent participated in more projects it is proven to have provided accurate and reliable answers.

Figure 4.6 demonstrates the number of projects in which respondent participated. Responses were mainly grouped into five groups, mainly those involved in project between 3-4, 5-6, 9-10 and those involved in more than 10 projects. Results indicate that majority 69.13% have been involved more than 10 projects followed by 6.52% who have been involved in between 5-6 projects.

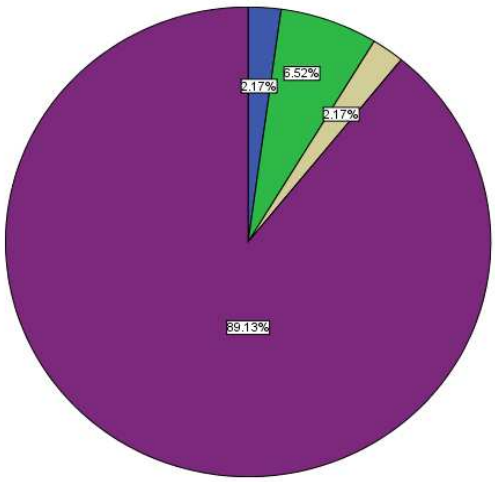


Figure 4.6: Number of projects which respondents have been involved

4.3.2 Awareness of respondent on contract strategies for projects within Local Government

This mainly determines awareness of the respondent concerning the contract strategies for projects within Local Government, it was principally designed to understand the sources in which respondent acquired this knowledge

Figure 4.7 clearly shows an awareness of the respondents concerning contract strategies for projects within Local Governments. The figure depicts that most of the respondents (44%) followed by workshops and seminars (25%).

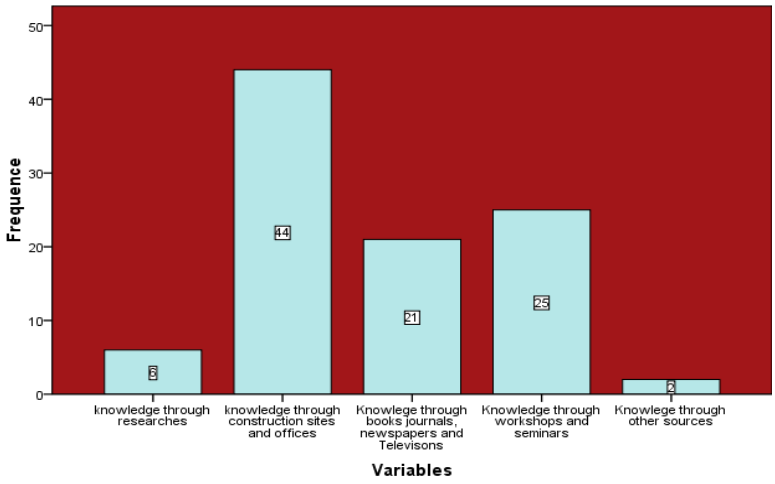


Figure 4.7 Awareness of respondent's knowledge on contract strategy

4.3.3 Types of construction strategies used in projects within Local Government.

The essence of this information was to understand different types of contract strategies and their extent of usage in different projects within Local Governments. The answers to this inquired information were set solicited using 5 Likert scale as follows, 5 = very large extent; 4 = large extent; 3 = average extent; 2 = small extent and 1 = not used at all

Figure 4.8 shows that project management is a commonly used contract strategy for most of the projects within Local Government with a mean score of 4.19, followed by traditional (3.56) contract strategy and there was no contract strategy which was not in use at all.

