BUILDING CONTRACTORS STRATEGIES IN ATTAINING BIDS IN TANZANIA

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By

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Ardhi University a dissertation entitled **"Building Contractors Strategies in Attaining Bids in Tanzania"** in fulfillment of the requirements for degree of MSc. in Construction Economics and Management of Ardhi University.

Dr. Khalfan Amour

(Supervisor)

Date.....

DECLARATION AND COPYRIGHT

I, **William Petro,** hereby declare that the contents of this dissertation are the result of my own study and findings, and to the best of my knowledge, they have never been presented elsewhere for a Diploma, Degree or any professional awards in any higher Learning Institution.

Signature……

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DEDICATION

I sincerely dedicate this dissertation to my lovely parents, Mr. and Mrs. Abraham Ngavatey for their endless support and guidance in my life. I also dedicate this dissertation to my wife Julieth Unambwe, my son Ivan Petro, all my young brothers and sister for their endless support and encouragement throughout my study.

ABSTRACT

Contractors adopt various bidding strategies in order to win the tender. The strategies adopted by the contractors are plans, ploy, patterns, perspective, or position base on various managerial intentions that act as a support for decision making, as a vehicle for coordination and as a target to win the given tender.

Some contractors have one or no works for the whole year regardless of many public or private bids applied. These contractors use different strategies in biding but you find some get many works and others do not win or win very few works compared to the big number of tender participated.

The aim of this study was to assess contribution of bidding strategies in achievement of successful bid by Tanzania building contractors. This has been achieved through identification of bidding strategies used, assessment of factors considered in the choice of suitable ones and their contribution to the successful bid.

To attain the aim of this study qualitative approach through individual interview of 10 contractors obtained by judgmental sampling. Also quantitative research approach has been deployed to data collated through questionnaires survey conducted to 60 local building contractors obtained through stratified sampling techniques from CRB list of class I-III contractors residing at Dar es Salaam.

Microsoft excel and Statistical Package for Social Sciences (SPSS) was used to analyze data collected using questionnaire and content analysis method was used to analyzed data collected using interviews.

The study found that sustainable practice and aggressive/random tendering are the most used strategies and they appear to have a strong/high contribution to successful bid compared to others. On the other hand, add no price features and public relation/social responsibility were less common used strategies and appear to have small contribution in attaining successful bids.

The study suggests that local building contractors should make use of bidding strategies as their milestone to improve from less price or market followers' contractors to innovator contractor with successful biding practice.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of variance
AQRB	Architect and Quantity Surveyor Registration Board
BOQ	Bills of Quantities
CRB	Contractor's Registration Board
JKT	Jeshi la Kujenga Taifa
JV	Joint Venture
NCC	National Construction Council
NHC	National Housing Cooperation
PPA	Public Procurement Act
PPR	Public Procurement Regulation
PPRA	Public Procurement Regulatory Authority
SMEs	Small and Medium Enterprises
TANePS	Tanzania National e-Procurement System
TBA	Tanzania Buildings Agency
SPSS	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Bidding is the act of offering to pay a particular amount of money for something, by different people (Online Cambridge dictionary). Ansoff (1965) in Dikmen et al. (2003) defines strategy as a firm's choices of products as well as markets. He argues that strategic decisions are primarily concerned with selection of the product mix, which the firm will produce and the markets to which it will sell. This will give the same reflection in construction industry as the contractor has to select the way in which they will offer and sell their service to get profit and expand in the construction business. Mintzberg (1987) in Dikmen et al. (2003) defines strategy as a plan, ploy, pattern, perspective, or position according to various managerial intentions and argues that one should have an eclectic view for strategy.

Contractors and subcontractors often develop strategies to be used as guidelines during bidding processes. Generally, an estimator, or estimating team is responsible for leading on a particular strategy. The overriding aim of the strategy is to weigh up market and commercial factors and decide on a fee that is just low or attractive enough to become the preferred bidder. Mintzberg (1978) in Dikmen et al. (2003) described a strategy acts as a support for decision making, as a vehicle for coordination and as a target.

The bidding process is often time consuming and expensive, involving costs for the evaluation of specifications, subcontractor solicitation, proposal preparation, and so on. In Tanzania construction industry competitive bidding is the one dominating for the government projects. Also other forms like direct nomination of a contractor is rarely used and mainly by private clients.

Various researches and discussion of bidding strategies used by bidders in construction has been done for many decades (Thorpe and McCaffer, 1991 in Lowe et al., 2006). Construction industry is a sector which always exists in competitive and innovative world with various challenges including political influence for public projects as politicians use same projects in gain popularity in the society.

Contractors should be creative and develop or adopt suitable competitive bidding strategist that enable them to win the job in which they bid for (Male, 1991 in Lowe et al., 2006). These are competitive business strategy (Porter, 1998), in which the Contractor should decide on which tender to engage in, with consideration of type of the work and size of construction work, type of the client and decide on appropriate or suitable mark-up which will ensure his winning of the job (Stone, 2012). In provision of mark up size, Drew (1994) said that each bidder has differing degrees of selecting one contracts over the other. Some contractors are more selective and others are less selective. Those who are very selective concentrate on certain characteristics in accordance to their preference. Less selective contractors place less emphasis on characteristics of contract. They are normally driven by constraints.

The competitive bidding process for awarding construction contracts in the Tanzania is typically based on the low-bid method and is probably as close to pure competition as possible in accordance to Public Procurement Act (2011) which govern the public procurements but the method is also adapted by private institution and people in the way that they enjoy the market price by getting market driven value. This is the reason why contractors use different bidding strategies to enable them to win the tender in order exist in construction industry. According to this method, the construction firm submits the lowest bid price will be awarded that construction contract. Its main advantage to clients is that it forces contractors to continuously lower bid prices by adopting cost-saving technological and managerial innovations which are among bidding strategies. Cost saved through competitive bidding process will go to the clients.

When the number of bidders is large, however, as is the case in a slow economy, an owner runs a significant risk of selecting a contractor that has either accidentally or deliberately submitted an unrealistically low price (Grogan 1992). A contractor cannot adhere to such a price and at the same time expect to complete the project according to plans and specifications, and also make a reasonable profit. This often results in excessive claims and disputes during construction that lead to schedule delays, compromises in quality, and increased costs.

Pricing strategy is among the bidding strategies. Best (1997) claims that there are basically two extreme pricing strategies: cost-based pricing and market-based pricing. Any other pricing strategy is always in between these two extremes. Cost-based

pricing starts by establishing the total cost of making a product. Then the product will be sold with addition of cost-based markups made of commonly overhead cost and a desired profit. There are two problems with this pricing logic. The first one is possibility to under-price products using cost based pricing. The second possible consequence of cost based pricing is overpricing.

Due to the fact that the price is set based on internal cost and margin requirements, the price that results could be too high or too low compared to the market price. When the pricing consider the market condition (product market position, customer views and competitors), a firm would know how to reduce cost in order to achieve a desired/ planned level of profit.

In Tanzania construction industry the quantity surveying professionals developed a number of estimating techniques designed to cope with the many and varied instances in which predictions of cost are required during the development of a building design. These estimating techniques range from simple lump sum evaluations (like in pre-tender price) and single unit methods in measuring and pricing very detailed approximate quantities or even pricing full bills of quantities.

In Tanzania AQRB and NCC publish the range of estimated cost per square meter for buildings construction annually. The rates will be provided by considering the market price, function of the building and complexity of service work. These rates give only rough average estimate with no specific type and quality of material. This will lead to generalized rates which need one to have a detailed description in order to establish realistic rates for the given project. Also one need to have a detailed Bills of Quantities

to take into consideration all the project details quantity of partition walling in the specified area and specification of material which may have very big impact on cost. Due to these rates many contractors who did not employ personnel's with construction estimation experience will provide unrealistic rate and check the last figure using AQRB and NCC rates.

It is assumed that cost estimates produced during the various design stages of a construction project have the objective of predicting the tender price level (i.e. lowest tender) which might be expected to be achieved if that same scheme were assumed to be fully detailed and competitive tenders could be invited on the relevant contract particulars. For competitive bidding the clients use the consultant price and allow the range for acceptable deviation like 15% below or above the estimated cost as given as evaluation criteria in many public bidding documents. This may fails if the clients delay to start procurement of the competent contractor and also you may find quantity surveyors giving unrealistic cost estimate due to time constrain in preparation of their documents (BOQ) hence may mislead during tender evaluation. The tender may be awarded to the contractor with unrealistic price and those with realistic market price will find their bid price being considered as abnormal high.

Due to challenges faced in cost estimating during tendering, the contractors need adapt suitable bidding strategies to deal with all the challenges in a way that they will do their works with reference bases that lead them to their target.

1.2 Statement of the Problem

When applying public and most private institutions projects in Tanzania bidders submit their bid price in which upon evaluation they will be awarded to execute such work in valuated or negotiated bid price if any. Considering evaluation criteria's for tender under documents used for public project like World Bank Guidelines and PPA the lowest evaluated bidder will be awarded the tender. Evaluation criteria's include technical evaluation in which among others experience of bidder and its technical personnel's in a works of similar nature, legality of the bidder, financial capacity to execute the work, plants and equipment require for the given project and its understanding of work for complex project and finally error free bidding price. Contractors use different bidding strategies to enable them to pass through evaluation process and provide reasonable bid price to win the given tender. Most of contractors fail in evaluation process when they bid for competitive bid. They apply many bids with no success as they fail at earlier stages of evaluation or with higher bid price compared to other evaluated bidders. Some contractors used none competitive strategies as an alternative way to get in the market as young contractors and some for sustainability of their firms in the market. Due to all the challenges in bidding contractors need to have proper consideration (factors) in selection bidding strategy that make them win the bid. Tan et al (2010) explained in their study that, selection of bidding strategy base on the analysis of the bidder's internal and external circumstances.

Successful or unsuccessful biding practice depends on the techniques used by the contractor to enable them win the tender and this techniques are what we call bidding

strategy. One needs to learn and use these strategies to see those which will enable them to win the tender. Many researchers like (Martin, 2014; Porter, 1998; Jagafa, 2016, Drucker, 2004, Skirtmore, 1989 and Tan et al., 2008) in their studies came up with strategies which differ from one another or having different terminology but same in application. This research has been done to make coordination of bidding strategies established in various studies and unveil their contribution in successful bid.

In construction you find three types of contractors in bidding process. You find low price providers, market follower and innovators contractors (Tan et al. 2010). Price providers contractor are those contractor who think of getting a project at any price regardless of being below the market price to win the bid. Market follower always change with the market situation and innovators contractor are those who think of new technology and construction techniques as they always invest in innovation. Innovators contractors invest in research for new bidding strategy to mark sure that they will get works and good profit at the same time. The three groups of contractors are categorized according to the bidding strategies used, therefore stepping from one category to another will be taken as a good success in the use of bidding strategy to win the bid. For this case there is a need for research to see the extent to which bidding strategies contribute in transformation of low bid and market follower contractors to successful innovators contractors.

1.3 Objectives of the Study

1.3.1 Main Objective

The main objective of this research is to assess contribution of bidding strategies used by Tanzania construction firms in achievement of successful bids.

1.3.2 Specific Objectives

1. To identify bidding strategies used by construction firms in Tanzania
2. To assess factors contributing to the choice of bidding strategies by Tanzania construction firms.
3. To unveil contribution of bidding strategies in successful bid in Tanzania.

1.4 Research Questions

In attempt to evaluate bidding strategies of Tanzania construction firms in achievement of successive competitive bidding price some question were set. The following are question has been set to fulfill the research objectives.

1. Which are common bidding strategies used by Tanzania construction firms?
4. Which are the factors influencing the choice of bidding strategies used by Tanzania construction firms?
2. To what extent do bidding strategies contribute on successful bidds in Tanzania?

1.5 Significance of the Study

This research is important due to the following facts;

i. Will help construction firms to come up with successful bidding price
ii. Help to prevent the bidders from losing resource without wining applied bids.
iii. Provide information to bidder about successfully factors in bidding process
iv. Help CRB to see areas to pay attention in the effort of capacity building for contractors as they conduct their workshops and seminars

v. Help PPRA and other policy makers to develop or provide friendly policies that enable contractors to provide successive bidders.

vi. Helps to activate the company in activities and make it suitable as they bid successively.

vii. To have a better understanding on how local contractors could effectively provide successive bidding price to compete with foreign bidders in bidding process,

1.6 Scope and limitation of the research

The study was conducted to class 1 to 3 local building contractors register by CRB in Dar es Salaam. The study was conducted in Dar es Salaam due to the fact that contractors have been registered in Dar es Salam and class 1 to 3 were chosen to participate in this study as they have enough experience and they are flexible in adoption of bidding strategies to enable them win the tender. The classes chosen are also believed to have enough information even of lower classes.

The study was taken during scarcity of building construction projects. Most of the public projects are being executed by government institution like TBA and SUMA JKT for more than three years. This changed many contractors' normal practice and turns into works that help in sustainability of their firms while making small or no profit. This may affected my study as what they have in their mind is what they gave out as strategies.

1.7 Theoretical framework

The aim of using bidding strategies is to attain competitive advantage in the industry over other competitors. As far as this study is concern three theories have been used to provide a philosophical backup of the research.

The first one being Poter's theory for competitiveness of the firm. In his studies Porter (1980 and 1985) developed a theory which insists that, competitive advantage comes from the competitive strategy adopted by the firm neutralizing threats or in exploitation of opportunities presented by a given industry. This theory received some criticism like failure to show internal mechanism that convert external environment challenges into useful ability (Lado et al., 1992). Also the firm can use more than one strategy at a time to gain competitive advantage which was not considered in Porter theory leaving the research gap in the use of multiple strategies to attain competitive advantages over other competitors. This study tries to explain competitive advantage through various bidding strategies. Contractors adapt one or more bidding strategies that they think can make them successful over other competing firm making this theory act as a study backup as it insist on the use of strategies to attain competitive advantage.

The second theory is the resource-based view and core competence approach (RBV) by Prahalad and Hamel, (1994). Hamel and Prahalad, (1994), propose that each firm should develop its unique resources in order to achieve core competence to sustain growth. According to RBV a firm can be viewed as a collection of resources but at the same time should know that not all the resources are considered necessarily to be the

source of a firm's competitive advantage. Also they have to consider that competitive advantage do not always depend on industrial structure and market but stems from the resources inside the firm. Another point is that a firm has to identify and strengthen its specific resources to develop its core competence. Resources in this context refer to the effective utilization of available resources to achieve competitive advantage and not only possession of firm's specific resources. Contribution of this theory in this study is its emphasis on the focus of the firm internal resources which were among the bidding strategies adapted by construction firms to achieve competitive advantage to win the bid. The theory received some critics like the need to know which resources are valuable in which contexts and how resources can be managed in such a way as to sustain competitive advantage and also the inward focus of the firm may result in the risk ignoring the nature of market conditions (Hooley et al., 1997). These critics plus statements of the theory has been used as a backup for this study as all the contractors evaluate available resource and use them in making conditions for successful bid.

The third theory is the firms' competitiveness in the strategic management approach. This theory was in its heyday in the 1970s were Alfred Chandler and Igor Ansoff, acted as the most influential pioneers of the theory. The two researchers wrote on this theory (Chandler, 1962; Ansoff, 1965). Wheelen and Hunger, (2002) define strategic management a set decisions and actions by management in determination of the long-run performance of the company. The strategic management can be thrust in dealing with turbulence of the business environment to encourage strategic thinking in achievement of the long-term development. Foss, (1996) criticize that, the theory is too pluralistic but to him this theory seems to be consistency compared to

competitiveness and resource based view theory. This theory also used as a backup of this study as some of bidding strategies used for successful bidding process are firm strategic management approach for the long run performance of the company.

All the three schools of theories are useful as all achieve competitive advantage for firms. In this study you find competitiveness theory used with a wide range of consideration of usefulness of competitive strategies in winning the tender, internal resource to attain competitive advantage over other competitors and the strategic management used to achieve the long term performance of the firm. Critics of the three theories have been considered as the gaps left with these theories which were also useful for this study.