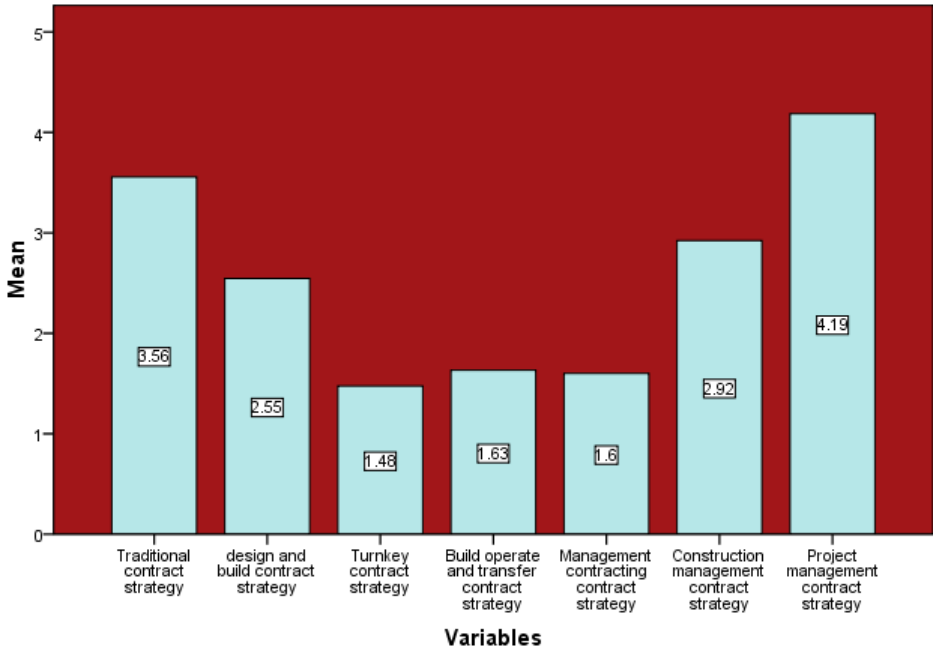


Figure 4.8 Types of contract strategies used for projects within Local Governments

4.3.4 Rating types of contract strategies used for the project within Local Government

This is very essential in determining the current status of the contract strategies used for the project within Local Governments. The answers to this inquired information were set solicited using 5 Likert scale as follows, 5 = Very good, 4=good, 3=satisfactory, 2=poor and 1=don't know.

Figure 4.9 the results show that the majority of respondent amounting to 58.70% said the contract strategies used in their respective Councils are satisfactory, followed by 19.57 % of respondents who said the contract strategies used in their respective Councils are good and 10.87% responded as the contract strategies used in their respective Councils are very good.

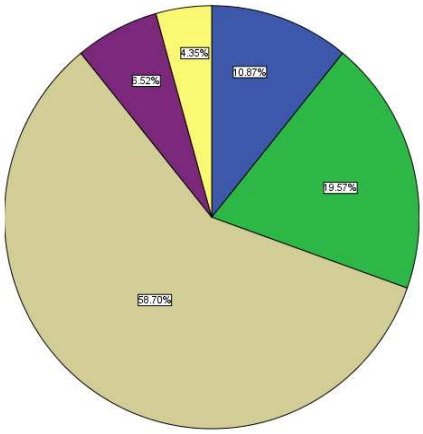


Figure 4.9: Rating contract strategies for projects within Local Governments

4.3.5 Criteria considered in selection of contract strategies for projects within Local Governments

The information from this data is very important because it helped to demonstrate the main current criteria used to select contract strategies for the projects within Local Governments. The answers to this inquired information were set solicited using 5 Likert scale as follows, 5 = strong; 4 indicates agree; 3 = Neutral; 2 = disagree; 1 = strongly disagree

Figure 4.10 revealed that the major criteria used to select contract strategies for projects within Local Government were, project characteristics with a mean score of 4.261, followed by source of fund (4.239), the government policies (4.152) and client familiarity with a certain contract strategy (4.109). There was no criterion which was not considered in the process of selection of contract strategies in those projects within Local government.

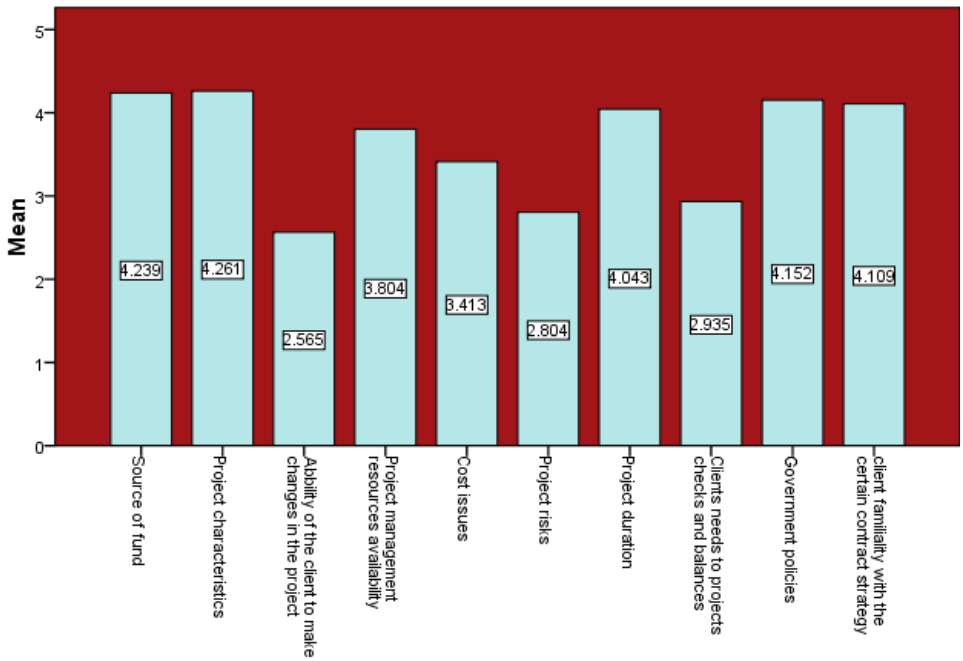


Figure 4.10: Criteria for selection of contract strategies for projects within Local Government

4.3.6 Challenges in the selection of contract strategies for projects within Dar es Salaam Municipal Councils

Ranking of challenges that appearing in the contract strategy is very important because it helped to determine the challenges that affecting different types of contract strategies for projects used within different Municipalities in Dar es Salaam region. The answers to this inquired information were set solicited using 5 Likert scale as follows, 5 = strongly agree; 4 = agree; 3 = Neutral; 2 = disagree; 1 = strongly disagree.

The results were ranked as follows based on mean score: $1=4<X\leq5$ the challenge strongly affects the contract strategy, $2=3<X\leq4$ the challenge affects the contract strategy, score3= $2<X\leq3$ the challenge affects the contract strategy to a small extent, score $4=1<X\leq2$ the challenge does not affect the contract strategy

Table 4.1: Challenges of contract strategies for projects within Local Governments

S/N	Challenges of contract strategies for projects within Local Governments		
	Variables	Mean	Level of effect
1	Inadequate funding	4.04	1
2	Conflict between contractor, owner, and other stakeholders	3.91	2
3	No contractor's input in the design or planning of the project	3.89	
4	There may be more individual disputes to resolve	3.89	
5	Long time	3.8	
6	Higher tenders may arise than originally predicted	3.76	
7	Lack of substantial funding on operation phase	3.52	
8	Problems of buildability and less economic construction methods	3.5	
9	Overall project duration may be longer	3.41	
10	Any alterations made by the client may prove to be more expensive	3.39	
11	Is not an easy method to operate it needs highly capable promoters	3.2	
12	The strategy brings a high risk for clients	3.07	
13	Risk of cost overruns which jeopardizes clients financial status	3	3
14	The contractor may temper with the quality to make savings	2.7	
15	High risk and more cost to contractor and client respectively	2.5	
16	Project cost may not be known until the end of construction	2.43	
17	Contract strategy is less appropriate for more complex projects	2.28	
18	Price certainty is unattainable	2.26	
19	It is very expensive and it requires the client to have all resources	2.22	
20	Contractors bankrupt may root difficulties in project completion	2.09	
21	The client loses control of design quality and project construction	1.96	4
22	Inappropriate for clients who needs authority	1.93	
23	Strategy is not customized to individual needs of the buyer	1.78	
24	The risk of the activity of individual works contractors delaying	1.78	

From Table 4.01 main challenges affecting the currently used contract strategies for projects within Dar es Salaam Municipalities are:

i) Inadequate funding with a mean score of 4.04 affect the contract strategy to a large extent; followed by the other challenges which affect the contract strategy to a normal extent;
ii) Conflict between owner, contractor and other stakeholders of the project since it involves a vast of various people with different qualifications and professions with a mean score of 3.91;
iii) There is no input into the design or planning of the project by the contractor as they are not appointed during the design stage with a mean score of 3.89;
iv) There may be more individual disputes to resolve, many of which may be related as the cause of a dispute with one works contractor may have an impact on works contractors appointed for subsequent work packages with a mean score of 3.89;
v) Long time as the process needs the design to be completed before the commencement of the project with a mean score of 3.8.

4.3.7 The intensity of Criteria considered in selection of contract strategies for projects within Local Governments

The information from this data is very important because it helped to demonstrate the intensity of each criterion used to select contract strategies for the projects within Local Governments. The answers to this inquired information were set solicited using 5 Likert scale as follows, 5 = very high intensity; 4 = high intensity; 3 = moderate intensity; 2 = low intensity; 1 = very low intensity.