1.8 Conceptual framework

The conceptual framework developed for this study act like a study map on implementation of bidding strategies to achieve successful bid. The conceptual framework developed is grounded on twenty nine independent variables and two dependent variable and five control variable. Independent variables are bidding strategies being practiced by construction firm to attain successful bid. This strategy will enable the biding firm to submit a successful or unsuccessful bid which a termed as dependent variable in this concept. Basing on the concept of this study successful or unsuccessful bid depend on the bidding strategy used in bidding. Selection of bidding strategy is controlled by five factor mention in this concept as control variable. Control variables include project documents where by project duration is mentioned, prequalification requirements will be given and many other information like those determining build ability of the project. Also they include project characteristics which

among of them include the size and complexity of the project. Other control variables were client characteristic like financial situation and historical background on payment, economic situation which includes completion and time (season) of bidding also internal characteristics (contractor) are among the control variables derived by tools like working load against present load, financial situation during tendering availability of personnel and plants for new work. All this deriving variables were considered to control contractors mind on decision of which strategy will be used for successful bid.

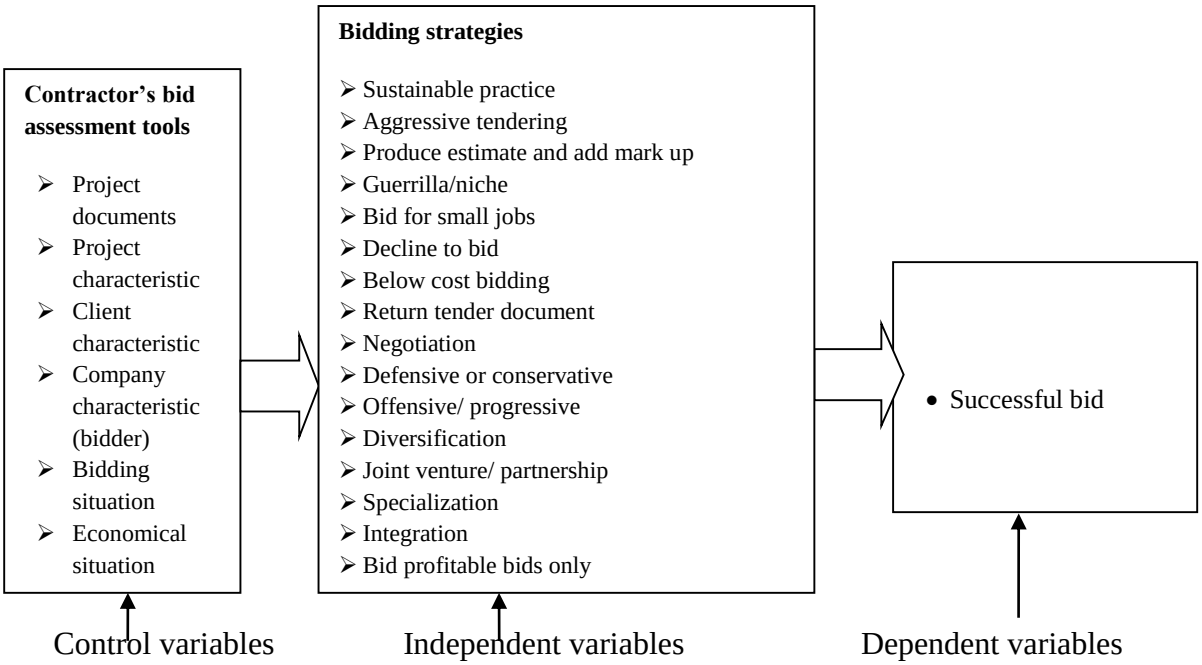

Figure 1.1 Conceptual framework (Source; author's views0

1.10 Chapter Summary

This chapter has introduced an overview of the entire research study which includes background information on bidding strategies as discussed in previous researchers, objectives of the study which include assessment of contribution of bidding strategies used by Tanzania construction firms in achievement of successful bid price. Also the

statement of the problem that gives overview of the study problem is included. It also provide significance of the study like better understanding on how local Contractors could effectively provide successive bidding price to compete with foreign bidders in bidding process and provision of knowledge which can help CRB and anther policy makers in improvement of construction policies. Other things given in this chapter is the scope and limitation of the study whereby the study cover class 1 to 3 local building contractors registered by CRB at Dae es Salaam.

The next chapter presents the relevant literature that was available during the course of study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discus past studies to gives an overview of its coverage on the wide aspects of bidding strategies. Various bidding strategies will be discussed in relation to previous studies done by other researchers in this topic. Furthermore various factor making bidder to use those strategies in bidding as a way of being successful competitor in construction industry looked at. The chapter provides the base of this study as it introduce the concepts of successful bidders' through discussion of various biding strategies and factor influencing selection of bidding strategies.

2.2 Bidding strategies

2.2.1 Introduction

Bidding strategy is a management technique which makes use of the company available resources in order provide or submit competitive bid. This technique considers a lot of aspects like internal and external environment. The aim being wining the bidding competition and provide maximum project performance.

Competitive strategy is a long term action plan which a firm uses against its competitors to achieve competitive advantage after studying their strength and weakness and compare them with its own (Martin, 2014). This strategy will define the industry and market in which the company/firm will compete successfully. It will enable the firm to determine competitive advantage and potential profit after defining intensity of competition in the industry. For a construction firm it will define the

industrial ground to fit in either, commercial, industrial, utilities or residential. In order for a firm to win in competitive tender they need to have approaches which make them win. These approaches will make a firm to decide on the size and market position a firm planed to achieve. In previous study you find researchers classified or described different bidding strategies used by contractor during tendering in deference ways for example Porter (1998) categorize strategies as differentiation, differentiation focus, cost leadership, and cost focus, Treacy and Wiersma, (1995) in Jagafa, (2016) categorize bidding strategies in three groups which are operational excellence, customer intimacy and product leadership Drucker (2004) presented three bidding strategies, which include; integration, specialization and diversification. Skitmore (1989), also introduced six bidding options that contractors can choose to exercise, these include Decline to bid; Submit a cover price ; Add 'non price features' (i.e. qualify the bid); Return tender documents; Produce a rough estimate and add mark-up; Produce a detailed estimate and add mark-up. Skitmore (1989) considered the first five options as non serious bidding strategies. As turnaround contractors/bidders submitting bids prepared by detailed estimate with additional mark up are said to submit a serious bid to the client.

According to Merna and Smith (1990); Fine (1975) bidding strategies were classified as the misconstrued (bid contain errors) or suicidal low bids (the bid below which is common to firms experiencing cash flow problems); and random (most common during low work levels), selective, and severely competitive bids (most common in public project tendering). Tan et al. (2008) conducted a study and revile five types of competitive bidding strategies. These include lower bid strategy public relations, joint

venture, claim strategy and risk control. Emily (2013) conducted a study which introduced three types of bidding strategies which are selective bidding, quantity bidding, and negotiated work.

2.2.2 Differentiation' and 'Product Leadership

In this strategy a bidder/contractor will introduce deferent or unique product or service into the market. The product introduce by contractor should be unique from what other rivals firms are offering. This need investment and research or innovative team which can brainstorm to introduce new or deferent product and services that will make them being cheap or produce good output compared to others. This also requires capital to implement new ideas on unique products. This firms which are product leaders in construction industry are able to offer lower bid prices to procuring entities hence give them a big chance of being awarded tender than their competitors. These companies also can leverage their expertise by achieving expertise in disciplines like collaboration and management (Martin, 2014).

2.2.3 'Operational Excellence' and cost leadership

This strategy aim to make firm superior in the market through offering lower cost to the client owing to low production cost (Portar, 1998). In this strategy the company lower the overall cost of production compared to other competing firms hence enable them to offer the lowest price compared to their rivals. The strategy streamlines operations through focusing on automating manufacturing processes and work procedures so as to bring down costs (Martin, 2014). This strategy requires one time substantial investment like new technology to the given industry. The strategy is available for small and medium companies as it only requires them to acquire raw

material at the lowest cost and use best labours to convert those materials to valuable product for the client (Jagafa, 2016). For Tanzania you may find firms practicing in this strategies using local available material to produce construction material like aggregate and sand. Others introduced ready mix concrete and lower the product cost in construction industry. Operational Excellence' and 'Cost Leadership' is beneficial when the price is an important factor in the market Martin (2014). This apply in competitive construction tendering were price is an important factor where by the lowest bidder is the one wine the tender. Contractor or bidders will try to lower their construction cost to win the tender and for healthy industry they must lower the cost of each item by application of good technology which can lower the cost of building material and use the best skilled people in transformation of those material to the best product required by clients. Small and medium contractor con strive to acquire quality material for quality construction at the lower price.

2.2.4 Customer Intimacy

The strategy is Differentiation Focus and Cost Focus on certain segment of market by producing specific service or product in accordance with the specific customer or client. This strategy will aim in giving lower price to particular commodity or service like in construction when the contractor specify to offer lower price for concrete works only and not other parts of the building. It segment, target certain markets and customize offerings to march that type of market segments (Martin, 2014). Strategies are available to small and medium sized construction firms as they can try their level in achieving cost focus in their communities and/or differentiation focus for the

particular segments of the construction industry like industrial, residential, social housing or commercial (Jagafa, 2016).

2.2.5 Specialization

For a company to grow and gain strength in its industry it either diversify in products, market, and end-uses and put more concentration in its areas of basic knowledge; or it diversify in its area of its knowledge and put its most concentration in its products, markets and end-uses (Drucker, 2004) **.** Almost all the business firms need specialization as way of dominating the area in which it can be the best than other (Drucker, 2004). The firms will specialize in order to gain strength through specialization. This will make them leader as they deal with areas which they are expert enough which is an added advantage when compared with other who have no specialization in the industry. Every business firm must try to obtain the most from its specialization (Swaim, 2010; Collins, 2001). This strategy can be practiced by all levels of contractors and here in Tanzania you find contractors specialized in one discipline like, electrical, mechanical, plumbing, air-condition, or aluminium works. This will make them become expertise in that field hence enable them to offer quality service at affordable cost compared to the firms doing all the construction activities. Construction Small and medium enterprises (SMEs) tend to specialize in their niche markets so as to satisfy special market need, as well as price range, product quality and demographics that it targets. They specialize and try to become product leaders in that product category therefore they concentrated in its products, markets, and end-uses, and diversified in its knowledge.

2.2.6 Integration

Integration is the merging of two or more different disciplines or organization with different goals in order to attempt a certain targeted goal as they support each other in that situation according to their specialization (Austin, 2002; Jaafari, 1999). This is like that of machines systems working together to give out a function of a machine. Different cultures of different disciplines or organization will be aligned in collaborative manner in sharing available information and this is a continue process until the project objectives are attempted. **.** It is often a continuous process with its objective of improving team culture together with professional attitudes (Howel, 1996; Dainty, 2001). For construction industry, integration can be described as introduction of methods, working practices, and behaviors to introduce the culture of effective collaboration and efficient of individuals and organizations (Vyse, 2001; Lennard, 2002). This creates environment where by all individual or organization within the integration share project data. In construction integration can be explained by referring to design and build method of construction where by design team work with the contractor in collaboration as one tem to attain one project goal which is fulfilling the client requirement by turning them into tangible feature which is construction structure. The other example is the association with a specialist sub-contractor in order to attempt or meat project requirement and fulfills the project objectives when awarded the tender.

2.2.7 Offensive or Progressive Strategy

This strategy can be practiced by middle to big companies as it require capital and other resource to implement. This sometimes is termed as progressive strategy or a

growth strategy (Robbin, 2015). Offensive strategy overcomes barriers to achievement of goals by changing the relationship of the system creating them (Swaim, 2010). "Nature loves competition and rewards successful offense" Durant (2010), this implies that, successful offense in any business are rewarded due to the fact that business reflects the similar dynamics as nature. Launching an offensive strategy includes some element of risk which a firm must take precautions on Robbins (2015)**.** An offense strategy focuses on new services or products, new distributions channels, new customers and new talent among other things (Chesley and Watson, 2010).

2.2.8 Defensive or Conservative strategy

A defensive strategy can be defined as accepting the competitive forces and positioning your firm or company to best defend against those forces (Swaim, 2010). Defensive strategies involve improving efficiencies, managing financial risk, and reducing costs. This also involves the situation where the firm decide to sale its business before dropping in value if necessary (Martin, 2014) .Financial risk can be managed through restructuring and reducing debt, managing top line results, securing bank relationships and margin enhancements. Also knowing the company's daily cash position which includes credit availability and cash on hand is another way of financial risk management. Being strategic on receivables and payables so that the company receives cash sooner and pays it later which will enable them manage the work force more efficiently and effectively (Chesley and Watson, 2010).

Defensive strategy is either a cost-reduction where spending more will not produce growth or the protection of a company vulnerable position Robbin (2015). When

defensive strategy is adopted by defending the company vulnerable positions then the strategy is designed to keep competitors out by reduced pricing to Clients or increased the value of product or service, both of which usually need reduced costs for any company employing these forms (Chesley and Watson, 2010; Drucker, 1961; Swaim, 2010). In construction, when we talks of reduced prices and increase the service value may be in the form of lowest bidding method. This is when the firm submit a lowest price but and then later provide a quality work.

2.2.9 Guerrilla or niche strategy

This strategy is highly adopted by companies during recession times (Rowson, 2009). It reduce the size of play ground by minimizing or neutralizing barriers and taking defensive position or an offensive or in a more attractive or smaller market segment.

Offensive strategy is not available at all during a turnaround it is even not available with existing resources at an acceptable cost and risk. This situation can happen, for situation like during an economic recession were by there will be only fewer buyers of a high-priced product (Rowson, 2009). In this case there may be no alternative to a defensive strategy. If opportunities for the company grow with the market share exist with available resources in acceptable cost and risk, the businesses will favor an offensive strategy. if they are not available, then the defensive strategy is left as default (Robbin, 2015).

An offense focuses on new services or products, new talent, new customers and new distributions channels, among other things (Chesley and Watson, 2010). Drucker (2014) reviled that theoretically and practically it is impossible to predict if one

strategy will succeed over another. Any strategy to be selected should has a distantly issues and the aim of a firm should be to adopt a strategy which will handle the situation with the minimum side effects.

2.2.10 Decline to bid

This strategy gives a contractor an opportunity to withdraw from the competition (Thorpe and McCaffer, 1991). The contractor is in position to return the tender document depending on various factors set to help on decision. Decline to tender has negative and positive impacts to the Contractor. Some of positive impacts include saving time and money, maintain the firm moral, avoid overloading while the negative impact includes loss of revenue and profit, loss of commission and bonus, lose possibility of being invited for the next tender.

Some contractors may decide decline to bid because they are overwhelmed with enquiries and/or they might have had a number of recent successes (Drew, 1994).

2.2.11 Return tender documents or submit cover pricing

The cover pricing is defined as “a bid practice submitted by firms when they believe that it is necessary to appear in a certain tender for a particular project while they don’t wish to win the tender and they don’t have time or resources to facilitate them in careful preparation of priced tender for that particular project. In most cases the contractor will submit a very high bid price as they don’t expect to win the competition. Cover price is a strategy which the contractors adopt so as to control their present workloads efficiently and profitably and at the same time remain on a client’s good side and therefore maintain his good relationship with the client hence will be

on his list of future enquiries. The Contracting firms use this strategy to stop competitors from reading their bidding strategy (McHugh and Forster, 2012; Gruneburg, 2008; Drew, 1994).

2.2.12 Add 'non price features' (i.e. qualify the bid)

Non price features are those features qualify the contractor to participate in in procurements proceedings. These are requirements other than priced BOQ that will qualify the contractor for the award of tender. The tender document shall specify factors which may be taken into account in evolution of tender in addition to price PRA (2013). For qualifying to participate in procurement processes, a tenderer shall possess non price features like professional and technical qualifications, financial resources, equipments and other physical facilities, managerial capacity, experience and reputation, reliability, personnel to perform the assignment paid tax and social security contribution (PPR, 2013).

2.2.13 Produce a detailed or rough estimate and add mark-up

In this strategy, bidders produce a detailed or rough estimate and add mark-up. This is truly and genuinely competitive strategy (Skitmore, 1989).