Figure 4.11 exposed the intensiveness of each criteria used in selection of contract strategies for projects within Local Government; project characteristics which scored a mean of 4.5 is the criteria which ranked to have highest intensity, followed by source of fund criteria which scored a mean of 4.348, the third criteria is project duration which scored a mean of 4.13 and least criteria in terms of intensity is the ability of the client to make changes in the project which scored a mean of 2.674.

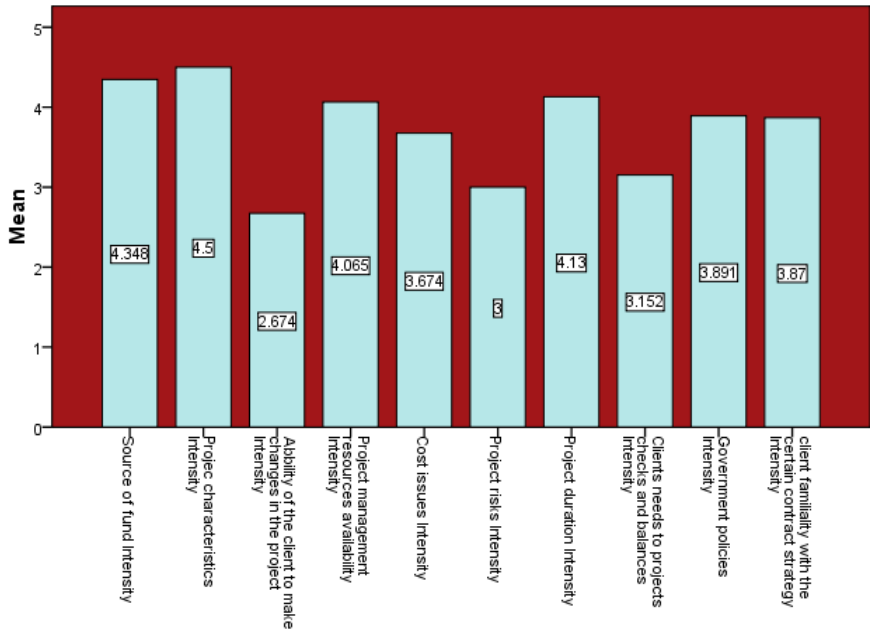


Figure 4.11: The intensity of the criteria for the selection of contract strategy

4.3.8 Responsible organ for the selection of contract strategies for projects within Local Governments

The question aimed at determining the proper organ for determining contract strategies for Local Government projects. The answers were divided into five groups and each group were given a number to stand for, where by 1 stands for Municipal works department, 2 Procurement management unit (PMU), 3 central government, 4 contractors, 5 all above and 6 other sources

Figure 4.12 majority of the respondents 45.90% said Municipal works department is responsible for the selection of contract strategy to be adopted in the projects executed within the Municipal Council, 26.23% of respondents said all the three organs that is Municipal works department, PMU and central government are responsible for the selection of contract strategy for projects within Local Government and 19.67% said procurement management unit (PMU) is responsible for the selection of contract strategy for projects within Local Government, 4.92% said central government is responsible for the selection of contract strategy for projects within Local Government , 3.28% said other organs which they specified as Public procurement authority (PPRA) is responsible for the selection of contract

strategy for projects within Local Government and the and there is no any respondent who said contractors as an organ for the selection of contract strategies for projects within Local Government.

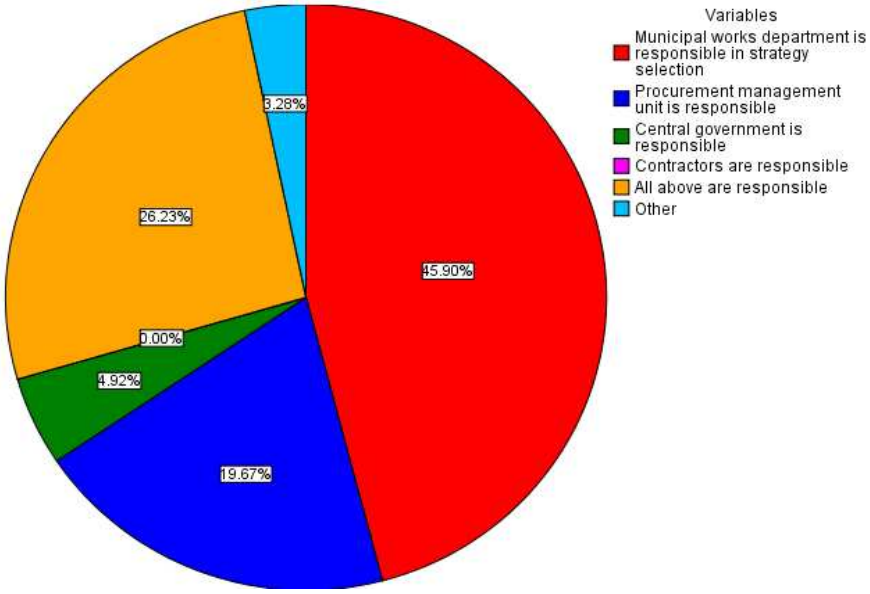


Figure 4.12: Responsible organ for the selection of contract strategy

4.3.9 Contract strategy to be adopted for projects within Local Government;

This information is very fundamental since it provides for the best strategies to be adopted by the Municipalities in their projects depending on the previous characteristics measured. The answers to this inquired information were set solicited using 5 Likert scale as follows, 5 =very frequently; 4 = frequently; 3 = average frequently; 2 = rarely and 1= not used at all.

Figure 4.12 represents field data where most respondents proposed that project management contract strategy to be used as a general contract strategy for the projects within Local Government with a mean score of 3.91followed by design and build with a mean score of 3.84, and the traditional contract strategy with a mean score of 3.77. Construction management was proposed at the fourth position with a mean score of 3.03, the fifth contract strategy is Turnkey with a mean score of 2.19, the sixth contract strategy was management contracting, with a mean score of 1.66 and the last contract strategy is build operate and transfer with a mean score of 1.45.

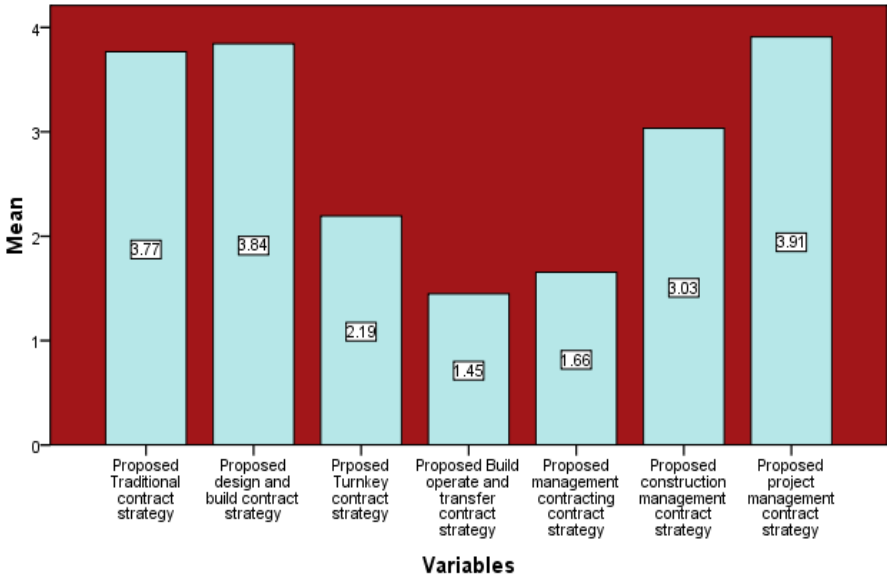


Figure 4.13: Proposed form of contract strategy for projects within Local Governments

Based on a literature review in chapter two the advantages and disadvantages of each contract strategy are illustrated in table 4.2.

Table 4.2: Proposed contract strategy framework for projects within Local Governments

s/n	Contract strategy	Criteria for selection	Reasons for use
1	Traditional	• Ability of the client to make changes in the project • Cost issues • Project risks • Clients need on project checks and balances	• Competition may result into lower project cost • Avoids future unnecessary variations since the design needs to be completed before the commencement of the project • Project cost has been known before commencement of the project • It allows for the client to make checks and balance