The contractors develop one or more bidding strategies during bidding that gives them a big chance of winning the tender (Male, 1991). Wining the bid normally come to the contractor submitted the serious bid (Skitmore, 1989). The contractor may submit serious bid in competitive tendering by adopting business strategies like price leadership in which the try to use alternatives to low cost of production and the produce detailed estimate then add mark up that enable them to win the tender. The contractors

will try to lower their margins in order to become the lowest bidder when applying for tender especially with public sector clients. Producing a rough estimate and add mark-up is termed as a non serious bid (Jagafa, 2016)

Contractor also may add small mark up due to their aggression or tendency of random tendering (Fine, 1975), and find that they have overtraded themselves with many jobs but having limited resources to handle them. This will cause loss of future work, unhappy client and bad reputation. Aggression will cause lot of problems to Contractor while critical selection gets them where they want to be and hence successfully company.

2.2.14 Bid only on projects that are profitable

In construction industry the key for successful recovery is contractors to making sure that they the project to be executed return a profit. This was proved by the research conducted by Jagafa (2016) Where most contractors and subcontractor state that among the successful turnarounds is involvement of tender for jobs with the aggressive clients or main contractors, where they can get a good margin on the contract. Aggressive clients and main contractors used to squeeze their loads to the contractor or subcontractor, thus make them weary. On the other hand there are clients/main contractors who understand construction business/market and have much understanding on the needs of the contractor/subcontractor than others. Subcontractors develop trusting relationships with those contractor who now how the market work therefore they give support where they can. If subcontractors do not trust the main contractor then they are weary of exposing themselves in their works. Any successful

contractor or subcontractor always emphasize making profit in the works they are engaged. Researchers state and state the impotence of making profit as profit is the lifeblood of any business (Ross and Williams, 2013; Collins, 2001; Gruneberg, 1997; Altman, 1993).

2.2.15 Below cost bidding

Jagafa (2016) describe this as a bidding strategy commonly used during recession and recovery when the Contractors priority is survival rather than much profit. In this case the contractors straggle to minimize loses rather than making profit. His study reveled that recession brought change in attitude, change in relationships and approach to tender which will affect contractors, subcontractors and clients. Further in his study (Jagafa, 2016) explained that the Contractors will submit their work packages through competitive tender process basing on data obtained during negotiation with Clients, subcontractors and suppliers before of recession. This situation makes the adversary culture to the supply chain where client squeezes the contractors; the contractor squeezes the supply chain. Due to the fact that nobody is in business to lose money therefore you find the contractor will always try to find ways to get the better off the client through variations and claims, and the same will be done by subcontractor by try to do the same to the contractor.

Some contractors normally below cost bidding strategy to survive during desperation. Desperation is a result of intense competition which as a result Contractors prefers ‘below cost’ bidding strategy. This is termed as ‘suicide bidding’ as it is a bankrupt business mode (Drew, 1994; Fine, 1975). When things go wrong to contractors using

this mode it is really wrong. In most cases some contractors defend the strategy as thy term as their basis of improved surviving cost and cash flow of their firms.

2.2.16 Bid for smaller jobs

Bidding for small jobs is a common strategy to small emerging contractors or young small contractors in the industry as the base of experience and survival in the industry. Young contractors get small jobs to insure funds to pay for their charges, salary to their employees and small profit that enable them to survive in the industry. Some contractors use mall jobs to survive on, in a recession and they reduces the overheads to match the requirements of the job. Recovery in construction industry can be done by shrinking the company to a manageable size and bid for smaller jobs (Jagafa, 2016). The result of using small jobs as downturn will increase competition to small jobs as many companies in the industry cut down. During the time big jobs do not exist or you find sometimes put on hold and left with small job in the industry. The result of many big contractors to fish for small jobs is high competition in small jobs market.

2.2.17 Bid for bigger jobs

During recession most of construction companies cut down cost by shrinking the company by reducing the work force, bid for smaller jobs, shrink the company to a manageable size, and reduce overheads (Jagafa, 2016). However few construction companies' do opposite by start bidding for bigger jobs and they are enjoying as the find that bigger jobs has less competition. Due to the fact that most of big companies shrunk down to cut down expenses, they bid for smaller jobs therefore completion on bigger jobs become small. Everybody is concentrating with small works bids hence

those companies bidding for bigger jobs win them with little competition. Due to this fact you find that bidding for bigger jobs strategy can help the company recover.

2.2.18 Joint Venture Strategy

Two or several contractor of same category like building or civil can form a joint organization for the purposed of bidding and execution the work won, is what form a strategy called joint venture (JV). Due to the fact that now day's construction projects are complex with more risk hence demand of forming joint venture to collectively bid for project increase (Kumaraswamy et al., 2000). In developing countries international contractors form joint venture with local contractors as a technique of interring into the new market and become a popular strategy in those countries (Lim and Liu 2001). Joint venture helps small upcoming and international contractors to chip in the market.

2.2.19 Public Relations Strategy

This strategy involves management of communication between construction firm and other stakeholders hence create effective public relationship. Public relationship helps communication between contractors and clients or consultant. Contractor can communicate to other stake holders through wining in industrial award, attending conferences and long term cooperation with the clients. Through this strategy the contractor reputation will be improved in a way that create it chances of being invited in shortlist or through single source and also create the chance of winning market competitions (Tan et al., 2008)

2.2.20 Risk Control Strategy

Before tendering contractors are supposed to highlight any risk fact which they think it to be exposed to the project. This will help them to plan for the means of assessment and management of that risk related to the project. To add the contractor credit to the client they can to describe his best skills in assessment managing and controlling such risks in the project. The contractor can illustrate or describe how they can avoid risk if avoidable if not then can show how to transfer to other parties like using insurance or give description on how to accept consequences of the particular risk (Tan et al., 2008). Contractors normally adopt the methods of mitigation of risk involved in complex project or numerous uncertainty faced in project during tendering as their important part of decision (Han et al., 2005).

2.2.21 Claims Strategy

This strategy is useful for big and complex projects in which according to its nature the contractor expects a number of changes. Adoption of this strategy lay on the characteristics of the project. The contractors seeking their works through this strategy have very high exception on either change of design, change in client's requirement hence expectation of variation for that project in future (Tan et al., 2008). This strategy depends on the characteristics of the project like size. For example large and complex project are likely to be affected with cost overrun but you will not expect that for small and well detailed projects.

2.2.22 Quantity Bidding Strategy

This bidding practice involve bidding on every work coming to the contractor way. This will be done by contactor thinking that if they bid many works then possibility of

wining some of them increase. Bidding by using this strategy will consume time and other resources like personnel's and cash. The result of using this strategy is the contractor to bring down their profit margin day after day. This strategy is normally used by new company try to chip in the market and those firms having large number of idle personnel's who are note busy with projects at hands (Tan et al., 2008).

2.2.23 Negotiated Work Strategy

This strategy depends on the relationship existing between the contractor and other stakeholder to help them get the works. This involve preparation of quotation submit them to the client and stay in contact with the clients waiting for the end of the process. In order to maintain good relationship for further projects the contract performs their works to the highest standard. When the contractor performs clients will give them other additional works through negotiation instead of bidding. Performing to the highest standards is therefore very important once a contractor lands a work. Negotiation works will improve the contractor profit and it involves big profit compared to those works obtained through competitive bidding (Tan etal., 2008).

2.2.24 Contractors of contractors in bidding practice

Tan et al. (2010) put contractors in three groups according to different opinions on their effectiveness in competition strategies. These groups are innovative, market follower, and low price providers contractors. Innovative contractors are those contractors who have strong confidence on the effectiveness of competitive bidding strategies compared to market followers and low-price provider. Innovators can meet the market's new demand quickly therefore they explore new markets compared to

other two types of contractor. Due to their speed of meeting new market demand you find innovative contractors have high success rate in bidding the other two groups. Market followers respond to the market change quickly hence they could have lower success rate than innovators. Due to the fact that market follower are exposed to all changes in the market and they are they will change and become innovators after learning. Due to multiple selection criteria you find low-price providers find it difficult to win the contracts. As the situation for low-price become worse they find it necessary for them to take action and adapt to the changing environment and finally develop innovative competition bidding strategies

2.3 Factors influencing selection of bidding strategies

During tendering all contractors submit their offer due their own reasons. Majority of contractors submit aiming at wining the tender and execute the works but some of them submit to retain their position of being considered for future works, evaluation of their new bidding team and others for checking their position in the market. For those who submit to win you find some think of super profit, others think of small profit and others think of busting their cash flow. Due to the fact that each contractor has their reason to bid they use different strategy to tender. In order to use a bidding strategy contractors' assess the project characteristics, bidding documents, clients characteristic, the contractor/Internal characteristics against the project and general economical situation (Shash et al., 1993). Where by project characteristics include the size of a project, method of construction / construction, build ability, complexity of design and construction, scale and scope of construction, realism of duration given for the project, project location, site constraint, access and storage limitations,

contribution of the project in improvement of experience of the firm's. Bidding documents includes design quality and scope of changes, realism of duration given for the project, standard and completeness of the information collected. Contractor's characteristic include firm financial situation during tendering, availability of equipment required for the project, presence of qualified personnel's for the job, financial working capital for the project as per requirements, strength in industry and firm capacity versus present workload. Clients characteristic include type of Client, clients financial Situation and historical back of client's in payments for past projects. Clients characteristic include tender period and market conditions, risk associated with the given condition of construction site, contribution of the project in creation of long-term relationships upon and availability of equipment.

2.3.1 Bidding documents

A. The size of a project

The project size is the measure of its scope that define how large or small is the project. The scope of the project can be measured in terms of construction area or project value (Githaiga, 2006). Also the size of the project can be measured by using construction duration (big project is measured by using long construction duration). When the project is big its revenue will give substantial and positive contribution to the annual business volume of the contractor. This contribution will reduce discrepancy between the actual operation capacity of the company and the contractor desire. The bigger size of project is potential to the contractor as it improves the monthly account cash inflows.

On the other hand there is a strong correlation between project size in square feet or metre and the number of labours. However, as the number of labours increases, the cost estimation of some items (Elifaki, 2014)

B. Method of Construction

Method of construction is portrayed though method statements produced in a way that it indicates the construction methods together with resources required to executing the given work. Method statement determines the construction programme to be used and includes the organizational structure to be used for successful execution of the project (Elifaki, 2014). Contractors dealing with complex or large project which require innovative techniques are very sensitive to the method statement and used their experienced key personnel's to produce a detailed method statement to be used during execution of works (Yan, 2018). Smart firms include a good detailed method statement as a tender qualification to gain competitive advantage.

C. Buildability

Buildability refer to the possibility of a given design to be constructed as per given drawing. The extend of Buildability defer from firm to firm and from large to small firm depending on availability of experienced technical personnel's to define drawing and provide technical solution during execution of works (Yan, 2018). Medium and small contractor may lack sufficient expertise to solve construction and buildability problems (Tan et al. 2010). Medium contractors give this strategy less consideration while small contractor totally ignore this strategy.

D. Complexity of Design and Construction

Technical complexity of the construction tasks, project organization, the extent of overlapping activities, the extent of interdependencies of stages of construction and site layout are among the factors contributing to the complexity of the design or construction. Complexity can also be reflected by size of the of task, extent of repetition of activities, number of operations, speed of construction, the extent of difference in tasks and extent of one being able to predict operations (Yan,2016). Both design and construction complexity has effect on cost of project and also on construction period. In essence, project complexity affects, work breakdown, contract duration and the construction cost (Bennett and Fine, 1979).

E. Scale and Scope of Construction

According to Enshassi (2010) scale and scope of construction includes space requirement, quality of work, and function of the building complete with the entire client's requirement. This is well defined in the contract documents through drawings and bills of quantitative. Knowing the scale and scope of work can help contractor in selection of strategy to be used in bidding. This help in selection of bidding strategy as it gives highlight that enable the contractor to understand resources required for the given project for the entire project duration (Yan, 2018).

F. Duration of the project

The construction duration or Contract period is defined as the time given by contract to completing the project (Githaiga, 2006). This duration is normally given in months, weeks or days.

If the given construction duration is long the contractors will be able to keep available resource in a way that it generate revenue over the period given in a way that the flourishing economics will radiate before completion of the project. This will be supported by the best mark-up used during tendering. Therefore contractors are required to choose bidding strategies to be used during tendering processes in consideration of the given contract period in order to meet their goals (Yan, 2018).

Construction duration gives the duration which contractors keep their resource in revenue generating state for the entire construction period with the hope that more flourishing economy will come before the completion of the project so as to make their resource produce more revenue (Githaiga, 2006).

G. Project location

In determination of bidding strategy that show how serous is a contractor in bidding you find them putting emphasis on the project location. This importance given to the location of the project originate from its potential effect on a contractor's competitive strength as it determine a lot of things like complexity of works accessibility of site and availability of resource to execute the project (Akintoye, 2000). Competitive strength of the contractor decrease as the project location go far from his business area. It will be strong for close area. This is due to the fact that he is competing with the contactors within their business area who have established long time business relationship with suppliers available at the location (Akintoye, 2000). On the other side they will incur cost of transportation of plants and material and also in accommodation of their technical team. For these case the contractor will adopt

strategies which will cause their bidding figure to go high trying to accommodate additional cost which the contractor bidding in its area of business does not have.

Topographical condition, weather problems, ground conditions, public transport, adjacent buildings, constraints for plant and equipment in relation to the site influence execution of the project and production performance with increase in overhead (Enshassi et al., 2010). These will give challenges to the contractor in deciding on bidding strategy which will enable them win the project.

H. Contribution of the project in improvement of experience of the firm's

For emerging contractors all projects provide the experience. If you go through tender documents you find that contractors are required to have general experience and experience of works of similar nature. Therefore if the firm able to win and execute a project then will build both firm and staff experience in that particular work. Experience and past performance of bidders on similar contracts or works should be consider during evaluation of submitted tender documents (Section 121(1,2a) of PPR, 2013). For this case contractor will tender to win and execute the work to improve its experience on projects of certain nature if they have no experience. This will force them to choose a good strategy that enables them to win and execute the work.

I. Standard and completeness of the information collected

According to Enshassi et al. (2010) the quality of construction project is influenced with standard of material, completeness of information collected during design and during tendering as is a mile stone of the contractor who will win and execute the work. Information of standard of works can also be drawn from drawings and Bills of

Quantities (BOQ). If the information's in the drawings are not complete the contractor will assume that information given in the Bills of Quantities is complete. If not complete then the missing one will mislead the reality of construction cost. Bidder use information in the BOQ to price the tender document while drawings give supplement information and for the missing one, contractors will write to request clarification from the procuring entity. Clarity of the quality required, specifications requirements and proper design coordination of services and structural requirements will help contractor on selection of bidding approach or strategy (Enshassi et al., 2010).

2.3.2 Bidding documents

A. Design quality and scope of changes

When the client has experience on construction they normally maintain more influence on the design process and the onsite during construction. The client will appoint a design firm to design and then may allow them to supervise or appoint another firm to supervise construction process in order to achieve his expected standards. Due to its importance the scope of phase for phase construction should be clearly defined for project pre- planning process. Good early planning or pre-project planning will result in saving of about 20% of the total costs while poor planning will lead to the project failure (Cho and Edward, 2001).

2.3.3 Contractor's characteristic

A. Firm financial situation during tendering

Good financial situation improve monthly cash in floor enabling the firm to pay the employees monthly wages for both temporary and permanent works force (Yan,

2018). This is why you find high emphasis is put to the cash floor in determination of a strategy to be employed during tendering. Good monthly cash inflow will improve availability of cash to the contractor improving his economic leverage to compete for other projects. If the cash floor is good the contractor will not suffer the financial cost through bank interest on loan to be taken to facilitate thing in the company (Enshassi, 2010). Bank loan may freeze a contractor's assets as they will be against the loan as collateral.