2	Design and build	• Project duration • Source of funds • Project characteristics including scope of work ,size of the project, quality of work and complexity of the project • Project risks	• Is very appropriate for complex projects • It is the relative importance of client priorities in terms of cost, time and quality • The project may commence even if the designs are not complete • Brings low risk to the client
3	Management contracting	• Project duration • Project characteristics including scope of work ,size of the project, quality of work and complexity of the project • Cost issues	• Promotes early start and hence early completion of the project • Appropriate for complex and large projects • It may result in maximum competitive price • Ideal when the project requirements are complex • When the employer needs early completion of the project this method may be applied
4	Construction management	• Project management resources availability that is, availability of experienced project management professionals. • Source of fund	• Ideal for clients who want to make future changes • Early start of the project • Competitive prices of tender but value for money • The client is familiar with the construction and knows some or all of the professional team • The risk and responsibility are not allocated to a single firm
5	Project management	• Project management resources availability that is, availability of experienced project management professionals. • Government policies • Client's familiarity with the certain contract strategy	• It is aimed at meeting client's requirements in order that the project will be completed on time, within authorized costs and to qualify standards

Now the appropriate contract strategy framework to be adopted by the Dar es Salaam Municipalities in the execution of their projects, the researcher exploited the relationship between the findings from the survey and the literature review.

The top most proposed contract strategy frameworks proposed from the survey are project management, design and build and the traditional contract strategies.

For project management the literature review tallies with the project management as its elaborated in table 4.2, as it is the process that follows stages and the project can commence even if the funds are not yet collected, it allows the clients to make regular checks and balance, it does not give the room for the contractor to temper with the quality and is very appropriate because local government depends on different sources of funds mainly being capitation from central government, collection from various sources and donors.

For the design and build the literature review goes contrary to the proposed answers of the respondents. Among other disadvantages the literature review affirms that, this is not an appropriate contract strategy for local government because it is ideal for complex and large projects, it needs substantial funds to commence the projects, the contractor may temper with the quality to make savings; therefore this strategy is of disadvantageous to local government.

For the traditional contract strategy literature review balance with the results from the respondents, as the strategy is cheap compared to other strategies, it may arise to competitive contract prices, the project cost is well known at the beginning of the project the only disadvantage with this is that, it can take a long time since needs the design to be completed before commencement of the projects.

The other contract strategies such as turnkey, contracting management, construction management, are not ideal to local government due to the fact that are designed for large and complex projects, needs substantial funds before commencement of the projects, client loses control over the design.

4.3.10 Recommendation with regard to selection of contract strategies for projects within Local Governments

This information is very essential since it gives the way forward in determining the best ways in selection of contract strategies

Respondents recommended that the issue of contract strategy shall be taken care at an inception design stage of the project, the Municipalities shall formulate the procurement strategy section to help in selection of an appropriate contract strategy, also they recommended on providing regular training to contract management team to update them to newly introduced technologies, they went further and said each project shall have its own contract strategy depending on the evaluation done at an inception stage of the project and lastly they recommended that the public procurement authority shall allow other contract strategies rather than project management contract strategy to be used in government construction projects.

CHAPTER FIVE
CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents conclusions and recommendations on the selection of appropriate contract strategies for projects within Local Government in Tanzania, depending on the findings to mirror the main objective of this study. The findings of the study have been discussed fully in chapter four after analyzing the data collected from a representative sample of Dar es Salaam Region Municipalities.

5.2 Conclusion

The main aim of this research was to examine various contract strategies which are being used by the Dar es Salaam Municipal Councils in the execution of its civil and building construction projects. Majority revealed that the commonly used contract strategies within Dar es Salaam Municipal Councils are project management followed by the traditional contract strategies. Major criteria used in selection of contract strategies for projects within Dar es Salaam Municipal Councils were, project characteristic, followed by source of fund, government policies, client familiarity with the certain contract strategy and project duration. A number of challenges were found to be affecting the current used contract strategies for projects within Dar es Salaam Municipal Councils. The top most challenges are:

- Inadequate funds;
- Conflict between owner, contractor and other stakeholders of the project;
- There is no input into the design or planning of the project by the contractor;
- Dispute with one works contractor may have an impact on works contractors appointed for subsequent work packages; and
- Some strategies take long time.

5.3 Recommendations

From the findings and the conclusion obtained in this study, here are the suggested recommendations that, if implemented, will reduce if not the problem of improper selection of contract strategy for projects within Local Governments which is much affecting the performance of building and civil projects within Local Governments.

- The issue of contract strategy for projects within Local Government shall be taken care at an inception design stage of the project.

- The Municipalities within Local Governments shall formulate an independent, effective procurement strategy section within its departments to help in the selection of an appropriate contract strategy and it shall also employ qualified, experienced personnel in the matters concerning contract strategies to head the section and also enough qualified support staffs must be employed to help the head of this section.