B. Availability of equipment required for the project

Purchasing of equipment is a big challenge to local contractors as they are facing a big challenge on access to enough credit for working capital. You find banks are accessible for only line of credit to assist in execution of specific project but not to the extent that the contractor will be in position to purchase fixed assets like plants to be used for long time in deferent projects. Due to high cost of hiring equipments and cost of finance (bank interest) causing the profit margin to go down, then the contractor will face difficulty of hiring even plants to execute his work smoothly. According to PPR, 2013 section 116.1, during evaluation of tender documents submitted to the client sufficient information regarding equipment/plants ownership or hiring sources for project is require if not seen the contractors bid is not considered for detailed evaluation. During bidding contractors will take consideration of cost of hiring plants or maintenance of plants owned therefore plants will also affect selection of bidding strategy. If the contractor own equipment they will consider them by putting a big mark-up to set his owned equipment in a revenue generating condition (Githaiga,

2006). Contractors therefore will reduce cost by easily rent equipment from the specialized sub-contractor in this area who normally offers service to local contractors.

C. Presence of qualified personnel's for the job

In the bid documents you find procuring entity included the number of key personnel and qualification required for the project under bidding. Most of the small local contractors lack experienced personnel's required in the tender documents and you may find others putting cv's of key personnel's left the company in order to win the work, lack of adequate skills cause local contractors fail to complete the work on time and also produce poor quality works ending on losing business (Olute, 2013; Mwita, 2013). Competent companies need to have enough competent technical personnel so as to give quality work to make business running. Not only those mentioned in bidding document but all the key personnel participating in the project including those running plants and equipment. During registration of the construction company you find that the number of permanent employees, equipment owned and the business volume are considered for classification of the contractors. Due to the nature of works a good measure for engineering contractors can be equipment owned as the work is machine intensive but for building contractor we can use the number of employees in classification of contractors.

D. Financial working capital for the project as per requirements

According to Enshassi et al. (2010) each project has got its own scope, specification of material and complexity in a way that there must be specific budget to run the project. Majority of the local contractors do not bid for large project due to shortage

of enough capital. Clients need the contractor to confirm to them that either they are guaranteed by the bank or they have enough capital to execute a particular project. That is, financial power to bid and compete the multi billion shillings projects if awarded to them. Most local contractors' do not have capital enabling them to purchase advanced machine or deploy new technology and equipment needed for a specific given tender project. Due to this reason you find most of the big projects (multibillionaire) are given to International contractors who have done good investment on plants, working capital and other resources compared to local contractors.

E. Strength in industry

When the contractors participated in complex and large size projects they may give them a prestigious business, a big reputation and strength in the construction industry (Enshassi et al., 2010). Small and medium contractors do not consider this strength in producing the mark-up size during tendering. Big contractors consider this strength in producing the mark-up size during bidding. Medium contractors also may trade off higher mark-up size against building stronger business in the construction industry

F. Firm capacity versus present workload

When we talk of present work load we refer to all the works on hand or progressive works which need transformed capital to for its execution. This will need contractors' resources for progress/execution. When one is bidding they must check on current work load against available resources. If resource like cash, work force and plant do not accommodate a new project then the contractor will used a biding appropriate

bidding strategy like decline to bid or return tender document if necessary to appear in submitted tender. On the other hand in the tender document contractors are required to submit current works. This will be used by evaluation team together with contractor's cash flow as it will be seen by requesting of bank statement, turn over and banks line of credit. Evaluation team will confirm firm capacity versus present workload in relation to their additional work load if awarded to the same firm.

2.3.4 Clients characteristic

A. Type of Client

Bidding behavior are highly influenced by type of client due to the fact that each client of the construction project come with his own ideas, objectives and roles that affect the characteristics of the contract. (Drew et al., 2001) classified clients in construction industry in seven classes as Housing Authority; Government; Other public sector clients; Large industrial, commercial, and retailing organizations; Large developers; Medium and small industrial; commercial, and retailing organizations; Other private sector clients.

Most contractors choose strategies through selection of only government institutions or sectors. Contractors prefer government institutions because they believe that there is assurance of payment for government funded projects. When you do the public sector or institution construction projects, in which funds come from the government they are not going to leave you with the bad debt as they are not going to disappear, therefore the contractors money is safe (Jagafa, 2016).

B. Clients Financial Situation

For contractor to make decision of bidding strategy they need to know type of clients and financial standing. If the contractor is satisfied with the client type and its financial position they form important factors in establishment of bidding strategy. Type of the client and financial situation are two factors usually considered by small construction contractors for decision on bidding whether to tender or not and facilitate in bidding strategies selection. Small contractor use this factors due to the fact that they have very small capital base therefore they would like to be assured that when they win tender the client is able to honor financial commitment to the project.

C. Historical back ground of client's in payments for past projects

PPR2016, section 44(1) required clients or procuring entity to support growth of local firms by fulfillment of their contractual obligation through timely payments to the tenderness. Before signing the contract the regulations require the procuring entity to record commitments against voted funds to avoid any delay of payment to contractors. Kartam and Kartam (2001) argued that delay of payment to contractor is the second highest operational risk that causes project delays after financial failure. Delays of payment affect delivery of material to the site which in turn, affects labor productivity for the construction project. Contractors' cash flow is affected by delay of approval of contractors' claims, settling of approved payments and delay in release of retention monies after expiration of defect liability period causing a big impact on construction projects (Odeyinka et al.2008; Sin 2006). Contractors incur additional financing cost which increases their risk of insolvency due to failure of clients to make payments within stipulated time frames (Odeyinka and Kaka, 2005; Euginie, 2006). Delay of payment is a problem which increases disputes in the construction projects.

Delayed of payment or nonpayment by clients causes cash flow problems that impatient subcontractors, suppliers and lenders who are unwilling to make up for the short fall (Lowe and Moroke, 2010). Bad debt due to delay of payment causes Cash-draught to persist in the construction industry. These effects reinforce the importance of choosing bidding strategies by looking ability of the client to pay for that project on the time during execution.

D. Required bond capacity

In order to discourage bidders against withdrawing the bid during bidding process or before expiry of the bid validity period bid securities are introduced in bidding. The format depends on the procuring entity or size of the bid. For large works projects bidders are required to submit the bid security in the form of bank guarantee and for small works bidders are normally required to submit in form of bid securing declaration. Amount to be paid for bid security in monetary value is usually stated in the biding documents. These requirements bring challenges to contractor as they fail to abide with banker's tough conditions of depositing an equivalent amount of money and interest charged when the request bank guarantee. Contractors find that the three/four month's period of bid validity is too long period to sustain banker's condition making bid security in form of bank guarantee to be expensive to bidders.

In PPR, (2013) section 23(5) tenderers were give option to submit certified checks, bank guarantee form a reputable bank or insurance from a reputable insurance company. In section 25 of PPR, (2013) tender securities for all unsuccessful tenderers

will be released within thirty days after the expiration of bid validity period including extension if done upon the award of contract, whichever come first.

Banks require big value assets in order to provide bid security and some of the banks delay to provide the bid securities to large projects causing the bidders to fail in submission of tender. In order to help local contractor's clients should require any of the required bonds in accordance to procurement regulation and also banks should minimize the barriers.

E. Competition

Multiple competitors who are behaving differently in uncertain business environments in their own risk attitudes is termed as market competition. In the market competition result will depends on the competitor's risk-taking behavior which is always affected by risk attitudes of the organizations. Degree of competition will depend on the market conditions and will be measured in terms of the likely number of potential competitors for projects in the market (Ngai et al., 2002). Competitive bidding studies are done by contractors to enable them to develop bidding strategies that can be used in many bidding. Bid decision is done clearly and objectively and not subjectively and this is due to the fact that these strategies are quantitative. Shash, (1995); Mochtar and Arditi, (2001) conducted a study and they argued that subjective assessment is used by contractor in selection of bidding strategy. Tan et al, (2010) the competition for works in the constructions industry become severe, and there is reason to believe that an increased demand for the delivery of additional value to client other than lowest bid now existing.

F. Time of bidding (season)

Time of bidding refers to the economical market situation or condition during bidding. Tendering behavior is affected by market conditions as discussed by various researchers through their studies including (e.g. DeNeufville et al., 1977); Flanagan and Norman, 1985; Runeson, 1990). Fluctuation of the number of competitors bidding for works, biding price or rates of works and bidding strategies depend on the Market (De Neufville et al.(1977). This means the number of bidders competing for work is less intensive and the biding price is high as contractors bid for project at higher profit margin during the boom period referred to as 'good' years when many construction projects are available market. On the other hand during slum period competition in construction projects is more intense and contractors bid price become lower compared with the boom period. This time is called bad years when few construction projects are available at the market.

In slum period small contractors greatly value the necessity of factor influencing selection of bidding strategies including mark-up size for projects. This is due to the fact that projects undertaken by small contractors are recurring project like routine maintenance. Due to demand of their service there is necessity of small contractor to adjust their mark-up size depending on the market condition and type of service they are tendering. There is no major impact if large and medium contractor ignore this factor as the matter of fact that their services does not vary over the year.

G. Time allowed for submitting bids

For large contractors the time set for the preparation of bids appeared to have a great importance in determination of bidding strategies. Large contractors normally believe that accurate estimate could not be achieved within the period allowed for submitting bids. Large contractors consider this fact in determination of their bidding strategy as they are aware that there is likelihood of producing inaccurate estimate due the given tender period. According to PPR (2013) section 187(1) magnitude and complexity of the intended project under procurement guide on the time allowed for preparation of tenders and shall be shorter than 21 for national competitive tender and 30 colander days for international competitive tender.

2.3.5 Clients characteristic

A. Tender period and Market Conditions

Market condition for construction project can be boom period when many project are available at the market and may be the time when there are few construction project available at the market (Jagafa, 2016). The price of tender will always vary according to the market condition. This brings necessity of putting into account the trends of the condition of market and cost of resources require for the project when deciding on type of strategy to be used for a particular bid. Mark-up will also be determined by considering this factor. Small project like domestic project are likely to have small effect compeered with large project on changes of the market condition therefore small

contractors who deal with small projects are not affected with this factor (Githaiga, 2006).

B. Risk associated with the given condition of construction site

Condition of construction sites vary from on project to another. Talking of condition of site means access to site, availability of nearby main road, availability of power for the works, availability of water for the works, position of site from nearby residents, nature of soil, swampy of dry condition and so on. According to Githaiga (2006) all the above site condition should be considered in selection of bidding strategy. Capability of a contractor to complete the project successful at the required time and quality depend on early consideration of risk factors associated with site condition during bidding.

C. Contribution of the project in creation of long-term relationships upon

Relationship of a contractor in construction industry includes relationship with clients, consultants and other construction stakeholders. Relationship create network that can helps the contractor land a work like negotiated works or single source type of procurement. This involves staying in contact with your owner/client, carefully preparation of bids, execute work to required standards and high quality as much as possible throughout the process. A better relationship in construction industry can be created even through Negotiation type of contracts. The impact of giving a contractor works due to relationship exists between contractor and client is the client to pay too much cost for the project. According to Drew (1994) some of the contractor can bid

only if they saw impression that consultants or clients are going to tolerance future enquiries or they resent the contractor picking with the purpose of choosing contracts for which bidder submitted if the contractor will not submit the document. Contractors who rely on their reputation to get future works use this factor to choose bidding strategy for the survival of their company.

D. Availability of equipment

According to PPR, (2013) section 116(1) Procuring entity used to put the list equipment required for execution of the given project. Failure to submit of equipment mentioned in the tender document will lead to rejection of contractor's tender. For this case all tenders will be checked during evaluation to see responsiveness to the technical requirements including required equipment. Non-conformity to technical requirements including equipments will justify grounds for rejection of contractor's tender. These major technical requirements include equipment or plants capacity should be above the minimum specified in the tender document to enable them to perform the intended basic functions.

2.4 Chapter Summary

This chapter discus an overview of bidding strategies used in construction industry as discussed by different authors in previous research studies on related research topics. Some of these strategies includes sustainable practice, quantity bidding strategy or aggressive tendering or random tendering, produce estimate and add mark-up, guerrilla/focus/niche strategies, bid for smaller jobs, decline to bid, below cost bidding or low bid, return tender documents/ submit a cover price and negotiation. Further the

chapter discussed on factors influencing contractors to use a certain bidding strategy. These factors includes those raised due to project characteristics, bidding documents, internal assessment against the requirement of the project and capacity of construction firm (bidder), client characteristics , bidding situation and economic situation. The next chapter covers methodology that describes how the research was carried out.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population of the study, research sample size and sampling techniques. Further it describes techniques used for collection of secondary and primary data including the methods used to distribute questionnaire to respondents. It also provides explanations on the methods used in data processing and analysis in order to attain objectives of this study.

3.2 Research Design

The first step in this research was identification of research problem by taking thorough study of course contents and past literature on related topics. After problem

identification research objective were set with related research question to facilitate study. Literature review was prepared in a way that the study topic was discussed with reference to the previous studies in order to bring awareness of the topic and contribution of previous researcher to the society on related matters or studies. Then data were collected by interview and questionnaire, the data collected were sort, corded and then analyzed using Statistical Package for the Social Sciences (SPSS) and descriptive analysis for data collected through interview. Analysis was done in a way that the research questions were answered and the research problem well addressed and solved. Recommendation and conclusion were given base on analyzed data collected and objective of the study.

3.3 Study Approach

For the purpose of this research Sequential Explanatory Design mix method was used were by collection and analysis of quantitative data was followed by the collection and analysis of qualitative data. Priority was given to the quantitative data, and the two methods were integrated during the interpretation. Quantitative approach was used for data collected through questionnaire survey. Questions were set in a way that response will be in numerical data through rating by Likert scale and then analyzed using statistical methods. Qualitative approach was used for data collected in textual form. This was done through in-depth interviews conducted basing on interview's guiding question asked to 10 building contracting firm and then analyzed using content analysis.

3.4 Population of the Study

Population of this study was 175 Class I to III Building contractors as registered by Contractors Registration Board (CRB) with their head offices located in Dar es Salaam. Class 1 to 3 contractors were chosen to be the population of this due to the fact that these classes' of building contractors are flexible in adaption of bidding strategies compared to lower classes. Majority of contractors in lower classes do not adapt many of building strategies rather they are always low price providers.

3.4.1 Area of the Study and targeted population

The study was conducted in Tanzania basing on contractors located in Dar es Salaam city. Dar es Salaam city was selected because offices/permanent addresses of majority of registered contractors are located Dar es Salaam. The targeted population for this study is building contractors practicing competitive bidding in Tanzania construction industry. Building contractors were chosen because majority of contractor are dealing with building construction. Most of registered contractors have two registration, building and civil contractor. Regardless of being register as civil and building contactors during interview we found that majority of them deal with building works than civil works.

3.5 Sample Design

Random or probability sampling was used to get the sample for this study. From 175 contractors 60 contractors were chosen randomly to represent the entire population. Due heterogeneous nature of the study population stratified random sampling was used. Building contractors registered in Class I to III with their offices located in Dar

es Salaam were grouped to form three stratums summed up to get a stratified sample. In Each stratum (class) a sample of pre-specified size is drawn differently in deferent strata (class). This technique ensuring that all classes within the selected population are well represented in the sample in order to increase the efficiency (that is to decrease the error in the estimation/judgment of research). By using stratified random sampling a list of 60 contractors was prepared where 21class I contractors were chosen out of 65, 19 class II out of 53 and 20class III out of 57.

3.5.1 Sampling Technique

The fish bowl technique was used in selection of the sample from CRB list of building contractors register at Dar es Salaam. Contractors were grouped in three cluster groups of class I,II and III building contractors. In each cluster building contractors were assigned numbers using separate slips of papers which were 1-60 for class I, 1-53 for class II and 1-57 for class III. The numbered slips of paper for three clusters of contractors were put in separate container and then picked out of the container one after another and the list of contractors were recorded to form our sample from the given population.

3.5.2 Sample Size

The Sample size for this study was calculated mathematically by taking consideration of building contractors registered by CRB as class I to III in Dar es Salaam.

The study adopted the formula by Kothari (2004) for

$$n = \left[\frac{z^2pqN]}{[e^2(N-1) + Z^2pq}\right]$$

Where:

'n' stands for the sample size; 'N' stands for the total number of population; 'Z' stands for the confidence level; 'e' stands for the margin/sampling error; 'p' stands for degree variability, which is 2%; and 'q' Stands for 1-p.

Data used in sampling are confidence level (Z) - 95% (1.96) and margin/sampling error (e) - 5%.

Class I

$$\frac{1.96^2 * 0.02 * 0.98 * 65}{[0.05^2(65-1)] + [1.96^2 * 0.02 * 0.98]} = 21$$

Class II

$$\frac{1.96^2 * 0.02 * 0.98 * 53}{[0.05^2(53-1)] + [1.96^2 * 0.02 * 0.98]} = 19$$

Class III

$$\frac{1.96^2 * 0.02 * 0.98 * 57}{[0.05^2(57-1)] + [1.96^2 * 0.02 * 0.98]} = 20$$

Table 3.1: Sample size for building contractors in Dar es Salaam (Base on CRB list of contractors)

Class of Registration	Population	Proposed Sample
Class I	65	21
Class II	53	19
Class III	57	20
Total population	175	60

The sample size selected is 60 building contractors class I to III in Dar es Salaam which make approximately 34.29% of the study population. According to Kothari (2004) a sample size covering at least 15% of the study population is reliable for making conclusion therefore our sample is a reliable sample in making conclusion.

3.6 Data Collection

Only primary data were collected for the purpose of this research whereby the list of collected factors was given to contractor to rank their influence in selection of biding strategies. The list of bidding strategies was also given to contractor rate their common use during bidding activities. Contractors were also asked to mention the number of successful and unsuccessful bid and rate contribution of the given bidding strategies in the mentioned successful/un-successful bid. All the data collected from journals, papers and books were termed as secondary and those collected from contractors were termed as primary data. The two form of data (Quantitative or qualitative) which are relevant to this research were collected. Primary data were obtained from building contractors with their head offices located at Dar es Salaam city through questionnaire survey were team dealing with tender or top management was engaged as a targeted

group. Class I to III building contractors were chosen to be the source of primary data for this study in which they will represent all building contractors.

In collecting data for this study questionnaires survey and interviews were used to collect primary data from a sample group of building contractors whereby questionnaires were distributed physically to contactors offices (one to one administration) and other were mailed and response were received via the same media.

3.6.1 Questionnaires

Before administration a pilot study was conducted to six building contractors selected randomly from a list of class 1 to 3 with their office at Dar es Salaam were by two contractor were chosen from each class. Pilot study helped to insure construct and content validity of questionnaires before administration to collect data for this study. After confirmation, questionnaires were put in a way they are seen in appendix 1 and then administered to respondents.

Questionnaire containing both open ended and restricted/closed questions for respondents to answer on a sheet of paper were used were distributed to contractors. Contractors were required to rank the use of given strategy, factors influencing the used bidding strategy in 5-point Likert scale. Respondents were allowed to add other bidding strategies and factor of their opinion which are useful according to their construction bidding experience. Also a question formulated to indicate contractor success through the number of successful and unsuccessful bid for four years was included in distributed questionnaire. This instrument helped the researcher to collect a lot of information and have access at almost all respondents in the sample within a

short time. In case of big enquires the instrument was very appropriate. Hence, distant subjects and well plan and focus.

Participants filled in the questionnaires in their own time without any assistance from the researcher with some consultation for clarification of some description in questions. This approach removed any undue pressure from the respondents and gave them the freedom to fill in the questionnaire as truthfully as possible, unlike one-on-one interviews, where interviewees might be influenced by the interviewer's attitude.

3.6.2 Interview

A set of open question used as a guideline for semi structured one-on-one interviews were prepared and then administered to respondents few days before interview. Face to face interview was conducted in the contractor's offices and by using video and voice phone calls. The answers to question were recorded and their quotes were kept and included in data analysis. Interview was conducted to 10 contractors then data collected were analyzed together with those obtained from questionnaire. Interview was conducted to supplement answers obtained from questionnaire to enable collection of real data reflecting real situation. Advantage of interview is that clarification of all questions was given and the respondent is not restricted to give their view that can contribute on additional value to the research.

3.7 Data Processing and Analysis

In the quest of this study, the researcher employed both qualitative and quantitative techniques for data analysis. Quantitative data collected from questionnaires were analyzed using Statistical Package for Social Sciences (SPSS). Statistical mean was

used to rank the commonness of bidding strategies and influence of assessment factors used to decide on the bidding strategy to be used. SPSS was used to indicate strength associated between factors contributing to the choice of bidding strategies and the chosen strategy also association between bidding strategies used and successful bid though values of "R". SPSS also was used to test percentage contribution of factors in choice of bidding strategies and percentage contribution of bidding strategies in successful bid through values of R-squire statistic mode.

Qualitative data were content analyzed. Some of the data collected trough interview was descriptive in nature therefore descriptive/content analysis which is termed as qualitative analysis was adopted.

3.8 Validity of Data

The researcher uses pilot study by interchanging research factors and bidding strategies in questionnaire and also by asking same question in a different format to check content validity of data collected if they enable him to get what he wants to get then there is validity. Also construct validity has been tested through common answers provided by deferent respondents during pilot study.

The pilot study was undertaken to streamline and validate semi structured one-on-one interviews that were to be used as among the tools for data collection in this research. Another sample of five contractors has been used to determine the interview protocol and the research construct (construct validity) that satisfy the requirements for validity within the less rigid parameters of qualitative research as it could adequately be used to obtain data on the concepts that the researcher hoped to measure. During pilot study

the researcher highlight ambiguities and difficult and unnecessary questions and discard or modify same of the questions to be used to conduct interview for this study. Furthermore during pilot study the researcher tried to ensure that replies can be properly interpreted in relation to the information required for the study.

The researcher finally constructed clear and understandable data collection instruments to all respondents. The instruments was in English language, because majority of respondents were post primary school levels employees and easy to communicate. This was done purposely to ensure validity of data collected.

3.9 Reliability of Data

The reliability of the linkert scale for this study was measured using Cronbach's Alpha out of the six questionnaires with response obtained through pilot study. The Cronbach's alpha test shows the values of 0.713 for bidding strategies and 7.241 for factors contributing to the choice of bidding strategies. According to Olaniyi, (2019) acceptable range for Cronbach's Alpha is between 0.70 and 0.90 or higher depending on the type of research. The study further explained that Cronbach's Alpha values of 0.7 and above indicates that all the variable indices dimensions demonstrate acceptable internal consistency. According to Hair et al (2010), instruments with alpha value of 0.60 are regarded to have an average reliability while those with the value of 0.70 and above indicate that the instrument has a high reliability standard. The Cronbach's alpha test for this study shows values ranging from 0.721 (Factors influence selection of bidding strategies) to 0.747 (Bidding strategies) as shown in the table 3.2 indicating acceptable internal reliability.

Reliability for interview was tested by using pilot study conducted five companies to determine whether the researcher has incorporated all the questions necessary to measure all concepts and determine whether each question elicits an adequate response. Through this test the researcher incorporated the all the question raised as additional question and eliminated all the questions seams not relevant and finally produced reliable interview question that elicit adequate responses for this study.

Table 3.2 Reliability analysis

Bidding practice	**Cronbach's Alpha**	**Number of items**
Factors influence selection of bidding strategies	0.721	21
Bidding strategies	0.747	29

3.10 Ethical Issues

This research observed and adhered to the ethical standards and issues with regard to voluntary nature of participation and the right to withdraw by individual employees/respondents from the process. The research maintained the confidentiality of data provided by individuals or identifiable participants and their anonymity. Data collected and information were exclusively used for the purpose of this academic work.

3.11 Chapter summary

This chapter explained methodological approaches for this research including research design, qualitative and quantitative approached as used in this study. Ethics for this study was explained to be observed by allowing respondents to be free to withdraw from the process, confirmation of confidentiality of data and the use of data being for

academic purpose and not otherwise. The next chapter discussed presentation of findings and data analysis.

CHAPTER FOUR

DATA COLLECTION AND ANALYSIS

4.1 Introduction

This chapter analyses the data collected from distributed questionnaires and interview into useful information through intensive discussion of the results. The main objective of this study is to evaluate bidding strategies of Tanzania construction firms in provision of successful bids. Under this chapter, each question provided in questionnaire survey and response from interview questions were discussed and analyzed in way that will answer the research question so as to determine the objectives of this study.

4.2 Response Rate

This study aimed to research registered building contractors in Tanzania in which contractors registered in Dar es Salaam were taken as a representative sample. The sample size of the contractors was 21, 19, and 20 for Class I, Class II and Class III respectively. The questionnaires were distributed to the chosen companies. The

researcher collected 100% of the filled questionnaires returned as shown in the table 4.1. Distribution of questionnaire was 21, 19, and 20 respectively for each class. Response was 21 questionnaires for class I equivalent to 100%, 19 for class II equivalent to 100% and III was 20 which was 100% forming average of 100% of questionnaire distributed in each class. Response was convincing to be used in making decision as far as more than 100% of questionnaires were returned.

Table 4.1: Response Rate

Class of Registration	**Distributed Questionnaires**	**Returned Questionnaires**	**Response Rate%**
Class I	21	21	100%
Class II	19	19	100%
Class III	20	20	100%
Total population	60	60	100%

4.3 Socio-Economic Characteristics of the Respondents

4.3.1 Experience of Respondents in Construction Industry

A question was set to ask the experience of respondents in construction industry. It had been found that 16.7% of respondents have less than five years experience, 30% had experience between 5 to 10 years and 53.3% had experience of more than ten years. This implies that more than seventy five percent (75%) of respondent who are in one way or another form recommendation/decision part of bidding strategies have experience of more than 5 year in construction industry. The percentage was increasing as experience increasing. Through this we learn that strategy selection is

considered to be borne in experience of personnel by Tanzania construction industry. This will help in selection of strategies as one experienced various tries for five years in bidding construction projects. These results are presented in table 4.2 and figure 4.1.

Table 4.2 Experience of respondents

Years of experience	Respondents	Percentage of Response
Less than 5 years	10	16.7
Between 5 and 10 years	18	30
More than 10 years	32	53.3
Total	60	100

4.4 Bidding strategies used by construction firms in Tanzania

4.4.1 Descriptive Statistics Results

Table 4.3 presents the common bidding strategies used by the construction firms. Contribution of twenty nine strategies were rated on a 5-point Likert scale, i.e. Extremely Common=5, Very Common=4, Common=3, Slightly Common=2, Not common=1. In order to conclude on the bidding strategies used by the construction firms, a mean score is calculated and column for this is provided in Table 4.3.

The results on Table 4.3 indicates that bidding strategies such as sustainable practice, aggressive tendering or random tendering, produce a rough estimate and add mark-up,

guerrilla/focus/niche strategies, bid for smaller jobs, decline to bid, below cost bidding or low bid, and return tender documents have mean above 4.00 which shows that these bidding strategies are highly used by construction firms in Tanzania.

The Table 4.3 also shows that strategies such as submit a cover price, defensive or conservative, offensive or progressive, diversification, joint venture, specialization, integration, partnership, bid only on projects that are profitable, claim expectation, and review economic engine have mean above 3.00 to 3.99 which shows that these strategies are used by construction firms in Tanzania at a medium level.

In addition, the Table 4.3 also shows that strategies such as risk sharing, differentiation and product leadership, operational excellence and cost leadership, technology transfer, customer intimacy, high tech, bid for bigger jobs, unique architectural design (design and build), social responsibility and accountability, and add 'non price features' (i.e. qualify the bid) have mean below 3.00 which shows that these strategies used by construction firms in Tanzania at a low level.

Table 4.3: Bidding strategies used in Tanzania construction Industry

Bidding strategies used by construction firms in Tanzania:	**Mean**	**Std. Deviation**
Sustainable practice	4.65	.917
Quantity Bidding Strategy or Aggressive tendering or random tendering	4.56	1.303
Produce estimate and add mark-up	4.45	1.233
Guerrilla/Focus/Niche Strategies	4.38	1.342
Bid for smaller jobs	4.18	1.121
Decline to bid	4.06	.673
Below cost bidding or low bid	4.01	.988
Return tender documents/ Submit a cover price	4.00	1.033
Negotiation	3.99	.981
Defensive or conservative	3.97	.983
Offensive or progressive	3.94	.909
Diversification	3.72	.965
Joint venture or Partnership	3.56	1.046
Specialization	3.49	.892

Integration	3.37	.974
Partnership	3.36	.986
Bid only on projects that are profitable	3.28	1.123
Claim expectation	3.00	.722
Review Economic Engine	3.00	.892
Risk Control Strategy	2.90	.985
Differentiation and Product Leadership	2.90	.905
Operational Excellence and Cost Leadership	2.90	.935
Technology Transfer	2.87	.739
Customer Intimacy	2.85	.637
High tech	2.72	.869
Bid for bigger jobs	2.74	.596
Unique architectural design (design and Build)	2.64	.573
Public relationship or Social responsibility and accountability	2.60	.889
Add 'non price features' (i.e. qualify the bid)	2.02	1.102

4.4.2 Discussion of bidding strategies used by construction firms in Tanzania

Sustainable practice ranked 1st over 29 bidding strategies to imply that most of Tanzania construction firm think of sustainable construction business. Availability of building construction work for these five years from 2016 went down due to the fact that the government changes its policies on building construction. Most of the works are being done through force account and government institution took over construction of public building leaving local contractors with very few private works which increase completion.

The government is the dominant client in construction therefore when they stop giving contractors fair ground in tendering and execution of public project then they bring suffering to building contractors. As the result of scarce building construction works contractors will adopt strategies the enable them to exist in the market like sustainable bidding strategy. Sustainable bidding strategy is accompanied with other strategies like aggressive or random tendering ranked in 2nd position as contractor tender as

many project as the can thinking of getting one among many, like throwing a stone in the dark.

Another strategy raked in 3rd position over 29 strategies is producing estimate and add small mark-up as straggle of contractors in competitive environment on scarce building construction works. Guerrilla or niche or focus strategy ranked 4th were by contractor resize their play ground and focus on works they thing of preference of selection of clients. This will help during scarcity of works as contractors fit in client's requirement to exist in the market.

Another strategy falling in this category of contractors straggling in scarcity of building construction works is bidding for small jobs were results ranks it in 5th position. In this strategy contractors turn to small available works regardless of class of contractors what they think is getting revenue to run their offices. Another strategy falling in this category is below cost bidding ranked 6th among 29 bidding strategies.

Contractors during shortage of works submit cost below the market price in order to win the bid. This is being done to obtain revenue to run their offices waiting on good season. The results revile the situation of scarce building construction works and straggling of contractors in running their offices with small or no profit waiting of grace period in future. This is due to the fact that all the above strategies have mean scores above 4 and below 5 implying that these strategies are extremely common to very common in use by building contractors.

Other strategies fallen and extremely common and very common groups of strategies are return tender document ranked 7th and negotiation 8th position with their mean

scores of 4.06 and 4.01 respectively. Contractors opt return tender document strategy if they are not in the good position to execute that work, they may have big current load that cannot allow them to add another project. Also if the risk involved with the project or financial situation of the firm during tendering does not accommodate new tender contractors opt this strategy. For the case of negation being in the group of extremely common to very common, it is due to the situation was contractors straggle to get the jobs through single source form of tender. In this situation contractors put small mark-up to get works in slum condition one my get a good profit through negotiation were even additional work to the original will be given to the contractor through negotiation rather than competitive tendering. This strategy is supported by good relationship between the contractor and the client.

Some strategies fall below common used to approaching to slightly common. These strategies include differentiation and product leadership, operation excellence and cost leadership ranked, technology transfer ranked from 20^{th} position all having the mean score of 2.9. For the case of product leadership very few contractors can be in the position of introducing new or unique product to win the tender also in order to implement product leadership production cost is the challenge to many contractors. Contractors are required to bring new technology or transfer of technology in order to attain operation excellence. This means three strategies which are operation excellence, technology transfer and high technology depend each other and they need cost of implementation which is the challenge to local building contractors

Other strategies under this category include customer intimacy ranked 23th, bid for big projects ranked 24th, unique architectural design ranked 26th and public relationship ranked 27th over 29 strategies. In case of public relationship many contractor are not in the position of returning back to the society. For this case they are not ready to use their money to create public/social relationship. Unique architectural design fall under design and build procurement which is rare now day as the government stopped construction of big building and insist in putting effort on industrialization. The last strategy is declining to bid. This strategy seems that it is not applicable nowadays due to shortage of building construction works. Scarcity of works made every one sensitive in any tender coming to their side.