- The Municipalities must be providing and supporting regular training to the contract management team to update them to newly introduced technologies;

- Every project shall have its own contract strategy depending on the evaluation done at an inception stage of the project.

- The Tanzania procurement authority that is public procurement regulatory authority shall amend its act through a national assembly to allow other contract strategies rather than a project management contract strategy to be used in government construction projects.

- Selection of the contract strategy shall be depending on the characteristics of the individual project and it is not to be generalized

5.4 Areas of further research:

- With regard to this study, the researcher is hereby recommending the following areas to form part of future research:

  a) Assessment of contract strategies for construction projects within peripheral Municipalities in Tanzania.

  b) Evaluation of an awareness of Local Government contract management teams to the issues concerning contract strategies within Local Government in Tanzania.

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APPENDICES

APPENDIX A

TOPIC: A STUDY ON SELECTION OF AN APPROPRIATE CONTRACT STRATEGY FOR PROJECTS WITHIN LOCAL GOVERNMENT AUTHORITIES (CASE STUDY DAR ES SALAAM MUNICIPAL COUNCILS)

Questionnaire survey to Municipal engineers, quantity surveyors, architects, technicians, procurement officers and all other officials concerned with construction contract management in Dar es Salaam Municipal Councils.

Objective

The aim of this research is to examine various contract strategies which are being used by the Dar es Salaam Municipal Councils in the execution of its civil and building construction projects.

Background information

The information obtained will allow me to inform the Local Governments' construction sector stakeholders and academicians on proper ways of selecting an appropriate contract strategy to each project depending on the findings of this study.

I. Respondent's details

Name (optional) ……..……..

Municipal Council……..

Occupation……..

II. Personal information (Please Check the appropriate insert √ or × in the box provided)

1. Gender

Male	
Female	

2. Age (Optional)

18-25	
26-35	
36 - 45	
46 - 55	
Above 55	

3. What is major (specialist career)

procurement	
Quantity Surveying	
Architecture	
Engineering	
Legal office	
Other, (please specify)	

4. Working experience

(0-1) years	
(1-5)years	
(5-10) years	
Over 10 years	

2. How many construction projects were you involved since starting your career

None	
1-2	
3-4	
5-6	
7-8	
9-10	
More than 10	

III. Awareness on construction contract strategies used by Dar es Salaam Municipal Councils (Please Check the appropriate (insert √ or × in the box provided)

1. Do you have any knowledge concerning the construction strategies used Dar es Salaam Municipal Councils?

   Yes / No. If yes, state how you acquired it. Check all appropriate.

Research	
Construction sites and offices	
Reading books, journals, newspaper or watching TV's	
Workshops and seminars	
Other (specify)	

2. What kind of construction contract strategy is being used in your Municipal Council? Please rank your answer based on the frequency with which the type of contract strategy is being used within your Council, where as 5= contract strategy is used to a very large extent; 4= contract strategy is used to large extent; 3 = contract strategy is used to average extent; 2= contract strategy is used to small extent;1=contract strategy is not used at all

	1	2	3	4	5
Traditional contract strategy					
Design and build contract strategy					
Turnkey contract strategy					
Build Operate and Transfer (BOT) contract strategy					
Management contracting contract strategy					
Construction management contract strategy					
Project management contract strategy					
Other (specify)					

3. How do you rate the current contract strategy used in construction project in your Municipal Council?

Very good	
Good	
satisfactory	
Poor	
Don't know	

4. What are the criteria used to select appropriate construction contract strategy in your Municipal Council?

Please rank your answer regarding to the frequency of the criterion in selection of the appropriate contract within your Council, where as 5= very frequently; 4= frequently; 3 = average frequently; 2= rarely; 1= Not at all

	1	2	3	4	5
Source of fund (client's resources)					
Project characteristics i.e. Scope of work, size of project, quality of work and complexity of the project					
Ability of the client to make changes/alteration in the project					
Project management resources availability i.e. (availability of experienced project management professionals such as engineers, quantity surveyors, architects and others)					
Cost issues i.e. is price certainly accepted or not					
Project risks i.e. who is the risk absorber? Is it a contractor or a client?					
Time of the project/ Project duration					
Clients needs on projects checks and balances					
Government policies					
Client's familiarity with the certain contract strategy					
Other (specify)					