During interview all 10 respondents said they are producing estimate and add profit which is the bidding strategy ranking 3rd in the list. If you check you may think that that interview gives different result compared to questionnaire where the strategy was ranked third. To the reality the results from interview and those from questionnaires will not give different answers as mark up may be small for sustainable bid or big for high profit bid. Contractors showed that they can produce rough estimate and add mark-up if they have short bidding period or produce detailed estimate and add mark-up they bidding period I long enough, complexity of design or other factors supporting god execution of the project like having required key personnel's, tool, good financial situation and so on.

As strategies like sustainable practice, quantity bidding strategy or aggressive tendering or random tendering, guerrilla/focus/niche strategies, bid for smaller jobs and

below cost bidding or low bid has been mentioned by more than 5 respondents out of ten. This is more than half. Other strategies like Review Economic Engine, Unique architectural design (design and Build), Public relationship or Social responsibility and accountability, Decline to bid, Add 'non price features' (i.e. qualify the bid), and Risk Control Strategy which were strategies mentioned in questionaier were not mentioned during interview. This means these strategies are not common to bidders while other has been mentioned by two or one contractor out of ten who participated in interview.

During interview also respondent were required to mention common strategies which they normally prefer during tendering. In responding 10 contractors produce estimate and add profit. Strategies used by half or more than half respondents are sustainable practice, bid for smaller jobs and quantity bidding strategy or aggressive tendering or random tendering. Other strategies like negotiation, below cost bidding or low bid, bid only on projects that are profitable, joint venture or Partnership and guerrilla/focus/niche appeared to be used by less than 5 contractors out of ten participated interview.

On discussion with directors of firms during interview on reasons used to select a certain bidding strategies most of them started by putting blame on government as a leading client in construction. They complain that for the past four years construction sector went through tough situation as the government turn to its institutes like TBA, Suma JKT, NHC and so on and given almost all the big building projects while international company like CCECC, BAM, CRJE and others are given big civil

projects. For the remaining small works like in government institution they are using force account where there is no need of using a construction company. For these cases construction industry for other contractors is tough and there is a very strong completion leading to change in bidding strategies from day to day and from tender to tender.

Some of the contractors were not succumbed to the market though situation. The managing director of BC1 contractor during interview argued that they maintained their margins and is not prepared to lose money and they are keeping their profit margin as there is no certainty that things will not go wrong. They understood the consequence of taking on work without profits. The managing director of BC1 said;

"Cutting margin to cut cost aiming at getting work will end up cutting everything and end with the small figure which will not do the targeted work at the planed standards therefore we will end up doing a substandard job, that result to a discontented client and distort our reputation"

Due to the intense competition at these four years the respondent from BC2 during interview said they are employing the strategy of bidding below cost in order to win work. The managing director of BC2 defended this strategy as follow:

"We tried to put reasonable margin on bid but we end up losing the job. Due to this situation we decided to attain below cost strategy. This will be a temporary strategy and we are trying to make things done by negotiating our cost base with our subcontractors. This will help our plan to bid below cost or slightly below cost but we

are making money on our jobs. If we thought of being safe by putting some margin we end up not winning and make the situation worse"

Due shortage of big building construction works which was the backbone of local contractors there is a big competition in small jobs as everyone is thinking of cuts down. The big jobs do not exist or given to government institutions and the smaller jobs are what left. The Managing Director of BC3 explains as follow:

"Now days due to shortage of big works you find the bigger contractors fishing in smaller waters. Because the big projects are cut or completely not happening those contractors that were bidding for big projects suddenly started to practice mouth feeding life therefore they started fishing in different waters that they wouldn't ordinarily be doing so at the time when big jobs are available."

Other firms went the other way than reduction of margin by adopting the less competitive bigger jobs. This strategy helped the company to run their business smoothly. The directors of BC4 during interview said;

"Through their research market they found that the smaller job market i.e projects below 10millions, were seen to be tight with high competition and reduced margins was we bid against many contractors. We therefore decided to turn to projects of, competition of 10millins and above for building but for civil works we bid even less"

Now day most of construction works are tendered through e-procurement (Tanzania National e-procurement system –TANe-PS). This is due to the fact that the government wants to keep the market prices. This disturbed close relationship existing

between contractors and clients. For example, during interview Director of BC5 introduce that at the time before many works being advertised through e-procurement they had a more partnering relationship with its supply-chain partners. Through negotiation strategy or single source they were discussing their future work, talking about the way they were going to do it, establishing needs and the quality side of things like materials, and negotiating prices. But this relationship disappeared as clients (Government) adopted e-procurement system of procurement for its supply chain order to keep a close the market prices. The e-procurement enabled the Government institutions to monitor the current market rate to get the best possible price. This cut down pre-existing relationship the institutions had with its supply chain. The managing director of BC5 that firm said:

"The e-procurement approach is a good approach but it is a sharp knife to relationship side of contractors and clients and is cutting the way we used to do our business and get good profit. My reflection to this system of procurement is that, it is a good approach but not the way we used to run our business. To me there are other things like relationships, sharing best practice that is going to lost"

The Managing director of BC6 said that e- procumbent is a good idea as one my see the contents of tender document and the decide to engage in bidding or not without payment compared to manual method were one will see the contents and instruction after purchase of tender document from the procuring entity. The problem this system is a big number of small civil works with very few building works. The managing director of BC6 said that.

"We are expertise in building construction works as we focused in those works and attain a big experience buildings works. Regardless of having both civil and buildings contractors registration certificates building works attracted us much as many works has big figure and profit. In addition to its big values its management is simple due to its centralized activities compared to road works which are spread in nature. Building constructions also are labour intensive compared to civil works which are machine intensive".

From all the above statements the following were reviled;

1) Most of public projects are being done by government institution and international contractors.
2) Most of local building contractors are bidding not profit but to run their offices and maintain their potential personnel's
3) Some of the contractors are strong and they are still bidding for big project in slum period
4) Most of building contractors are not flexible, they think of building project only rather than turning to the available work like civil works

4.4.3 Summary of findings on bidding strategies

Strategies used in bidding of construction project has been identified through literature review and their use has been determined through 5 points Likert scale were respondent were required to rate the uses of bidding strategies from extremely common to not common. Study results show that no bidding strategy fall under "not common". For this case results then reviled bidding strategies used by Tanzania

construction firms are Sustainable practice, Quantity Bidding Strategy or Aggressive tendering or random tendering, Produce estimate and add mark-up, Guerrilla/Focus/Niche Strategies, Bid for smaller jobs, Decline to bid, Below cost bidding or low bid, Return tender documents/ Submit a cover price, Negotiation, Defensive or conservative, Offensive or progressive, Diversification, Joint venture or Partnership, Specialization, Integration, Partnership, Bid only on projects that are profitable, Claim expectation, Review Economic Engine, Risk Control Strategy, Differentiation and Product Leadership, Operational Excellence and Cost Leadership, Technology Transfer, Customer Intimacy, High tech, Bid for bigger jobs, Unique architectural design (design and Build), Add 'non price features' (i.e. qualify the bid) and Public relationship or Social responsibility and accountability.

4.5 Factors contributing to the Choice of Bidding Strategies by Construction Firms

4.5.1 Descriptive statistics for Factors contributing to the Choice of Bidding Strategies by Construction Firms

Table 4.4 presents factors contributing/influencing contractors to the choice a certain bidding strategies. Contribution of twenty one factors were rank on a 5-point Likert scale, i.e. Very high=5, high=4, Moderate=3, Low=2, Very low=1. In order to conclude on the extent factors contributing to the choice of bidding strategies by construction firms a mean score is calculated and column for this is provided in Table 4.4.

The results Table 4.4 indicates that firm financial situation during tendering, presence of qualified personnel's for the job, tender period and market conditions, historical back of client's in payments for past projects, financial working capital for the project as per requirements, method of construction/ construction techniques, realism of duration given for the project, experience of the bidding firm in specific given tender works, time of bid (bidding season), strength in industry, standard and completeness of the information collected have mean above 4.00 which suggest that they have high contributing to the choice of bidding strategies by construction firms.

Table 4.4 also indicates that scale and scope of construction, prequalification requirements, availability of equipments, required bond, site constraint, access and storage limitations, firm capacity versus present workload, and risk associated with the given condition of construction site have mean between 3.00 to 3.99 which suggest that they have medium contributing to the choice of bidding strategies by construction firms.

In addition Table 4.4 shows that design and scope of work, build ability (including off-site prefabrication), contribution of the project in creation of long-term relationships upon completion of the given project, and contribution of the project in improvement of experience of the firm's have mean below 3.00 which suggest that they have low contributing to the choice of bidding strategies by construction firms.

Table 4.4: Factors Contributing to the Choice of Bidding Strategies by Construction Firms

Competitive bidding strategies	Mean	Std. Deviation

A. Project characteristics		
Method of construction/ construction techniques	4.10	1.430
Realism of duration given for the project	4.56	1.370
Scale and scope of construction	4.26	1.238
Complexity of design and construction	4.03	1.059
Site constraint, access and storage limitations	3.68	1.320
Build ability (including off-site prefabrication)	3.37	1.078
Contribution of the project in improvement of experience of the firm's	2.82	1.506
B. Project documents		
Standard and completeness of the information collected;	4.05	1.333
Owner special requirements	4.4	1.36
Design quality	3.58	1.403
C. Company characteristics		
Firm financial situation during tendering	4.62	1.320
Presence of qualified personnel's for the job	4.62	1.403
Financial working capital for the project as per requirements	4.26	1.406
Experience of the bidding firm in specific given tender works	4.06	1.620
Firm capacity Versus present workload	3.11	1.303
D. Bidding situation		
Required bond capacity	3.33	1.88
Time of bidding (season)	4.05	1.370
Prequalification requirements	3.83	1.059
E. Economic situation		
Tender period and Market Conditions	4.36	1.078
Risk associated with the given condition of construction site	3.18	1.320
Contribution of the project in creation of long-term relationships upon completion of the given project	2.85	1.059
Availability of equipment	3.7	1.43

4.5.2 Descriptive statists on other Factors mentioned in questionnaire to Contributing to the Choice of Bidding Strategies by Construction Firms results.

Table 4.5 presents additional factors contributing to the choice of bidding strategies by construction firms as added by responded in filling their questionnaires. Ten factors

have been added during collection of data through questionnaire survey. Contribution of ten factors were rank on a 5-point Likert scale, i.e. Very high=5, high=4, Moderate=3, Low=2, Very low=1. In order to conclude on the extent which affecting factors contributing to the choice of bidding strategies a mean score is calculated and column for this is provided in Table 4.5.

Table 4.5: Other Factors Contributing to the Choice of Bidding Strategies by Construction Firms

Factors	**Mean**	**Std. Deviation**
Risk involved in investment	4.2	1.117
Competition	4.08	1.239
Need for work	3.95	1.395
Time allowed for submission of bid	3.55	1.320
Current work load	3.78	1.403
Location of project	4.42	1.078
Types of equipment required	3.58	1.406
Types of contract	3.77	1.430
Strength in industry	3.77	1.370

Table 4.5 above indicates that indicates that Risk involved in investment, competition, location of project, duration have high contributing to the choice of bidding strategies by construction firms since their mean are above 4.00. also the Table 4.5 indicates that need for work, time allowed for submission of bid, current work load, types of

equipment required, types of contract, strength in industry have medium contributing to the choice of bidding strategies by construction firms since their mean are between 3.00 to 3.99.

4.5.3 Inferential Statistic Results Factors influencing seletion of Bidding Strategies

i) Model summary

Table 4.6a shows the value of regression coefficient "R" is 0.842[a] which indicates the good level of prediction of factors influencing selection of bidding strategies.. The R square statistic of the model is 0.710 implying that 71% our of factors (economic situation, bid situation, company characteristics, project documents, project characteristics) explain variability of bidding strategies. This shows that there a strong significance relationship between the factors contributing the choice of the bidding strategies and bidding strategies chosen.

Table 4.6a: Model Summary for Factors Contributing to the Choice of Bidding Strategies

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842[a]	.710	.650	.419
a. Predictors: (Constant), Economic Situation, Bid Situation, Company Characteristics, Project Documents, Project Characteristics				

ii) ANOVA for factors influencing selection of Bidding Strategies

ANOVA was conducted to test the significance of the linear regression model. The F statistic value of 11.972 implied that the combined model was significant and was sufficient in predicting contribution of the given factors in selection of bidding

strategy. This was supported by a probability value of (0.000) which is less that the level of significance (0.05).

These results suggest that the model was reliable to explain the relationship between the factors contributing the choice of the bidding strategies and bidding strategies chosen.

Table 4.6b: ANOVA for Factors Contributing to the Choice of Bidding Strategies

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.039	10	2.104	11.972	.000[a]
	Residual	8.611	49	.176		
	Total	29.650	59			
a. Predictors: (Constant), Economic Situation, Bid Situation, Company Characteristics, Project Documents, Project Characteristics.						
b. Dependent Variable: Bidding Strategies Chosen						

iii) Regression Coefficients for factors influencing selection of Bidding Strategies

The data were also analyzed by multiple regressions so as to access the individual contribution of independents variables towards the dependent variables. The multiple regressions were run and the results are presented in Table 4.6c below. Table 4.6c present the results on the individual contribution of the factors contributing to the choice of bidding strategies and bidding strategies. The results on the Table indicate that, with other variables held constant, the choice of bidding strategies was increased

by .842 for every increase in level of Company Characteristics, .725 for every increase in use of factors under Project Characteristics, and .590 for every increase use of factors under project documents. While with other variables held constant, the choice of bidding strategies was decreased by -.252 for every use factors under project characteristics, and -.088 for every decrease in use of factors under economic situation. These results suggest that project characteristics, project documents required, and company characteristics have significance contributing to the choice of bidding strategies since their values have positive. While bid situation, and economic situation have insignificance contributing to the choice of bidding strategies since their values have negative.

Table 4.6c: Coefficients for Factors Contributing to the Choice of Bidding Strategies

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	4.459	1.320		3.379	.001
	Bid Situation	.842	.140	.068	.299	.003
	Company Characteristics	.725	.152	.031	.168	.004
	Project Documents	.590	.177	.000	.002	.003
	Project Characteristics	-.252	.298	-.184	-.848	.400
	Economic Situation	-.088	.194	-.078	-.451	.654
a. Dependent Variable: Bidding Strategies Chosen						

4.5.4 Description of data collected through interview on Factors contributing to the Choice of Bidding Strategies by Construction Firms

Interview was conducted in order to improve research findings on getting both questionnaire and interview response. The results indicate that contractors are aware of all the factors in that table but they are some common factors like Firm financial situation during tendering, Tender period and Market Conditions, Historical back of client's in payments for past projects, Financial working capital for the project as per requirements, Realism of duration given for the project, Experience of the bidding firm in specific given tender works and Bidding situation/market condition have been mentioned to be known by all 10 interview respondents. Other factors which are common to more the half of respondents are Firm capacity Versus present workload, Presence of qualified personnel's for the job, Method of construction/construction techniques, Risk associated with the given condition of construction site, Current work load, Types of contract, Location of project, Competition, Need for work and Standard and completeness of the information collected.

During interview almost all contractors suggests that before everything you must think of cash flow to enable execution of the project you are bidding. According to respondents the problem of cash flow is caused by bad decision on allocation of available funds. This causes every contract to be sensitive in selection of project and ability of the client to pay. Comment from director of finance of BC7 was;

" The big issues on cash-flows should be discussed and insisted on the necessity of being sue on the cash to run the project which take an eye to firms financial situation

including expected cash inflow and availability of working capital for the project as per requirements"

The ability of the client to pay is major key for Construction Company's recovery. Other quotes from two Directors as recoded during interview include the following;

Managing director of BC8 said

"When you think of your clients you must think of people of institute which can be able to make money or to pay you on time, clients who are successful, because, if there are not successful, there is a possibility of you not being successful. For me the important thing is that my clients are making a good profit. Because if they are making a good profit, they will be in the position to pay me"

Managing director of BC9 said;

"*Primarily, we are selective to clients to tender for and to the type of the contract to engage in. This is to make sure the client is a good client, and could pay us. You must look very carefully at the client to make sure that you have got certainty of payment and let go as many potential risks as you can''*

From the above statements, cash flow is the key factor considered by local building contractors when they think on bidding.

After cash issues other factors seen also important are market condition as it can judge on the strategy that to tender for big profit or survival or small profit. Other important factors are realism of duration in which when reliable the tender by considering other factors on profit and supporting to win the project for those not reliable if is shortlist

or negotiation and contractors will prepare cover price to appear in the tender and submit to improve relationship for consideration in the future project.

One of the interview responded gave the way they decide on bidding strategy as many factors also contribute on selection of bidding strategies. One factor may influence the use of one or more strategies and on strategy can be influenced by more than one factor. Example firm capacity against present work load can influence the use of both detail and rough estimate and addition of mark-up depending on factors like the market condition, historical back ground of clients in payments internal financial situation and so on; sustainable practice taking into consideration the market condition; competition, strength in the industry, Contribution of the project in creation of long-term relationships upon completion of the given project and many other factors. According to them the relationship of strategies and factors considered during selection is not straight forward as you may find in selection of one strategy you will find many factors has been considered also factors depend on other factors. For this case experience of estimators is very important as also managing director ask for clarification that convinces them on strategies used and the factors being considered in selection of those strategies. Other strategies come from management directives.

4.5.5 Discussion on Factors contributing to the Choice of Bidding Strategies by Construction Firms

Bidding situation; The value of R in Multiple regression summary mode was .842 indicating the 84.2% prediction of factors contributing to the choice of bidding strategy. Furthermore factors falling under bidding situation include, Competition raked 9^{th} with the mean of 4.08 and time (season) of bidding rank 13^{th} with mean score

of 4.05. Both factors range from high to very high contribution in selection of bidding strategies. Sustainable practice ranked 1st strategy by contractors during this study with implication that most of them opt this strategy because of economical situation. If the completion is high you find majority of contractors opt bidding strategies like sustainable practices, bid for small jobs, below cost bidding and even diversification of contractor may be noticed. This is cause by high competition resulted by recession of change in government policies like in Tanzania now day.

During interview contractors declared to run their company with no job for long period since 1916. The put blame on govern change of policies were know day most of project are done by government institution using force account form of procurement and for those not done in force account government institution like TBA, SUMA JKT, NHC and other took over the position of contractors. This increases completion of local building contractors in the construction industry. The two factors under this group appeared to go to gather. If time of bidding is a boom period completion decreases and if it is slump season completion rise. This implies that the two factors go together in selection of bidding strategy. When it is construction boom season completion decreases and most of contractors opt bidding strategy like produce estimate and add big mark up, bid for big jobs and bid for project that are only profitable. For slum season contractors adopt sustainable practice aggressive tendering, produce estimate and add small mark up, bid for small jobs, below cost bidding and even return bid document strategy.

Company characteristics; The value of R in Multiple regression summary mode was .725 indicating the 72.5% prediction of factors contributing to the choice of bidding strategy. Preparation of successful bid involves the determination of all direct and indirect costs expected to be used during execution of the construction project. For this reasons most of contractors rank firm financial situation during bidding which is among factors falling under company characteristics as the first factor contributing in choice of bidding strategies. Firm financial situation during tendering that fall under company characteristic has a mean score of 4.62. Most of contractors seen to evaluate themselves on the need of work as some force to have a project to sustain his situation in the industry even without getting big profit. Other factors like Presence of qualified personnel's for the job rank second with mean score of 4.62, historical background of the client raked 5^{th} with the mean of 4.35, financial working capital for the project as per requirement rank 6^{th} with mean score of 4.26 and Experience of the bidding firm in specific given tender works with means score of 4.06 ranked 11^{th}. All these factors range from high to very high contribution in selection of bidding strategies.

Companies think of project finance and also availability of experienced personnel's to supervise execution of project before bidding the project. If they are not in good situation they opt to decline to bid. If they have small capital they think of applying for small jobs or think of joint venture with other companies. Other firms return the tender documents to retain their position in the shortlisted bidders thinking of being imitated for future tenders at a time when their in the good condition to execute the works. Those firm which are in good financial position and still possess his potential key personnel's they can select various bidding strategies like bidding for bigger

project which will be having small completion during shortage of works as many company opt on sustainable strategies.

Other factors falling under company characteristics were current work load with mean score of 3.78, strength in industry with mean score of 3.77, need for the work with mean score of 3.55 and firm capacity versus workload with mean score of 3.11. These factors fall between high contribution and very high contribution which implies that they still have a big impact on selection of bidding strategies. If the company has a big current load they can decline to bid, submit tender document of think to bid profitable projects only.

Strength in the industry will enable the firm to bid only big projects, diversifications, risk control strategy, bid only project that are profitable integration, differentiation and product leadership, high technology public relationship as a means to return to the society and other many bidding strategies depending on the bid. Firm capacity versus work load depend on the situation during tendering if not suffice then the contractor adopt appropriate strategy like decline to tender and submit tender document. If the situation is good then the firm will choose biding strategy like high tech, diversification and many other strategies depending on the capacity of the firm in management of the additional coming load.

During interview all the contractors insisted on firm financial situation during tendering, historical back ground of the client, capital finance of the project as per requirements, firm capacity versus present work load which in turn affect cash flow of the firm. The problem of cash flow arise when the company is squeezed to slow/non

paying clients, impatient subcontractors and suppliers and those lenders who are ready to make up for the short fall (Lowe and Moroke, 2012).

The managing director of one of the firm said, "Before tendering we must check our client financial ability or historical background on payment and if we have a doubt for negotiation tendering we introduce the issue of early on staged payments or up-front payments where possible which is normally unacceptable for public project". For this case they don't want to through stones in darkness as according to many of them their companies are dying because the government for some project is not paying on time.

This result reviled that all the contractors bidding for construction jobs are very sensitive on resource based view theory (Prahalad and Hamel, 1990) in which the concentrate on assessment internal resources and then external resource to decided on the bidding strategy to be adapted.

Project documents; The value of R in Multiple regression summary mode was .590 indicating the 59% prediction of factors contributing to the choice of bidding strategy. The 1st factor in this group is realism of duration given for the project ranked 10th over 31 factors and has a mean score of 4.06.

Duration given in the bid document is a major factor in selection of bidding strategy. If the execution time appear to be small compared to the resource of the firm to execute the work in time the bidder will opt to decline to bid or submit the tender document strategies. If the time is over estimated they use other factors like historical background of the client in payment and financial position of the client then if they fiver he/she will go on access the bid through other factors and then decide on the

appropriate bidding strategies. Realism of execution time will guide the contractor on decision on the use of available resource. During interview one of the managing directors said if you see the time given is not realist its better run away because you may find your entire resources stack in a one project with pour cash flow and end up lost your time with claims settlements.

The second factor in this group is standards and completeness of information collected ranked 12th over 31 factors with mean score of 4.06. if information collected were not sufficient to bid bidders will opt bidding strategies like decline to bid, submit cover price, produce estimate and add a bigger mark-up, claim expectation, add non price features and even aggressive tendering as the see that the fit in information given. Project manager of firm BC2 during interview said all the information collated during site visit, pre-bid meeting, official communication during tendering and tender documents are useful information. If one see that all those information collated are not enough or will affect project execution or payment process decline to tender to avoid falling in that pit hole. Your may fall in that pit hole stay there forever and be the end of your business my become the poison of your business".

The first two factors i.e realism of duration given for the project and standards and completeness of information collected fall in factors with high to very high influence in selection of bidding strategy. Design and scope of work ranked 28th over 31st factors with mean score 2.58 fall in factors with moderate to low influence in selection of bidding strategies. The results reveled less importance of design an scope of work in selection of bidding strategies. Design and scope of work has great impact in

construction especially during execution. If all the factors are under control design and scope will be accommodated during execution as all the resources will be available. Despite it management during execution design and scope of work has influence in selection of bidding strategies as it act as a guide line to other factors like presence of qualified personal's for the job and construction techniques.

Project Characteristics; The value of R in Multiple regression summary mode was .252 indicating the 25.2% prediction of factors contributing to the choice of bidding strategy. Location of the project which is among project characteristics factors is ranked 3rd among 31 factors with the mean score of 4.42, Methods of construction or construction techniques ranked 8th with the mean score of 4.10 .These two factors has between very high to high influence in selection of bidding strategies.

Contractors think of project location as it advantages if the project is located within the company location of business as it cut down transport cost, increase assurance of availability of material suppliers, labour force for the work and simplify management of the project. For this sense you find location has been gives the 1st priority among factors under project characteristics as to predict on the size o mark up to be added to the cost, decline to tender or submit the tender, joint venture with contractors who are familiar with location, and other strategies depending on the location and experience of a person selecting bidding strategy.

Method of construction or construction techniques has a big influence on construction projects as it is always associated with tools equipment and machines which need mobilization cost for those owned and addition of hiring cost for those not owned.

Contractors also face challenge in availability of appropriated plants and equipments as per requirement. This factor can be used to select bidding strategies like high technology, risk control, decline to bid and even submit the bid to reserve your consideration in future project. Having known construction techniques one can judge on bidding strategies as they consider additional cost associated with construction techniques. The last factor under this category is build-ability ranked 29th over 31st factors. This factor was 7th and last factor under this category. Its mean score is 2.78 which show moderate to low contribution in selection bidding strategies. Build ability is less considered as it is overtaken by other consideration like types of equipment required and even type of contract like design and build. Construction techniques can be used to solve issues of build ability which in turn reduced its influence on selection of bidding strategies.

Location and construction techniques appeared to have major influence causing project characteristic to rank first in influence to selection of bidding strategy while other factors like build ability had a small influence as other top one affected much on strategies.

Economic situation; The value of R in Multiple regression summary modes was .088 indicating the 8.8% prediction of factors contributing to the choice of bidding strategy. Factors falling under this category include risk involved in investment ranked 7th factor among 31st factors having a mean score of 4.20.

Risk involved in investment is the only factor fallen under factors with high to very high influence in selection of bidding strategies. Since risk involved in investment

judge on existence of the firm or disappearance of the firm when exposed to risk associated with investment. Through investigation of risk associated with investment has to be made at the before investment and the ways to deal with them should be put in place even before investment. This is why this factor had a high consideration while others were treated as having moderate to low influence in selection of bidding strategy. Other factors like contribution of the project in creation of long-term relationships upon completion of the given project and Contribution of the project in improvement of experience of the firm's were rank 30^{th} and 31^{st} out of 31^{st} factors. This means they are the last two factors in the entire list.

During interview contractors mentioned contribution of the project in creation of long-term relationships as a factor conspired to save during slum period. Negotiation strategies fall under creation of long term relationship. Improvement of experience of the firm is important for new established firms but it will no longer consider by experienced firms. Young firm bid below cost or use sustainable practice strategy in order to improve experience of the firm. Contractors use the factor of risk involved in investment to select of all the strategies in the list taking into consideration all objectives of investment.

4.6 Successful Competitive Bid Price

4.6.1 Descriptive statistics on Successful Competitive Bid Price

Questionnaire survey was among the methods used in examination of successful competitive bid price. To examine successful competitive bid price provided by the

construction firms, the respondents were asked to responds on the number of successful and unsuccessful bid in the past 4 years. The results are presented below;

Table 4.7: Number of successful and unsuccessful bids

No of successful and unsuccessful bids in the Last 4 Years:	**Frequency**	**Percent**
No of successful Bids in the Last 4 Years:		
Less than 3 successful bid price	38	63.3
3 to 5 successful bid price	10	16.7
6 to 8 successful bid price	10	16.7
Above 8 successful bid price	2	3.3
Total	60	100.0
No of unsuccessful bid in the Last 4 Years:		
Less than 3 rejected bid price	5	8.3
3 to 5 rejected bid price	7	11.7
5 to 7 rejected bid price	43	71.7
Above 8 rejected bid price	5	8.3
Total	60	100.0

Table 4.79 above indicates that 63.3% of the firms reported that the number of successful bid price in the last four years were less than 3 bids, 16.7% of the firms succeeded to have 3 to 5 successful bid price, 16.7% of the firms succeeded to have 6 to 8 successful bid price, 3.3% of the firms have above 8 successful bid price in the last four years..

Table 4.7 also indicates that 8.3% of the firms reported that the number of rejected bid price in the last four years were less than 3 bids, 11.7% of the firms have 3 to 5 rejected bid price, 71.7% of the firms have 6 to 8 rejected bid price, 8.3% of the firms have above 8 rejected bid price in the last four years. These results suggest that in the last four the majority of construction firms have less than 5 to 7 rejected bid price.

4.6.2 Interview findings on contribution of Bidding Strategies in Provision of Successful Competitive Bid Price.

During interview 3 contractors out of 10 got less than 3 projects while 6 got between 3 and 5 and only one between 6 and eight projects. On examination of unsuccessful project 8 contractors loose above 8 projects, 4 loose 5 to 7 projects and one loose. These results imply that the number of successful bids is small compared to unsuccessful ones. But results on the other hand imply that all contractors use strategy to win the bid and they are successful depending on the situation in the construction industry.

4. 6.3 Inferential Statistic for bidding strategies contributing to the successful bid

i) Model summary

The "**R**" column in table 4.8a represents the value of *R*, the multiple correlation coefficients. *R* can be considered to be one measure of the quality of the prediction of the dependent variable; in this case, Successful Competitive Bid. A value of 0.947, in this model, indicates a good level of prediction. The "**R Square**" column represents the R^2 value (also called the coefficient of determination), which is the proportion of variance in the dependent variable (Successful bid) that can be explained by the independent variables (Bidding strategies) this means the proportion of variation accounted for by the regression model above and beyond the mean model. You can see from our value of .897 that our bidding strategies explain 89.7% of the variability of successful bid. This implies that 89.7% of the variation in the successful competitive bid price is accounted for by the offensive or progressive, integration, specialization,

partnership, sustainable practice, joint venture, review economic engine, unique architectural design (design and build), social responsibility and accountability, bid for smaller jobs, decline to bid, submit a cover price, aggressive tendering or random tendering, below cost bidding or low bid, defensive or conservative, technology transfer, risk sharing, bid for bigger jobs, diversification, differentiation and product leadership, high tech, guerrilla/focus/niche strategies, bid only on projects that are profitable, claim expectation, customer intimacy, operational excellence and cost leadership, produce a rough estimate and add mark-up, return tender documents. This shows that there a strong significance relationship between bidding strategies and provision of successful competitive bid price. In this case the bidding strategies studied have significance contribution on the provision of successful competitive bid price.

Table 4.8a: Model Summary for Bidding Strategies in Provision of Successful Bid

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947[a]	.897	.797	.13211

a. Predictors: (Constant), Add 'non price features' (i.e. qualify the bid), Offensive or progressive, Integration , Specialization, Partnership, Sustainable practice, Joint venture, Review Economic Engine , Unique architectural design (design and Build), Social responsibility and accountability, Bid for smaller jobs, Decline to bid , Submit a cover price, Aggressive tendering or random tendering, Below cost bidding or low bid, Defensive or conservative, Technology Transfer, Risk sharing, Bid for bigger jobs , Diversification, Differentiation and Product Leadership, High tech, Guerrilla/Focus/Niche Strategies, Bid only on projects that are profitable, Claim expectation, Customer Intimacy, Operational Excellence and Cost Leadership, Produce a rough estimate and add mark-up, Return tender documents

ii) ANOVA for Bidding Strategies in Provision of Successful Bid

The analysis result on Table 4.8b revealed that the significance of that F statistics is 0.00 which is less than 0.05. These results show that the model is statistically significant in prediction of the successful bid price.