5. What are the major challenges appearing in the contract strategy used within your Council?

Please rank your answer regarding to the challenges affecting the contract strategies within your Council, where as 5= strongly agree; 4= agree; 3 = Neutral; 2= Disagree; 1=strongly disagree

	1	2	3	4	5
Long time as the process needs the design to be completed before the commencement of the project					
Conflict between owner, contractor and other stakeholders of the project since it involves a vast of various people with different qualifications and professions.					
No input into the design or planning of the project by the contractor as they are not appointed during the design stage					
There may be problems of buildability and less economic methods of construction being used as a result of the contractor not being involved in the design					
overall project duration may be longer as the strategy is sequential and construction cannot be commenced prior to the completion of the design					
Project cost may not be known until end of the construction					

High risk is directed to the contractor and it is subjected to more costs to client					
contractor may temper with the quality and may sometimes reduce quality of work so as to save cost and make more profits					
Any alterations made by client or client representative may prove to be more expensive					
Client loses control over the quality of design and construction of the project					
Contract strategy is less appropriate for more complex projects due to the fact that it needs brief and performance specification to be completed prior execution of the contract.					
If the contractor becomes bankrupt prior to the completion of the project, there may be problems in executing the project using another contractor who will utilize the originally appointed contractor's design.					
The strategy may not work as well for a buyer who wants more authority, control and flexibility in a design process.					
The strategy is not customized to an individual buyer's needs.					
Projects may be successful only when substantial revenues are generated during the operation phase.					
The success of project depends upon successful rising of necessary finance.					
The strategy is not an easy method to operate because it needs high capability of promoters					
Price certainty is unattainable until the works contractor has been appointed for the final works package.					
It is very expensive contract strategy since the client is required to have adequate resources to administer the project.					
higher tenders may arise than originally predicted for works packages in the contract cost plan for the project					
The strategy brings a high risk for clients					
The strategy has the greatest risk of cost overruns which could jeopardize the financial stability of the client					
In this strategy there is a risk of the activity of individual works contractors delaying or disrupting each other					
There may be more individual disputes to resolve, many of which may be related as the cause of a dispute with one works contractor may have an impact on works contractors appointed for subsequent works packages					
Other (specify)					

6. In your opinion what are the intensity of impact of the following criteria for the selection of an appropriate contract strategy in your Council?

   Please rank your knowledge on the following, where as 5= Very high; 4= High; 3 = Moderate; 2= Low; 1=Very low

	1	2	3	4	5
Source of fund (client's resources)					
Project characteristics i.e. Scope of work, size of project, quality of work and complexity of the project					
Ability of the client to make changes/alteration in the project					
Project management resources availability i.e. (availability of experienced project management professionals such as engineers, quantity surveyors, architects and others)					
Cost issues i.e. is price certainly accepted or not					
Project risks i.e. who is the risk absorber? Is it a contractor or a client?					
Time of the project/ Project duration					
Clients needs on projects checks and balances					
Government policies					
Client's familiarity with the certain contract strategy					
Other (specify)					

7. In your opinion, whom do you think is responsible for selection of an appropriate construction contract strategy framework to be adopted by the Dar es Salaam Municipal Councils?

Municipal works department	
Procurement management unit (PMU)	
Central government	
Contractor	
All	
Others (please specify)	

Please give reason (s) for your opinion

……

……

8.0 What forms of contract strategy would you prefer to see more application of it in your Municipal Council?

Please rank your answer on the following criterion, where as 5= very frequently; 4= frequently; 3 = average frequently; 2= rarely; 1= Not at all

	1	2	3	4	5
Traditional contract strategy					
Design and build contract strategy					
Turnkey contract strategy					
Build Operate and Transfer (BOT) contract strategy					
Management contracting contract strategy					
Construction management contract strategy					
Project management contract strategy					
Other (specify)					

9.0 What can you recommend in regard to selection of construction contract strategies in Dar es Salaam Municipalities? (Check more than one if any)

The issue of contract strategy shall be taken care at an inception design stage of the project	
Every project shall have its own contract strategy depending on the evaluation done at an inception stage of the project.	
The procurement authority shall allow other contract strategies rather than project management contract strategy to be used in government construction contracts.	
The Municipals shall formulate the procurement strategy section to help in selection of an appropriate contract strategy.	
Regular training to contract management team to update them to newly introduced technologies.	
Selection of the contract strategy shall be depending on the characteristics of the project.	
Other (specify.	

Thank you for your co-operation in completing this questionnaire.

Mhina, Kwingwa