Table 4.8b: ANOVA for Bidding Strategies in Provision of Successful Bid

Model		Sum of	Df	Mean	F	Sig.
1	Regression	4.546	29	.157	8.982	.000[a]
	Residual	.524	30	.017		
	Total	5.069	59			
a.Predictors: (Constant), Add 'non price features' (i.e. qualify the bid), Offensive or progressive, Integration , Specialization, Partnership, Sustainable practice, Joint venture, Review Economic Engine , Unique architectural design (design and Build), Social responsibility and accountability, Bid for smaller jobs, Decline to bid , Submit a cover price, Aggressive tendering or random tendering, Below cost bidding or low bid, Defensive or conservative, Technology Transfer, Risk sharing, Bid for bigger jobs , Diversification, Differentiation and Product Leadership, High tech, Guerrilla/Focus/Niche Strategies, Bid only on projects that are profitable, Claim expectation, Customer Intimacy, Operational Excellence and Cost Leadership, Produce a rough estimate and add mark-up, Return tender documents.						
b. Dependent Variable: **Provision Of Successful Competitive Bid Price**						

iii) Regression Coefficients of Bidding Strategies in Provision of Successful Competitive Bid Price

The data were also analyzed by multiple regressions so as to access the individual contribution of independents variables (bidding strategies) towards the dependent variables (successful competitive bid price). The multiple regressions were run and the results are presented in Table 4.8c below.

The results on Table 4.8C indicates that aggressive tendering or random tendering, guerrilla/focus/niche strategies, decline to bid, return tender documents, offensive or progressive, diversification, bid only on projects that are profitable, review economic engine, technology transfer, bid for bigger jobs, and social responsibility and

accountability have insignificance contribution on bidding strategies on provision of successful competitive bid price since their values have negative value.

However the strategies such as add 'non price features' (i.e. qualify the bid), integration, specialization, partnership, sustainable practice, joint venture, unique architectural design (design and build), bid for smaller jobs, submit a cover price, below cost bidding or low bid, defensive or conservative, risk sharing, differentiation and product leadership, high tech, claim expectation, customer intimacy, operational excellence and cost leadership, and producing a rough estimate and add mark-up have significance contribution on bidding strategies on provision of successful competitive bid price since their values have positive value. The positive value implies that the use of these strategies increases the chance of success in biding.

Table 4.8c: Coefficients for Bidding Strategies in Provision of Successful Competitive Bid Price

Model		Unstandardized		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.556	.543		4.710	.000
	Sustainable practice	.203	.087	.636	2.339	.026
	Aggressive tendering or random tendering	-.021	.034	-.094	-.620	.540
	Produce a rough estimate and add mark-up	.002	.052	.007	.031	.975
	Guerrilla/Focus/Niche Strategies	-.030	.026	-.136	-1.137	.264
	Bid for smaller jobs	.008	.033	.032	.254	.801
	Decline to bid	-.210	.069	-.482	-3.036	.005
	Below cost bidding or low bid	-.060	.031	-.201	-1.896	.068
	Return tender documents	-.016	.066	-.055	-.236	.815
	Submit a cover price	.086	.043	.287	2.021	.052
	Defensive or conservative	.145	.042	.488	3.466	.002
	Offensive or progressive	-.272	.064	-.842	-4.245	.000
	Diversification	-.184	.041	-.607	-4.518	.000
	Joint venture	.043	.066	.152	.648	.522
	Specialization	.034	.031	.103	1.102	.279
	Integration	.064	.035	.212	1.825	.078

	Partnership	.129	.047	.433	2.737	.010
	Bid only on projects that are profitable	-.106	.033	-.408	-3.184	.003
	Claim expectation	.089	.053	.218	1.657	.108
	Review Economic Engine	-.129	.034	-.394	-3.841	.001
	Risk sharing	.067	.035	.225	1.891	.068
	Differentiation and Product Leadership	.080	.046	.247	1.748	.091
	Operational Excellence and Cost Leadership	.059	.056	.188	1.050	.302
	Technology Transfer	-.090	.070	-.227	-1.295	.205
	Customer Intimacy	.425	.081	.923	5.225	.000
	High tech	.063	.051	.187	1.231	.228
	Bid for bigger jobs	-.214	.052	-.436	-4.114	.000
	Unique architectural design (design and Build)	.033	.059	.065	.565	.576
	Social responsibility and accountability	-.056	.039	-.169	-1.419	.166
	Add 'non price features' (i.e. qualify the bid)	.014	.033	.053	.434	.668
a. Dependent Variable: **Provision Of Successful Competitive Bid Price**						

4.6.4 Discussion on contribution of bidding Strategies in Provision of Successful Competitive Bid Price.

The results show that contractor with less than 3 successful bids were 38 out of 60 making approximately 63.3%. 71.7% of contractors submitted 5 to 7 unsuccessful bids. This is the sign big shortage of works to the contractor or big number of unsuccessful bids. During interview many contractor had no work and others has one or two works the reasons of scarcity of works or unsuccessful bid is explained to being government institution took over many public works, other works being done in the form of force account and the international contractors taking over execution of big public project. Another reason of scarcity of works is change in government policy where many works are civil works now day while many contractors based in building works. Privet build contractors end up getting works from private institution which also in one way or another went down compeered years before 2015. The shortage of work is not failure of bidding strategies but other unavoidable circumstances as

mentioned above. This being seen through inferential analysis showing the value of R being .947a being very close to one implying that there is strong significance relationship between the contribution of bidding strategies and provision of successful bid. Also the value of R-Square also implies 89% of the variation in the successful competitive bid price is accounted for by bidding strategies. Coefficient of each bidding strategy has being tested and the results being some of strategies appeared to have insignificant contribution on provision of successful bid by having negative values while others had significance contribution by having positive values. All these evidences gathered in this study imply that bidding strategies' has a big contribution in successful bid in Tanzania construction industry.

4.7 Chapter Summary

This chapter analyzed and discussed data collected through questionnaire and interview from the sample of class I class III building contractors.

a) Through discussion of the data collected and analyzed using descriptive statistics reveled that all the contractors consider one or more strategies in bidding. Bidding strategies reviled in this study were obtained from existing studies then their use has been ranked through 5 points Likert scale range from extremely common to not common. Study results show that no bidding strategy fall under "not common". For this case basing on the first objective of the study the results reviled that bidding strategies used by Tanzania construction firms are sustainable practice, quantity bidding strategy or aggressive tendering or random tendering, produce estimate and add mark-up, guerrilla/focus/niche strategies, bid for smaller jobs, decline to bid, below cost bidding or low bid,

return tender documents/ submit a cover price, negotiation, defensive or conservative, offensive or progressive, diversification, joint venture or partnership, specialization, integration, partnership, bid only on projects that are profitable, claim expectation, review economic engine, risk control strategy, differentiation and product leadership, operational excellence and cost leadership, technology transfer, customer intimacy, high tech, bid for bigger jobs, unique architectural design (design and build), add 'non price features' (i.e. qualify the bid) and public relationship or social responsibility and accountability

b) The second specific objective was to assess factors contributing to the choice of bidding strategies by construction firms in Tanzania. The study through secondary data and primary data collected and the analyzed reviled the following;

   - The value of R appeared to be .842[a] which implies that there is strong significance relationship between the group of factors contributing to the choice of bidding strategies and the chosen bidding strategy. This has been discussed on reference to results obtain from expertise through interviews and questionnaire.
   - R-square also implied that 71% of the variation in the choice of bidding strategies is accounted for by the group of factors said to influencing its choice.

c) The third specific objective of the study was to investigate contribution of bidding strategies in provision of successful bid in Tanzania. The study

through secondary data and primary data collected and the analyzed reviled that bidding strategies which are confirmed to contribute in successive bid includes;

- The value of R which appeared to be .947a which implies that implying that there is strong significance relationship between the contribution of bidding strategies and provision of successful bid.
- R-square also implied that 89% of the variation in the successful competitive bid price is accounted for by bidding strategies

The next chapter provides conclusion and recommendation of the study in line with the study objectives.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of this study and provides conclusion and recommendation on analysis of bidding strategy of Tanzania construction firm in provision of successive bid.

5.2 Conclusions of the Study

The conclusions of the study was based on the research questions developed based on the specific objectives of the study which were; to identify bidding strategies used by construction firms; to assess factors contributing to the choice of bidding strategies by construction firms; and to unveil contribution of bidding strategies in provision of successful bid in Tanzania.

5.2.1 Bidding strategies used by construction firms in Tanzania.

This study concludes that construction firms to a large extent are using bidding strategies such as sustainable practice, aggressive tendering or random tendering, produce a rough estimate and add mark-up, guerrilla/focus/niche strategies, bid for smaller jobs, decline to bid, below cost bidding or low bid, and return tender documents.

5.2.2 Factors contributing to the choice of bidding strategies by construction firms in Tanzania.

The study concludes that there a strong significance relationship between the factors contributing the choice of the bidding strategies and bidding strategies chosen. In

addition, 71% of the variation in the choice of bidding strategies is accounted for by the factors such as economic situation, bid situation, company characteristics, project documents, and project characteristics.

It was also concluded that the factors such as need for work and current work load have insignificance contributing the choice of bidding strategies and bidding strategies, while factors such as strength in industry, risk involved in investment, competition, types of contract, duration, location of project, types of equipment required, owner special requirement have significance contributing to the choice of bidding strategies.

5.2.3 Contribution of bidding strategies in provision of successful bid in Tanzania.

The study concluded that there a strong significance relationship between bidding strategies and provision of successful bid. It was also concluded that 89% of the variation in the successful bid is accounted for by the bidding strategies studied in this study. In this case the bidding strategies studied have significance contribution on the provision of successful bid.

5.3 Recommendations of the Study

5.4.1 Recommendations to the Construction Firms

Since the study found that there a strong significance relationship between the factors contributing the choice of the bidding strategies and bidding strategies chosen, as it was revealed that 71% of the variation in the choice of bidding strategies is accounted for by the factors such as strength in industry, need for work, risk involved in

investment, competition, types of contract, duration, location of project, types of equipment required, current work load, and owner special requirement. Therefore this study recommend that the construction firms that are in or those that expect to enter into construction industry they need to be knowledgeable enough on the aspects such as risk involved in investment, competition, types of contract, duration, location of project, types of equipment required, how to deal with work load as well as owner special requirement.

This can be done through conduct an extensive research on the internal capability of a firm on its equipments, and current work load. While on externally, the firm need to conduct an extensive research such on the risk involved in investment, competition, types of contract, duration, location of project, as well as owner special requirement since these aspects may determine to bidding strategies to be chosen.

Also, since the study found out that there is a strong significance relationship between bidding strategies and provision of successful bid, whereby 89% of the variation in the successful bid is accounted for by the bidding strategies studied in this study. In this case the construction firms need to consider factors such as add 'non price features' (i.e. qualify the bid), integration, specialization, partnership, sustainable practice, joint venture, unique architectural design (design and build), bid for smaller jobs, submit a cover price, below cost bidding or low bid, defensive or conservative, risk sharing, differentiation and product leadership, high tech, claim expectation, customer intimacy, operational excellence and cost leadership, and producing a rough estimate,

as well as add mark-up since they were found out to have a significance contribution on the provision of successful bid.

5.4.2 Recommendations for further studies

This study was based at evaluating bidding strategies used by contractors in Tanzania construction to achieving successful bid. Further studies can be conducted to evaluated bidding strategies used by consulting firm to achieve successful bidding as evaluation of consultancy and non consultancy works differ according to PPA, (2013). This study also ended up in selection of bidders using different bidding strategies in the biding process therefore further studies can be conducted on performance of contractors selected to execute works to see viability each bidding strategies for sustainability of construction firms.

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APPENDICES

APPENDIX 1

QUESTIONNEIRE SURVEY

BUILDING CONTRACTORS STRATEGIES IN ATTAINING BIDS IN TANZANIA

Dear responded;

Information you provide for this survey will be confidential and for academic purpose only.

SECTION A; GENERAL INFORMATION

1. Name of the Contractor (optional)……..
2. Name of respondent (optional)……
3. Position …….
4. Class of your company as registered by Contractor Registration Board (CRB)
    a) Class I
    b) Class II
    c) Class III

    ☐
5. Experience of respondent
    a) Less than 5 years
    b) Between 5 and 10 years
    c) More than 10 years

    ☐

SECTION B; Identification of common bidding strategies

Please rate the common bidding strategy used by construction firms:

5=Extremely common, 4= Very common, 3=Common, 2= slightly common, 1= not common

Bidding strategies used by construction firms in Tanzania:	**5**	**4**	**3**	**2**	**1**
Sustainable practice					
Quantity Bidding Strategy or Aggressive tendering or random tendering					
Produce estimate and add mark-up					
Guerrilla/Focus/Niche Strategies					
Bid for smaller jobs					
Decline to bid					
Below cost bidding or low bid					
Return tender documents/ Submit a cover price					
Negotiation					
Defensive or conservative					
Offensive or progressive					
Diversification					
Joint venture or Partnership					
Specialization					
Integration					
Partnership					
Bid only on projects that are profitable					
Claim expectation					
Review Economic Engine					
Risk Control Strategy					
Differentiation and Product Leadership					
Operational Excellence and Cost Leadership					
Technology Transfer					
Customer Intimacy					
High tech					
Bid for bigger jobs					
Unique architectural design (design and Build)					
Public relationship or Social responsibility and accountability					
Add 'non price features' (i.e. qualify the bid)					
OTHERS SPECIFY BELOW					

SECTION C; Evaluate factors influencing selection of bidding strategies

Please rate contribution of the following factors in selection of bidding .

5=Very high, 4=high, 3=moderate, 2=low, 1=very low

Factors	**5**	**4**	**3**	**2**	**1**
A. Project characteristics					
Method of construction/ construction techniques					
Realism of duration given for the project					
Scale and scope of construction					
Complexity of design and construction					
Site constraint, access and storage limitations					
Build ability (including off-site prefabrication)					
Contribution of the project in improvement of experience of					
OTHERS SPECIFY BELOW					
B. Project documents					
Standard and completeness of the information collected;					
Owner special requirements					
Design quality					
OTHERS SPECIFY BELOW					
C. Company characteristics					
Firm financial situation during tendering					
Presence of qualified personnel's for the job					
Financial working capital for the project as per requirements					
Experience of the bidding firm in specific given tender					
Firm capacity Versus present workload					
OTHERS SPECIFY BELOW					
D. Bidding situation					
Required bond capacity					
Time of bidding (season)					
Prequalification requirements					
E. Economic situation					
Tender period and Market Conditions					
Risk associated with the given condition of construction					
Contribution of the project in creation of long-term relationships upon completion of the given project					
Availability of equipment					

Required bond capacity					
Time of bidding (season)					
Prequalification requirements					
OTHERS SPECIFY BELOW					

SECTION D: Successful and unsuccessful bidding

Select the Number of successful or unsuccessful projects applied for the period of four year in construction industry using bidding strategies at your company:

No of successful and unsuccessful bids in the Last 4 Years:	
No of successful Bids in the Last 4 Years:	
Less than 3 successful bid price	
3 to 5 successful bid price	
6 to 8 successful bid price	
Above 8 successful bid price	
Total	
No of unsuccessful bid in the Last 4 Years	
Less than 3 rejected bid price	
3 to 5 rejected bid price	
5 to 7 rejected bid price	
Above 8 rejected bid price	
Total	

APENDIX 2

NTERVIEW QUESTIONS (GUIDELINES)

This interview is for educational purpose only, therefore it does not involve any commercial activities and all information you will provide will be confidential and for the purpose of this research.

Introduction

1. Could you briefly give an overview of your position to the company, years involved and primary responsibilities held?

Bidding strategies

2. Mention the construction bidding strategies you know.

3. Which of the above strategies mentioned inquestion No. 2 are commonly used by your company during tendering?

4. Why do you use of certain strategies during bidding

Factors considered by contractors in selection of bidding strategies

5. What are the factors used in your company for assessment of the bid to choose specific bidding strategies?

6. Why do you consider these factor?

Successful bidding

7. How many bids were successful for last 4 years on using bidding strategies?

8. How many bids were not successful for the last 4 years on using bidding strategies?

THANK YOU VERY MUCH FOR YOUR PARTICIPATION